

IN SEARCH OF ENVIRONMENTAL JUSTICE IN MALAYSIA: THE CASES OF BROGA AND BUKIT MERAH

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ABSTRACT

The thesis examines two environmental campaigns in Malaysia in order to consider their significance in relation to conceptualising ideas of environmental justice and citizenship. The first campaign, the Broga anti-incinerator campaign is compared and contrasted to the second campaign, the Bukit Merah anti-radioactive waste campaign. Using a qualitative approach, the thesis examines how campaigners made use of a wide range of international environmental justice concepts and discourses, and campaigning strategies. These were locally adapted to fit the Malaysian political and social context, so that campaigners could demand their rights and challenge the responsibilities of the state and business interests. Campaigners made their demands for accountability not only through the law courts, but also through using discourses and strategies of environmentalism, rights to information and participation, citizen science, and lobbying internationally via transnational advocacy networks. Collectively, these actions brought both internal and external pressures to bear on the state and business interests, and created new spaces for dissent and for the construction of rights and entitlements. While actual material gains were not substantial, there were gradual incremental changes in feelings of personal empowerment and political consciousness, and in institutional health and safety processes. From this, I argue that conceptual links should be made between ideas of environmental justice and environmental citizenship. Concepts of environmental citizenship help to strengthen arguments for environmental justice, and vice versa. Much of the literature on environmental citizenship focuses on issues of individual social responsibility. However, many environmental conflicts in developing countries are refracted through the prisms of justice, equalities and rights because environmental rights are not distributed unconditionally or equally. In the context of Malaysia, where there is a highly unequal distribution of social and environmental rights, demonstrated understandings of why one should act responsibly will not automatically result in an ethics of environmental responsibility. The politicisation of social rights and justice helps to bring about understandings of an ethics of environmental responsibility. Arguments for justice made from the position of citizens actively claiming and demanding accountability further strengthens such arguments. Hence, the evolution of rights and responsibilities has to go hand-in-hand together; thereby defining environmental justice campaigners as also environmental citizens.

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ABBREVIATIONS AND SHORTENED NAMES

AELB	The Atomic Energy Licensing Board
BA	Barisan Alternatif (Alternative Front)
BN	Barisan Nasional (National Front)
CAP	Consumers' Association of Penang
D and D	Decommissioning and decontamination
DAP	Democratic Action Party
DANCED	Danish Cooperation for Environment and Development)
FDI	Foreign Direct Investment
Gagasan	Gagasan Demokrasi Rakyat (Coalition for People's Democracy)
GAIA	Global Alliance for Incinerator Alternatives/Global Anti-Incinerator Alliance
Gerak	Majlis Gerakan Keadilan Rakyat Malaysia (Malaysian People's Movement for Justice)
GDP	Gross Domestic Product
IAEA	International Atomic Energy Agency (a United Nations body)
ISA	Internal Security Act
KPKT	Kementerian Perumahan dan Kerajaan Tempatan (The Ministry of Housing and Local Government; since 2013, the Ministry of Urban Wellbeing, Housing and Local Government)
LTSF	Long term storage facility
MCA	Malaysian Chinese Association
MIC	Malaysian Indian Congress
MOSTI	The Ministry of Science, Technology and Innovation
Muhd/Mohd	Muhammad/Mohammad
NBA	Narmada Bachao Andolan (Save the Narmada Movement)
NGO	Non-governmental organisation
Nuklear Malaysia	Malaysian Nuclear Agency
NV	New Village
PARC	Perak Anti-Radioactive Action Committee (The Bukit Merah Campaign)
PAS	Parti Islam SeMalaysia (Pan-Malaysian Islamic Party)
PKN	Parti Keadilan Nasional (National Justice Party)
PKR	Parti Keadilan Rakyat (People's Justice Party)
PRM	Parti Rakyat Malaysia
PSM	Parti Sosialis Malaysia
RM	Ringgit Malaysia (Malaysian Dollars)
SAM	Sahabat Alam Malaysia (Friends of the Earth Malaysia)
SSP	Sardar Sarovar Projects (Narmada Dam Projects)
UMNO	United Malays National Organisation
USD	United States Dollars

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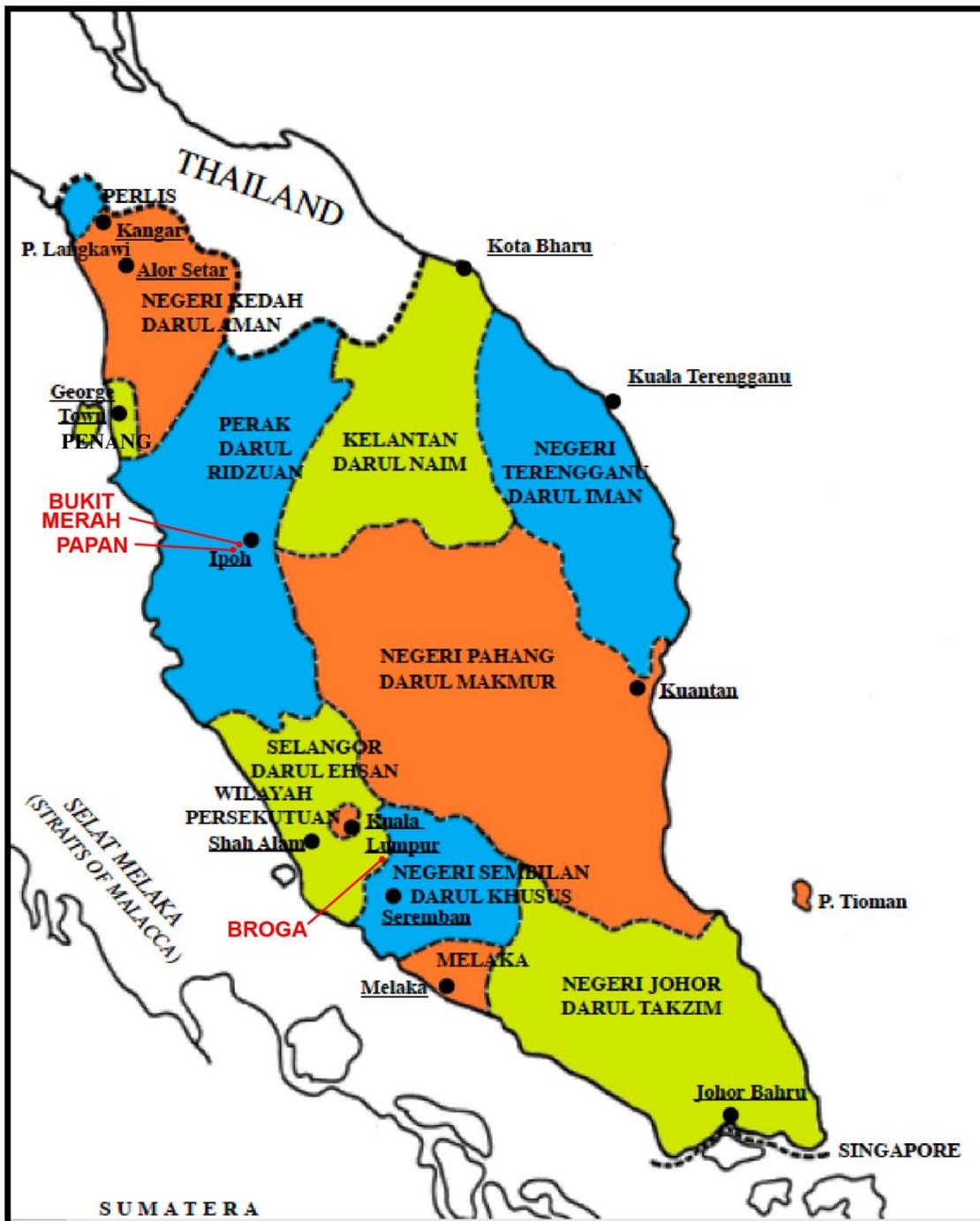
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DECLARATION

I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author. The thesis has not been previously submitted to this or any other university for a degree, and does not incorporate any material already submitted for a degree.

Signed:

Dated:



Map 1: Peninsula Malaysia and approximate location of case studies

(Source: Statistical Handbook Malaysia 2013, p. 119; retrieved from

www.statistics.gov.my)

CHAPTER ONE

INTRODUCTION

Over the last three to four decades, Malaysia's export-led economic growth has been accompanied by the increasingly contentious issue of safe disposal of effluents. With rapid industrialisation and urbanisation, Malaysians frequently express dissatisfaction with the inappropriate disposal of waste (solid waste from households as well as industrial waste) and its effects on public health and safety and the environment. Episodes of conflicts over the rights of ordinary citizens and responsibilities of the state have led to a rise in public discourse that the state is either unresponsive and/or inefficient in dealing with concerns of safe waste disposal, public health and safety, and the environment.

To date, much research on environmental conflicts in Southeast Asia has focused on deforestation and the dispossession of indigenous people in rural areas. Far less attention has been paid to conflicts arising from the impacts of pollution, especially environmental justice-type campaigns (popularly known as Not-in-my-backyard (NIMBY) conflicts). Much less is known about how such conflicts play out in places where democratic tools enabling marginalised communities to engage with powerful actors (state and business interests) are less developed such as, for example, in the context of Malaysia. Most of the environmental justice literature is focused in the developed West, especially in the United States of America (USA), where environmental justice theory originated and where there is a voluminous amount of research on such conflicts (Walker, 2012). This study seeks to address the research lacuna by comparing the contrasting results of the Broga (2003-2006) anti-incinerator and the Bukit Merah (1984-1994) anti-radioactive waste disposal campaigns in Malaysia, where the political and social contexts are vastly different from that of the USA, or more generally, the developed West. Not only are there less democratic tools to hold powerful actors accountable in Malaysia, the communities and villages of Broga and Bukit Merah have also been historically marginalised and stigmatised, respectively, making it more difficult for these community voices to be heard by the pro-business and authoritarian Malaysian state. Despite the differences in political and social contexts,

however, the concepts and discourses of environmental justice originating in the West were used by Broga and Bukit Merah campaigners to demand for justice and rights. How was this possible? Thus, the thesis builds on contemporary environmental justice research concerned with the potency and the salience of environmental justice concepts and discourses which have travelled the globe and become embedded or ‘locally grounded’ (Debbane and Keil, 2004, p. 210) in many countries all over the world (Schlosberg, 2007; Walker, 2012).

The research examines how heterogeneous groupings of Broga and Bukit Merah campaigners with disparate interests have collectively utilised a wide array of discourses and methods to frame their demands and pursue campaign objectives. It also examines the responses of the state and business interests to dissent as well as the role played by civil society agents. Campaigners in both Broga and Bukit Merah used the language of rights: to health and safety, participation and information. They demanded for distributive justice in the siting of the proposed incinerator, the radioactive waste landfill and in the cessation of the operations of the rare earth extraction facility/factory which produced the radioactive waste. They used the language and tools of citizen science; joined transnational advocacy networks with the help of non-governmental organisations (NGOs); and pursued litigation in order to achieve campaign objectives.

Both the campaigns came to a close with very different results. The Broga incinerator project was cancelled in August 2006, whereas the Bukit Merah court case dragged on for eight years (Theophilus, 2006; Harding, 1996). These two cases were chosen based on their shared characteristics; whilst the time difference (19 years between the start of the Bukit Merah campaign and that of Broga) would allow for comparisons of how each campaign developed in the context of different political and social conditions. The first shared characteristic is that both issues are primarily concerned with the safe disposal of waste and the impacts of pollution on public health and the environment; second, the majority of residents are largely rural Chinese living in New Villages, a geographical and social location that signals ongoing marginalisation within the Malaysian polity. New Villages are originally internment sites where the rural Chinese were resettled during the Malayan Communist Insurgency (1948 – 1960), a history which is belied by their appearance as an ‘ordinary’ part of the rural and urban landscape of Malaysia. Third, communities in both cases resorted to the use of legal proceedings to seek a stop

work order and for the government to divulge more information about the rare earth extraction facility/incinerator. Fourth, the business interests involved made use of Japanese finance, technology and knowledge, which led both campaigns to partake in transnational campaigning and lobbying networks. Finally, the nature of both the environmental campaigns mimics that of NIMBY campaigns, which are frequently associated with urban environmental conflicts of the developed world. It is no coincidence that the sites of both conflicts are peri-urban areas, located immediately outside cities: Broga, approximately 50 km from the centre of Kuala Lumpur, the capital of Malaysia, and Bukit Merah, seven km outside of Ipoh, the capital of the state of Perak. The rapid urbanisation and economic growth experienced in Malaysia since the early 1980s have increasingly given rise to environmental justice-type conflicts where issues of social justice intersect with that of the environment. The Broga and Bukit Merah campaigns are thus symptomatic of this rapid economic growth and urbanisation.

I argue that, while the core environmental justice issues of distributive justice, recognition and participation found in both campaigns are similar to those found in the environmental justice literature, how environmental justice concepts and discourse are used and developed is context specific (Walker, 2012) (Chapter Eight). Thus, the thesis examines the context of history, politics and political economy of Malaysia, for example, colonial and post-colonial processes of racial divisions, sustainable development and growth and political reformation, in order to gain a thorough understanding of both conflicts (Chapter Five). Due to the history of racial divisions, which has created a situation whereby, today, the Chinese in Malaysia are still regarded as ‘immigrants’. As such, they are seen to have ‘stolen’ the wealth of the ‘indigenous’ Malay population. Therefore, claims of environmental racism would be risky and detrimental to campaign objectives in such a context. Consequently, claims of environmental racism were not used in public discourses, unlike those found in environmental justice research in the USA.

I formed the central research question around key issues of justice, rights, the politics of knowledge, trust, accountability and transparency, environmental racism, recognition and participation as expressed by campaigners asking: what are the implications of the

Broga and Bukit Merah conflicts for theorising environmental justice and environmental citizenship?

1.1 Research questions

Linked to the issues above, the thesis considers the following questions:

- (1). How did the state and business interests respond to campaigners' demands for justice and accountability, and why did they respond using a particular framework of science and technology?
- (2). Why were campaigns launched in Broga and Bukit Merah, and how did campaigners demand their rights and challenge the responsibilities of the state and business interests? Furthermore, why did these demands and challenge take the form they did?
- (3). Why were environmental justice concepts and discourses adapted in particular ways in the Broga and Bukit Merah campaigns, and how can we understand this adaptation with reference to how environmental justice travels globally?
- (4). How are concepts of environmental justice linked to that of environmental citizenship in the context of the Broga and Bukit Merah campaigns?

The research draws on three theoretical bodies of literature that have developed in three different disciplinary contexts in order to deepen and extend the conceptions of environmental justice. They are: the questioning of the creation of scientific knowledge, environmental justice and social movement theories and environmental citizenship. Scientific knowledge as truth and arbitrator of social conflicts dominated the views expressed by the state and business interests. They used scientific knowledge to explain why they supported the construction of the proposed Broga incinerator as well as the Asian Rare Earth facility which produced the low-level radioactive waste which was inappropriately disposed of in Bukit Merah. Campaigners of both conflicts utilised a wide array of concepts, discourses and campaigning strategies that were similar to those discussed and theorised in the environmental justice and social movement literature.

The demands of campaigners for environmental justice, for the rights to information and participation, all demonstrate the politics of democracy, which overlaps with the concerns of environmental citizenship. Therefore, the research also makes connections between the overlapping concerns found within the environmental justice literature with that found within environmental citizenship, asking if environmental justice campaigners are also environmental citizens. It is through explicitly making links with the theoretical debates found in the three different, yet overlapping, bodies of literature that enables a deepened and thorough understanding of the implications of the Broga and Bukit Merah campaigns for theorising environmental justice. The case studies of Broga and Bukit Merah underscore how context is central to how environmental justice travels; and how and in what ways environmental justice matters to environmental citizenship and vice versa.

1.2 Malaysia

Colonial Malaya became a federation of states when it gained independence on 31 August 1957. However, it was only comprised of the states on the peninsular part of what is today Malaysia. The modern state of Malaysia was only formed in 1963 in order to unify all British colonies (with the exception of Brunei) in Southeast Asia (Kaur, 2001). Those states which were included in the Federation of Malaysia in 1963 were Sabah and Sarawak on Borneo Island, and the island of Singapore. Singapore subsequently seceded from the federation in 1965. Today, Malaysia is a federation of 13 states and one Federal Territory comprising the three components of Kuala Lumpur, the capital city, Pulau Labuan, and the administrative centre, Putrajaya.

Malaysia occupies two land masses separated by the South China Sea: Peninsula Malaysia (the southernmost tip of the continent of Asia) and the states of Sabah and Sarawak, located on the island of Borneo. Both Sabah and Sarawak are collectively known as East Malaysia. The total land mass of Malaysia is 330,290 square kilometres, of which Sabah and Sarawak comprise 60% and Peninsular Malaysia 40% of the total land mass (Department of Statistics, Malaysia, 2013). Despite being smaller in total area, 80% of the population live in Peninsula Malaysia (Jomo et al., 2004).

Malaysia is culturally diverse with many ethnicities and religions co-existing alongside each other. The official religion is Islam and both civil and Syariah courts operate alongside each other, with Syariah law applicable only to Muslims. The estimated 29.95 million population is made up of Malays who are Muslims (55%), other *Bumiputera* (indigenous peoples) (13%), Chinese (24%) and Indians (7.2%), others (0.9%) and residents who are non-Malaysian citizens (8.6%) (Department of Statistics, Malaysia, 2013).¹

The administration of the state of Malaysia bears similarity to that of the United Kingdom. It is constitutional monarchy with three tiers of government – federal, state and local/municipal. Federal and state-level elections are held once every five years, but municipal elections were abolished in the mid-1960s (Jomo et al., 2004, p. 10). The federal constitution defines the power of each level of government, and the federal government sets policies for finance, defence, education, development and other matters considered as part of national interest. The state governments have jurisdiction over natural resources such as land, water, minerals and forest resources, with the exception of petroleum and natural gas.

Tun Dr Mahathir Mohammad, the fourth Prime Minister of Malaysia, was in power from 1981-2003. He is seen as the ‘father’ of modern Malaysia and the one responsible for Malaysia’s fast economic growth based on export-oriented policies in the manufacturing sector (predominantly electronics) which has attracted mainly Japanese foreign direct investment (FDI). In 2005, Malaysia’s Gross Domestic Product (GDP) per capita was estimated to be USD 4,970, with real GDP averaging 6% per annum since 2003 (World Bank, 2007). In 2012, GDP per capita had increased to USD 10,432 with an economic growth of 5.6% (World Bank, 2014). The national poverty line was estimated at 1.7% of the population and life expectancy at birth was 75 years (World Bank, 2014). Historically, Malaysia’s economy was dominated by the export of primary commodities such as rubber, tin and palm oil. This changed dramatically in the last two decades of the 20th century. This shift from agriculture to manufacturing is

¹ These figures are 2013 adjusted numbers provided by the Department of Statistics, Malaysia, based on the 2010 population census. Malay Muslims are also considered *Bumiputera* which translates as ‘sons of the soil’ to indicate indigeneity. However, since the majority of *Bumiputera* are Malay and Muslims, they have been categorised separately from other *Bumiputera* groups in the census.

demonstrated in the demographics of the rural population. In 1990, 50.2% of the total population was rural but by 2012, only 27% remained rural (World Bank, 2007, 2014).

The rapid economic growth from the 1980s was stimulated by the government's export oriented growth policies which encouraged FDI, especially Japanese FDI (Gomez and Jomo, 1997). One direct result was the Asian Rare Earth (ARE) factory, a Japanese FDI, located in Bukit Merah, near Ipoh, the capital of the state of Perak, which began operations in 1982. The ARE processed tin tailings to extract rare earth elements for export to Japan and other developed countries such as Australia and the USA. This was a joint venture between a Japanese multinational company, Mitsubishi Kasei (Mitsubishi Chemicals), and two Malaysian firms.

The fast economic growth and simultaneous urban expansion have also placed tremendous pressures on industrial and domestic waste management, especially in and around Kuala Lumpur, the capital of Malaysia. Kuala Lumpur, like many cities in Southeast Asia and Asia, is dependent on landfills as a means of waste disposal. Not only is the total amount of rubbish increasing, thereby causing landfills to be used beyond their capacity, but also the new type of rubbish produced by an increasingly affluent society may not be suitable for landfills. Incinerators are increasingly seen as the solution to this problem. Thus in 2003, Dr Mahathir and his cabinet approved the construction of what would become known as the Broga incinerator (Jayasankaran, 2006).

1.3 Broga and Bukit Merah campaigns

There are many environmental campaigns that have been and are being conducted in Malaysia. They are diverse and varied; yet while some use the concepts and discourses of environmental justice in their campaigning, others do not. These environmental campaigns include issues such as deforestation and indigenous peoples' rights, the appropriation of agricultural land for development projects, such as golf courses and industrial aquaculture, the pollution of rivers and coastal areas with industrial and

agricultural waste, the construction of incinerators, air pollution,² radiation pollution, cyanide poisoning and pollution from gold mining operations and others (www.sarawakreport.org; Consumers Association of Penang and Sahabat Alam Malaysia, 1997; Keck and Sikkink, 1998; Stop the Haze Campaign, www.gec.org.my; Tariq, 2013; Raman, 2014). The research focuses on two environmental conflicts which utilise environmental justice concepts and discourses in their campaigns: the Broga Anti-Incinerator Campaign and the campaign launched by the Perak Anti-Radioactive Action Committee (PARC) in Bukit Merah, which I refer to as the Bukit Merah campaign. Table 1 below summarises the main features of both campaigns.

BROGA CAMPAIGN	BUKIT MERAH CAMPAIGN
<ul style="list-style-type: none"> • Location: Semenyih, District of Hulu Langat, Selangor. Part of the village of Broga is located in Lenggeng, Negeri Sembilan. • Approximately 50 km south-east of Kuala Lumpur. • Length of campaign: 2003-2006 • A New Village; working-class village and pre-dominantly Chinese with nearby ethnically mixed, middle-class neighbourhoods • Grassroots campaigners consist of: smallholders of rubber plantations (these are owners of small plots of land who tap their own rubber trees); fruit, fish and vegetable farmers; middle-class professionals. • Campaign motivated by: <ul style="list-style-type: none"> ➢ Potential long-term damage to health and the environment. 	<ul style="list-style-type: none"> • Location: Kinta District, Perak. • Eight km from Ipoh; 200 km north of Kuala Lumpur. • Length of campaign: 1984-1994 • A New Village; working-class and pre-dominantly Chinese. • Grassroots campaigners consist of: farmers; shopkeepers; workers in backyard industries (e.g. metal soldering) and in shoe manufacturing. • Campaign motivated by: <ul style="list-style-type: none"> ➢ Indiscriminate disposal of low-level radioactive waste. ➢ Experiences of ill health

² Malaysia, Indonesia and Singapore experience, annually, hazardous air pollution from the burning of forests that are cleared for the expansion of oil palm plantations on the islands of Sumatra and Borneo. Singapore and the southern half of Peninsula Malaysia especially, are blanketed by a thick haze for several weeks each year (Asia Sentinel, 2011; Chachavalpongpon, 2013). The levels for PM 2.5 (fine particles smaller than 2.5 microns in diameter) were hazardous in Singapore and Malaysia for a few weeks in March and April 2014 (Chua, 2014). In this period, more than 200 schools in Kuala Lumpur and Selangor were closed because of the hazardous air pollution levels (New Straits Times, 2014).

<ul style="list-style-type: none"> • Incinerator to be constructed by the Japanese waste management company, Ebara Corporation. The proponent of the project was the Ministry of Housing and Local Government. • Litigation: to prevent the incinerator from being built. 	<p>(leukaemia, stillborn babies, miscarriages, lead poisoning, skin irritations, difficulty breathing, etc.)</p> <ul style="list-style-type: none"> ➤ Potential long-term damage to health and the environment • A Japanese-Malaysian joint-venture investment between Mitsubishi Kasei and Malaysian companies Tabung Haji and BEH Chemicals. • Litigation: to seek the permanent shutdown of the Asian Rare Earth facility and proper disposal of low level radioactive waste.
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Table 1.1 The Broga and Bukit Merah campaigns at a glance

Broga

Residents who lived near the proposed Broga incinerator launched a campaign to prevent an incinerator from being built. In the thesis, this campaign will be referred to as the Broga campaign. The Broga thermal treatment plant, capable of incinerating 1,500 tonnes of rubbish a day, was seen as the solution to the waste produced by Kuala Lumpur and its satellite towns (Straits Times, 2003; Theophilus, 2006). The proponent of the incinerator project was the Ministry of Housing and Local Government (in Malay, *Kementerian Perumahan dan Kerajaan Tempatan* (KPKT))³ but the incinerator would be built by a Japanese waste management company, Ebara Corporation. The initial proposed site of the incinerator was to be in Puchong, a town 21 km south-west of Kuala Lumpur. However, middle-class residents living near Puchong succeeded in cancelling the proposed project in their neighbourhood through partisan electoral advocacy. The project was subsequently relocated to Broga New Village (NV), a more rural and remote site, less than 50 km southeast of Kuala Lumpur. Here, even though it is historically a rural and remote site, it is today the location of several local and international universities, including the United Kingdom’s University of Nottingham Malaysian campus, as well as several middle-class and prosperous neighbourhoods. In 2003, at the time the Broga campaign began, besides the village of Broga, other human

³ As of 2013, this Ministry has been renamed The Ministry of Urban Wellbeing, Housing and Local Government. From henceforth, this Ministry will be referred to as KPKT, its Malay acronym, in the thesis.

settlements near the location of the proposed incinerator site were the University of Nottingham and one middle-class housing development called Taman Tasik Semenyih (TTS). TTS is home to many middle-class professionals – e.g. engineers, university lecturers, geologists, accountants. The first wave of protest was led by these residents in TTS but they were subsequently joined by residents of Broga NV who were mostly from a lower-income group. All campaigners raised the issues of distributive justice, pollution risks and the lack of trust in a corrupt government. They expressed their fears of an industrial accident at the proposed waste incinerator as a result of poor quality of construction as frequently witnessed in many government projects as a result of kickbacks and corruption. They also expressed concerns with a lack of a culture of proper maintenance. However, the proposed incinerator was cancelled in August 2006 and the ongoing court case brought by Ms Alice Lee, then a resident of Broga NV, ceased.

Bukit Merah

The residents of Bukit Merah NV launched a campaign in 1984 against the operations of the Asian Rare Earth (ARE) facility, which began operations in 1982 in Bukit Merah to extract rare earth elements from tin tailings. Campaigning actually began with villagers from Papan NV, six km from Bukit Merah NV, where construction work began in 1984 for the storage of low-level radioactive waste, in an area surrounded by houses, fruit orchards, vegetable and fish farms. Villagers of Papan set up a road blockade to prevent construction of the storage facility near their village. The location of the waste storage site was later moved to Bukit Kledang,⁴ where today stands the world's largest long-term storage facility for low-level radioactive waste produced from a rare earth extraction facility (Bradsher, 2011b). Subsequently, Bukit Merah NV residents joined the campaign and became the dominant campaigners as they realised that waste from the ARE facility was being indiscriminately dumped where they lived, worked and played. Manufacturing processes emitted ionising radiation and waste produced contained low-level radioactivity. Many villagers experienced ill health, such as difficulty breathing and skin irritations. There were also cases of congenital birth defects, stillbirths, miscarriages, leukaemia and unexplained deaths in healthy adults

⁴ The long-term storage facility is located at these coordinates: N 04° 32.803' and E 101° 00.948'. I visited this site with a monitoring team from the Atomic Energy Licensing Board (AELB) of Malaysia on 10-08-2010. Although this is a different site from the original one located in Papan, it is not far from Papan and is six km from Bukit Merah NV.

(Consumers' Association of Penang, 1993). After the protests at Papan NV began, and with the involvement of environmental and consumer NGOs, Bukit Merah villagers began to link their experiences of ill health to the operations of the ARE. As a result, eight Bukit Merah residents, representing Bukit Merah NV, went to court in 1985 to seek: a permanent shut-down of the ARE, the proper disposal of any waste produced and the clean-up of waste which had already been indiscriminately dumped. A temporary court injunction for the ARE to cease operations was granted by the Ipoh High Court. However, by February 1987, the ARE had resumed operations. A full court hearing commenced later in 1987 which ended with the Ipoh High Court ruling in favour of the Bukit Merah villagers in July 1992. However, upon appeal by the ARE at the Federal level, the Supreme Court of Malaysia overturned the ruling by the Ipoh High Court and awarded costs to the ARE. The awarded costs were not claimed by the ARE from the Bukit Merah villagers.

1.4 Approach to the research

Semi-structured interviews were the key elements of the research. I conducted 47 semi-structured interviews and one focus group discussion with the village committee of Broga.⁵ Interview participants were made up of affected residents (who were from both low-income and middle-income groups), activists, NGO representatives, journalists, consultants and government officials. Stakeholders from both sides of both conflicts were interviewed so as to thoroughly understand the multiple perspectives in regard to the campaigns of Broga and Bukit Merah. I recorded interviews when permitted, which was the case for the majority of participants. I took notes when interview participants were not willing to be recorded and also wrote-up other observations and further details as soon as I possibly could, which would usually be at night after the interview during the day. Further synthesis and summations were made from recordings and notes of interviews. Some interviews were transcribed in full. Chapter Four discusses in detail the research methodology and fieldwork carried out.

⁵ The village committee, or in Malay, *Jawatankuasa Kemajuan dan Keselamatan Kampung* (JKKK), exists in every village in Malaysia and functions to ensure the smooth-running of each village. For example, a JKKK helps to ensure the enforcement of the rules and regulations of the local council.

Textual analysis was carried out on the documents gathered. These were campaign materials such as e-mails, memos, minutes-of-meetings, campaign publications and information flyers, press releases, interview transcripts, and other published materials such as online and print media news articles, publications of environmental NGOs, information from Malaysian government websites and others relevant to the research.

I relied on Loh (1998), Weiss (2003, 2006) and Gomez and Jomo (1999) as key references to the history of New Villages (NVs), politics and political economy of Malaysia.

1.5 Terms and concepts

Before I proceed further, it is useful to clarify the use of several terms and concepts in the thesis. I use the term ‘grassroots’ or ‘grassroots campaigners’ to refer to residents who lived near both the proposed Broga incinerator and ARE facility, who were directly affected by pollution risks and who decided to join the campaigns to protest against these two projects. As such, the term ‘grassroots campaigners’ include citizens from a wide range of backgrounds: from low- to middle-income groups and all manners of professions and occupation. Those NGOs, activists and opposition political party members who supported the campaigns but did not live anywhere physically near those two projects (in other words, they were not directly affected by pollution risks from the proposed incinerator or the ARE facility) are not ‘grassroots campaigners’.

In the thesis, the terms ‘civil society’ or ‘civil society agents’ are used to refer to NGOs, individual activists and organisations that are not part of a government or business interests. Civil society in Malaysia is structured in a comparable way to its counterparts elsewhere, even though it does not conform exactly to all Western standards that are premised on a liberal democratic framework (Weiss, 2006, p. 25). I use the term ‘civil society’ in the thesis in a normative sense to refer to all associations outside the state, that are both politically engaged as well as those that are not, such as sports, community and cultural associations (see Weiss, 2006). Many individual activists acted in their own personal capacity and did not represent any organisation. However, many of them had backgrounds in academia or journalism. The Malaysian NGOs involved in both

campaigns were mainly those concerned with environment-related issues and human rights.

Many environmental justice conflicts are also referred to as risk conflicts. The use of the term 'risk conflict' in the thesis refers to the use of such a term by Beck (1992) in his seminal book *Risk Society: towards a new modernity*. Many environmental justice conflicts involve issues of risk as discussed in *Risk Society*, where threats to human health, animals, plants and generally, the world's environment are caused by man-made hazards, such as nuclear weapons, radioactive waste, pesticides and other environmental toxins and pollutants (Beck, 1992). As such, Beck (1992) has posited the risk society theory to explain not just the increasing concern that industrialised societies demonstrate towards these hazards, but also the deep questioning (reflexive society) of the 'relations of definition' (the legal, political and cultural institutions as well as the epistemology of knowledge) which has brought about these hazardous conditions. Industrialised societies today are considered by Beck (1992) as being in a state of reflexive modernity because they not only question and criticise 'relations of definition', but also rise up in public dissent in response to environmental concerns. Some examples of public dissent are public protests, the boycotting of goods and green consumerism. Since the two case studies in the thesis involve protests against pollution risks caused by ionising radiation and incineration, I sometimes refer to those case studies as risk conflicts. The term 'lay public' refer to members of the general public who do not possess scientific training or membership in scientific institutions in contrast to scientific expertise and institutions (Irwin, 1995). Further discussions of ideas of risk (adverse effects) and risk assessment are found in Chapter Three.

The terms 'state' and 'government' are used interchangeably in the thesis despite the state being a larger entity of which the government is but one part of. This is because in Malaysia, the state is seen as the government and vice versa, because the same ruling coalition the *Barisan Nasional*, led by UMNO (United Malays National Organisation), have ruled Malaysia since independence in 1957. A more detailed history of *Barisan Nasional* is provided in Chapter Four. According to Migdal (2001, p. 13), Max Weber's definition of the modern state as a compulsory association which organises domination, has come to dominate twentieth-century social science. In this version, a modern state is defined by a government which controls all the people found within a bounded

territory; Migdal (2001) regards this definition an ‘image’ of what a state is. This definition does not provide an explanation as to why in Malaysia, the state and government are often regarded as one. Migdal’s (2001) alternative explanation of the state offers an insight into why the state and government might possibly be elided into one entity in the case of Malaysia. Migdal (2001) defines the state as both image and practice in his ‘state-in-society’ theory (2001, p. 16-23). In this theory,

[T]he state is a field of power marked by the use the threat of violence and shaped by (1) *the image of a coherent, controlling organization in a territory, which is a representation of the people bounded by that territory*, and (2) *the actual practice of its multiple parts* (Migdal, 2001, p. 16).

It is this second half of Migdal’s definition of the state as practice that is relevant here. Practices of the state reinforce the image or myth of the state as well as work against it. In other words, practises or routinised performative acts also define the state (Migdal, 2001, p. 19). Therefore, Malaysians, who have routinely, in their daily lives, experienced the Malaysian state since 1957 as having been ruled by the same coalition government that have behaved, acted and performed in the same manner, have come to view the Malaysian state and government as one. Foucault calls these practices ‘tactics of governmentality,’ which he separates from image, as key to the survival of the state. He says:

It is the tactics of government which make possible the continual definition and redefinition of what is within the competence of the state and what is not, the public versus the private, and so on; thus the state can only be understood in its survival and its limits on the basis of the general tactics of governmentality (Foucault, 1991, cited in Migdal, 2001, p. 18).

The thesis views the state in a similar way to Foucault’s ‘governmentality’ and Migdal’s ‘state-in-society’ theory in terms of the multiplicity and contested nature of practices/performances of the state.

Another term that is often used in the thesis is the word ‘frame’. A frame is an interpretive schemata or lenses through which social movements define problems, attribute responsibility for the injustice and point to solutions that can be undertaken through collective action (Snow et al., 1986; Carroll, 1997; Tarrow, 1998). Framing involves aligning individual interests, values and beliefs so they are congruent and complementary to the activities, goals and ideology of a campaign. Frame alignment

involves how campaigners position themselves, the discourses that are used to articulate their aims and how collective identity is formed (Snow et al., 1986). In other words, framing (or a frame), specifically refers to processes of how social movements define their problems and objectives, build a collective identity and also find solutions to their problems.

1.6 Structure of the thesis

After Chapter One, Chapter Two provides detailed case study descriptions of both the Broga and Bukit Merah campaigns. Chapter Three provides a detailed discussion of the theoretical concepts that underpin the issues raised in the research. Chapter Three draws from the environmental justice and social movement literature as well as that of science and technology and citizenship studies. In Chapter Four, the methodology, methods, interpretation, analysis and validation techniques used to carry out the research are discussed. This is followed by an examination of the political economy and development pathways taken by the Malaysian government, as well as the history of the formation of New Villages in Chapter Five. This is done in order to provide a background within which to understand the specificities of both environmental campaigns. In the same chapter, issues of sustainable development and how the Malaysian government responded to the anti-tropical timber trade campaign in the 1980s and 1990s is also discussed since these issues are also relevant to the analyses of the thesis. Chapters Six, Seven and Eight analyse and interpret the primary and secondary data gathered during the two field trips to Malaysia. In response to research question (1), Chapter Six analyses the views and responses of the state and business interests towards the campaign demands of Broga and Bukit Merah; Chapter Seven, in response to research question (2), gives voice to the understandings expressed by campaigners as to why they protested. Chapter Eight continues to respond to research question (2) by further examining the wide-range of discourses used to frame the demands of campaigners, as well as the tactics or strategies pursued to realise those demands. Such an examination will also shed light on how the environmental justice frame travels globally (research question (3)). The examination of campaign discourses and practices in Chapter Eight, also raises questions and debates that link the literature of environmental justice to that of environmental citizenship. Thus in Chapter Nine, I investigate how the two campaigns can be understood in terms of the global travel of

the environmental justice frame (research question (3)), how such an analysis of travel would help rethink the environmental justice frame in a post-colonial and developing country context (research question (4)) and how concepts of environmental justice are linked to that of environmental citizenship (research question (5)). The thesis then concludes in Chapter Ten with the findings of the research and a summary of the main arguments.

CHAPTER TWO

THE BROGA AND BUKIT MEARH CASE STUDIES

This chapter describes in detail the campaigns of Broga and Bukit Merah in the format of case studies. As mentioned in the previous chapter, the case studies were chosen based on their similarities and on the time difference separating the start of each campaign. Both campaigns utilised an environmental justice frame in order to make demands for justice. The time difference, 19 years, between the start of each of the campaigns allows for the comparison of how each campaigners developed in different political and social contexts. It also enables a close examination of how environmental justice concepts and discourses had evolved over that period in Malaysia.

2.1 Case study one: the Broga Anti-Incinerator Campaign

The Broga thermal treatment plant, capable of incinerating 1,500 tonnes of rubbish a day and costing 1.5 billion ringgit⁶ (USD 422 million) was seen as the solution to the 5,500 tonnes of waste produced daily in the Klang Valley (an area that includes Kuala Lumpur and its satellite towns) (New Straits Times, 2003; Theophilus, 2006). The plant was estimated to be ready for operation in 2007 (New Straits Times, 2003). The incinerator project was touted as Asia's largest and would be built using Japanese technology and funded by a soft loan from the Japan Bank for International Co-operation (Theophilus, 2002a). The main contractor for the construction of the project was to be a Japanese company, Ebara Corporation and would be managed jointly by a consortium of four consultants: Tokyo-based Yachiyo Engineering Company Limited, Malaysian-based companies of Minconsult Sendirian Berhad,⁷ HSS Integrated Sendirian Berhad and Environmental and Engineering Consultants Sendirian Berhad (Theophilus, 2002a).

The incinerator was originally to be located in Kampung Bohol, Puchong, a working-class industrial area south-west of Kuala Lumpur (Jayasankaran, 2002). However,

⁶ The Malaysian unit of currency.

⁷ The Malay term *Sendirian Berhad* means Company Limited.

Puchong is within a five km radius of three affluent, middle-class areas of Bukit Indah (population 216,400), Kinrara (population 43,270) and Bukit Jalil (population 12,150), and other areas within the Subang Jaya municipality (a middle-class satellite town of Kuala Lumpur) (Loone, 2002). Residents of the affluent middle-class areas of Petaling Jaya (another satellite town of Kuala Lumpur) were also involved in campaigning as Petaling Jaya is adjacent to Subang Jaya. All these middle-class residents threatened to vote for the opposition in the next general elections if the incinerator was not moved to a less populated area or to a forest reserve⁸ (Theophilus, 2002a). They were organised, well-funded through voluntary donations and had the advantage of the time and efforts of a volunteer coordinator who could afford to work more than full-time organising a campaign (Fieldnotes, 27-07-2009). One of the main points of discontent voiced by the middle-class population was the lack of consultation with their municipal council (the Subang Jaya Municipal Council) in the Federal government's decision to build the incinerator in Puchong.

Eventually, in a decision hailed as a victory for community empowerment, the government announced that the Puchong incinerator was to be relocated to a small village called Broga, less than 50 km south of Kuala Lumpur, on the border of the states of Selangor and Negeri Sembilan in November 2002 (Theophilus, 2002b; Straits Times, 2003).

The village of Broga is largely made up of clusters of communities⁹ whose livelihoods are largely tied to the rural economy – small landholders growing rubber trees, vegetables and fruit trees and farming fish, all mostly geared for the Kuala Lumpur market (Fieldnotes, 17-06-2006). Broga is surrounded by several hills which are mostly forested, but some have been logged and in the distant past, mined for tin. It is a popular weekend destination for Kuala Lumpur and Klang Valley (the area surrounding Kuala Lumpur) hill walkers/joggers. However, due to its geographical proximity to Kuala Lumpur and its conurbation of smaller towns and urban areas, there are some Broga villagers who work in waged employment further afield, outside of Broga.

⁸ They threatened to unseat five Members of Parliament from the ruling coalition in the 2004 general elections.

⁹ Although the population of Broga is largely Chinese, there are Malay, Indian and Orang Asli (the indigenous peoples of Peninsula Malaysia) communities living within the village.

The proposed incinerator would be located on a slope with a gradient of 25 degrees; something not permitted by environmental regulations (Malaysiakini, 2003c). Like the second case study of Bukit Merah, Broga is also a New Village. Broga has several seafood restaurants that serve fish straight from the fish farms – this is something attractive to largely urban, Chinese residents of Kuala Lumpur. They come to Broga, seeking fresh seafood and enjoyment of rural greenery. Besides those rural communities, there are also several middle-class housing areas around Broga (within 2 km) whose residents have moved from Kuala Lumpur in order to escape the city's noise and pollution. Both the rural and middle-class residents of Broga protested and successfully obtained a temporary injunction to stop the construction of the incinerator, citing a right to information for details of the project, the absence of an approved detailed Environmental Impact Assessment, a lack of consultation with affected residents and the unknown impact on public health. When the injunction expired, work on the incinerator began.

The Broga campaign attracted the support and involvement of human rights and environmental non-governmental organisations, academics (who lived near Broga in Taman Tasik Semenyih) and opposition political parties, DAP (the Chinese-dominated Democratic Action Party) and PAS (*Parti Islam SeMalaysia*).¹⁰ The involvement resulted in villagers of the Broga campaign declaring '*Siapa tolong, kami sokong*,' meaning that the villagers would vote for whoever helped them stop the incinerator project (i.e. partisan electoral advocacy).

Broga campaigners also sought legal justice. However, only one person from the campaign volunteered herself to take the government to court. The sole plaintiff in the court case seeking a temporary injunction against the construction of the Broga incinerator was Ms Alice Lee, a Chinese woman who was born and brought up in Broga. She was also the main protagonist in an independent documentary film entitled '*Alice Lives Here*',¹¹ that was largely considered to have been responsible for contributing to heightened media and public attention in the anti-incinerator campaign

¹⁰ PAS is an Islamic political party.

¹¹ Directed by Mr Jules Ong and filmed in 2005. It won the Justin Louise Award (Amateur category) at the Malaysian Freedom Film Festival in August 2005.

(Interview, Mr Jules Ong, Petaling Jaya, 19-08-2009). In this half hour documentary which was widely shown in public talks during the Broga campaign, Ms Lee was represented as a strong woman who metamorphosed from a non-political, timid, rural simpleton into a politically conscious, brave and knowledgeable activist ('Alice Lives Here,' 2005, www.youtube.com/watch?v=5576hl6Uv_w). The film also showed that this metamorphosis happened because of her desire to save her community and home from pollution risks posed by the proposed incinerator. Ms Lee was described in the film as having changed dramatically through her experiences of campaigning, through her ascendancy from timid participant to pro-active co-leader of the Broga anti-incinerator campaign. Besides focusing on the political awakening of Ms Lee, the documentary also showed how livelihoods and the environment risked being destroyed and polluted if the incinerator was built. A river which flowed beside the site of the proposed incinerator provided water to 1.5 million urban residents in Kuala Lumpur and its conurbation, and the film pointed out how the safety of the drinking water would be threatened if the incinerator was built. The film also showed Ms Lee talking about her concern for Broga villagers at being deprived of their livelihoods, as their rubber plantations and fruit orchards (mainly planted with the *durian* fruit) were compulsorily purchased under the Land Acquisition Act. Ms Lee further pointed out that while 28 families would receive compensation when their lands, located on the proposed site of the incinerator, were compulsorily purchased by the Malaysian government, there were a further 80 families who would not be receiving compensation despite the fact that their lands surrounded the site of the proposed incinerator ('Alice Lives Here,' 2005 www.youtube.com/watch?v=5576hl6Uv_w). These 80 families would not be able to continue farming their rubber plantations or fruit orchards because of pollution and safety risks as a result of being located at close proximity (less than two km) to the site of the proposed incinerator ('Alice Lives Here,' 2005, www.youtube.com/watch?v=5576hl6Uv_w).

The way Ms Lee was portrayed and described in the documentary film was not something novel or new because many environmental campaigns have been condensed into and represented through the subject position of a particular individual, and in many cases, a woman (Mehta, 2005). For example, rural women who formed the iconic and international 1980s image as tree huggers in trying to resist industrial forestry and logging in rural Himalayan forests in the Indian state of Uttar Pradesh have been

described as ecofeminists (Mies and Shiva, 1993). Such industrial logging activities were causing rural women to experience a lack of firewood and fodder as well as water for drinking and irrigation. Water sources were drying up in deforested rural areas. The prolonged protests of those Uttar Pradesh rural women came to be known as the Chipko movement, and the women were regarded, described and represented as ‘natural’ protectors of both rural livelihoods as well as the environment (Mies and Shiva, 1993). The ‘natural’ tendency came from being women who were socialised in patriarchal societies to take on the responsibility as caregivers and nurturers. This capacity as nurturers also made them defenders of the environment (Mies and Shiva, 1993). Thus, there is a connection between the principles of feminism and the principles of ecology because the worldview that causes a culture of male domination and exploitation is also the same worldview that gives rise to environmental degradation and injustice (Mies and Shiva, 1993). In this view, women were regarded as ‘natural’ ecofeminists as well as ecowarriors for their role as protectors of the environment. Therefore, the portrayal of Ms Lee as committed, caring and as protecting her village, livelihoods and the environment in the documentary film was not an extraordinary portrayal, but was instead one that called upon a history of ecofeminist activism which had long been researched, theorised and debated at a global level (Griffin, 1978; Caldecott and Leland, 1983; Diamond and Orenstein, 1990; Mies and Shiva, 1993; Thomas-Slayter and Rocheleau, 1995). Such a portrayal achieved the objective of eliciting sympathy for the Broga campaign when the documentary film was shown at public screenings. The implications of this type of portrayal of the role played by Ms Lee will be examined in further detail in Chapter Eight.

The Broga incinerator project was first mooted and approved by the cabinet of Dr Mahathir. However, when Dr Mahathir retired, the new Prime Minister Abdullah Badawi who succeeded him, decided to scrap the Broga project in August 2006 (Jayasankaran, 2006). No reason was given at that time, but many campaigners believed that their campaign had an influence in this decision. Subsequently, in August 2007, the then Deputy Prime Minister, Datuk Seri Najib Razak (at present, the Prime Minister), said that the project was scrapped because the construction and maintenance costs were too high (Loh and Sim, 2007).

2.2 Case study two: The Perak Anti-Radioactive Action Committee (PARC) (Referred to as the Bukit Merah Campaign in the thesis)

In 1982, the Asian Rare Earth (ARE) factory had begun full operations in Bukit Merah, a small Chinese New Village of some 10,000 inhabitants and located eight kilometres outside of Ipoh, the state capital of Perak (Todd, 1991). The inhabitants were largely small farmers (many with insecure land tenure), labourers, shopkeepers and workers in small backyard industries (e.g. metal welders). In previous decades, Perak was the largest producer of tin in Malaysia, thus tin and its associated industries abound. The ARE extracted monazite and zenotime, rare earth elements, from tin tailings. With further processing useful compounds such as yttrium oxide is extracted for commercial use to manufacture incandescent gaslight mantels, chemical catalysts and pigments, which are used in colour television.¹² These compounds would be mainly exported to the United States, Australia and Japan (Nair, 1984). The waste produced in the manufacturing process contained thorium hydroxide, a radioactive material, in the form of wet sludge, which also contained uranium, barium and lead salts. The extraction process also involved the use of large quantities of volatile, strong acids and alkalis, and acidic fumes (such as hydrogen sulphide and sulphur dioxide) were released in the manufacturing processes.

The ARE was jointly owned by Japan's Mitsubishi Chemical Industries Limited (35%), and two Malaysian concerns, Beh Minerals (35%), Tabung Haji (20%) and other *Bumiputera* businessmen (10%) (Consumers' Association Penang, 1993; Harding, 1996). Whereas Beh Minerals was a Chinese company, Tabung Haji was a Muslim pilgrim management fund. Radioactive waste produced by the ARE was not only improperly stored on-site on factory grounds, it was also illegally dumped both into nearby ponds, a nearby stream and adjacent lands where children would play football and where villagers took their evening walks. There were also vegetable farms close to the ARE and adjacent to the lands where the radioactive waste was being dumped.

Despite the dangers of being exposed to radioactive waste, the villagers of Bukit Merah were unaware of this until November 1983 after the ARE had applied to the Nuclear

¹² Today, rare earth elements are used in the manufacture of smartphones and smartbombs, and in green technology such as wind turbines and hybrid cars.

Energy Unit under the Prime Minister's Department for permission to store the thorium waste six kilometres away in the village of Papan (Nair, 1984). The waste was regarded as valuable since it had the future potential to be used in nuclear reactors if the technology was developed (such technology has yet to be developed as of 2013).¹³ Hence, the Perak state government claimed the storage of waste at Papan would be temporary until such a time it could be utilised in nuclear reactors.¹⁴ Papan villagers protested against this for health and safety concerns and for the fact their fish farms, orchards and houses were barely one kilometre away from the proposed disposal site on a plateau hewn out of the slope of a hill (Berthelsen, 1984).

The state government offered to compensate and relocate the Papan villagers to a new site two kilometres away, not just because of the waste disposal site project, but also because it had already awarded a mining company a permit to mine the tin found underneath the village of Papan (Berthelsen, 1984). However, although some villagers had accepted the relocation offer in relation to the tin mining issue, 2,000 remained and refused to move (Berthelsen, 1984). As the issue of the dangers of radioactive exposure gathered pace, it drew the engagement of NGOs and political parties of both the opposition and the ruling coalition. A Papan Support Group was formed, consisting of mainly the NGO community, and who could engage with the technical arguments that were being made by the Federal and State governments. *Gerakan* and the MCA, two Chinese parties within the ruling coalition *Barisan Nasional*, competed with the opposition party, DAP, to represent the villagers in their attempts to stop the project. A small contingent of UMNO (the dominant party in *Barisan Nasional*) also competed for representation.

However, public attention soon turned from Papan to Bukit Merah as the villagers of Bukit Merah realised that their experiences of ill health in the recent past were not accidental. Adults and children of Bukit Merah were experiencing ill health – skin irritations and respiratory problems; and falling ill frequently with the common cold. Some pregnant women had either miscarried in late pregnancy or delivered stillborn

¹³ This is something contentious. Internationally, many experts believe this would not happen as it is too expensive and complex to use such waste as fuel for nuclear power generation (Bacon, 2012; Schmidt, 2013).

¹⁴ Malaysia did not have nuclear power plants then but at the moment there are ongoing efforts to develop the first nuclear power plant (see www.nuclearmalaysia.gov.my)

babies (Todd, 1988). A medical doctor, Dr T. Jayabalan, representing the Consumers' Association of Penang (CAP), recorded five cases of congenital birth defects, seven cases of lymphoblastic leukaemia in the young (aged six to eighteen years of age) and several mysterious deaths (Consumers' Association of Penang, 1993, pp. 40-45). Two of these mysterious deaths were caused by meningoencephalitis accompanied by depressed white blood cell counts (the deceased were aged 22 and 13 years), while the third death involved a two-year old boy who died of septicaemia, also accompanied by a depressed white blood cell count. CAP is an NGO based in Penang, Malaysia who not only helped to launch an international campaign for the Bukit Merah residents, but also provided legal representation as well as conducted tests in children of Bukit Merah for lead poisoning (see pp. 246-248, **Box 9.1 Consumers' Association of Penang** for the role of CAP). Those records of ill health, leukaemia, birth defects, miscarriages and stillbirths, mysterious deaths and the results of the lead poisoning tests were used in the court case brought by Bukit Merah residents against the ARE.

These tests were carried out by Dr Jayabalan and he received help in interpreting the results from Dr Rosalie Bertell, radiation and public health expert and also President of the International Institute of Concern for Public Health (IICPH), Canada; as well as help from IICPH's toxicologist and physician consultant, Dr Brian Gibson. Dr Bertell estimated that the incidence of leukaemia in children under the age of 13 in Bukit Merah was 35 times higher than the national average. She carried out her calculations by comparing the number of recorded Bukit Merah cases of leukaemia between 1987 and 1990, to a 1986-1988 national study of childhood leukaemia rates by Professor Lin Hai Peng, University Malaya. Professor Lin found the incidence of leukaemia to be 3.4 cases annually per 100,000 children below the age of 13. This meant that for Bukit Merah NV with 1,500 children in the same age group, the incidence rate for leukaemia would be 0.05 cases per year (Consumers' Association of Penang, 1993, p. 42). However, there were seven reported cases from 1987-1990, making the incidence rate 35 times higher.

In June 1987, Dr Jayabalan conducted tests on 60 children (Consumers' Association of Penang, 1993, p. 45-46). This was four months after the ARE resumed operations after a period of a court-enforced shutdown in 1985. All the 60 children had lead levels above four microgrammes per decilitre (ug/dl), the level that is considered safe

(Consumers' Association of Penang, 1993, p. 46). The average blood lead level was 12 ug/dl. Four of the children had toxic lead levels, all above 20 ug/dl. In addition to the blood tests, 90 percent of the children had bluish colouration between the gums and teeth, an indication of lead poisoning (Consumers' Association of Penang, 1993, p. 46). The children also had lowered white blood cell counts, which ranged from 4,850-11,600 per cubic millimetre (mm^3) (averaging 7,208 per mm^3). The normal range is considered to be between 8,000 -10,000 per mm^3 (Consumers' Association of Penang, 1993, p. 47). The children's average monocyte count was 207 per mm^3 ; compared with 325 per mm^3 , which was considered to be healthy (Consumers' Association of Penang, 1993, p. 48). A year later, in June 1988, 44 of the 60 children were again tested for lead poisoning. The average blood lead level was 27.5 ug/dl, higher than the previous year (Consumers' Association of Penang, 1993, p. 45) .

High levels of lead were also found in soil, plants and water (from the Serokai River adjacent to the ARE) samples taken near the ARE (Consumers' Association of Penang, 1993, p. 46). Lead was also found in vegetables grown in lands near the ARE and using water from the Serokai River. These vegetables were sold for consumption within Bukit Merah NV. The drinking water supply was also tested for lead levels, and were found to be between 0.02-0.05 parts per million (ppm), within the 0.05 ppm considered to be the safe level (Consumers' Association of Penang, 1993, p. 46). Therefore, Dr Jayabalan concluded that Bukit Merah's piped water was not a contributory source of lead toxicity in the village, and that the most likely source was the ARE facility.

A medical fund was set up, which received contributions from individuals and organisations based in Malaysia and Japan. As of 2009, there were still four recipients above the age of 20 whose families received monthly stipends of RM150 from this medical fund in order to assist with the cost of living with disabilities. Those who had leukaemia had long since passed away. The four recipients were born with congenital defects and medical problems and were unable to live independently and needed round-the-clock care (Interview, Hew Yoon Tat, Bukit Merah, 13-08-2009).

Those personal experiences of health issues such as ill health, leukaemia, congenital birth defects, miscarriages and stillbirths, mysterious deaths and the results of the lead poisoning tests, led the people of Bukit Merah to believe that exposure to and ingestion

of the radioactive (and lead containing) wastes produced by the ARE, as well as radiation and acid fumes released from the rare earth extraction processes caused all these health issues. Below is what Wong Siew Ying, a widow with five children and sole breadwinner for her family, had to say about why she took part in the Bukit Merah campaign:

We have managed to survive as a family so far. I am now working in a cottage industry, making shoes. I also do any part-time work I can lay my hands on – construction work, painting or anything else. I manage to earn around RM 9 per day and I work from 8 in the morning to 6 in the evening. . . . It was strange how I started falling sick so often. I had no appetite and was always down with a cold. My children were falling sick too. I then heard that the radioactive level in the area was too high. I was not surprised. I knew something was wrong as my neighbours were falling ill too. I am doing all I can to help close down the plant. How can we let a factory produce dangerous substances? We at Bukit Merah are poor, simple folk, but we have a right to lead healthy lives. What makes me fight hardest is my children. I have worked so hard all these years to keep them alive and I've been successful so far and I'm not going to stop now (Wong Siew Ying, aged 54, cited in Consumers' Association of Penang, 1993, pp. 35-36).

The residents of Bukit Merah then formed the Perak Anti-Radioactive Action Committee (PARC) in order to campaign for the permanent closure of the ARE facility. In September 1985, eight Bukit Merah residents and members of the PARC went to court on behalf of other residents of Bukit Merah, to seek an injunction against ARE producing, storing and keeping radioactive wastes in the vicinity of the village. Despite a temporary court injunction to cease operation in October 1985, by February 1987, the ARE was in full operation after obtaining a licence issued by a newly formed regulatory body, the Atomic Energy Licensing Board (AELB). The licence certified that ARE had complied with the standards of the International Atomic Energy Agency for safe radioactive waste disposal. The reason for resuming operations was justified in court by the ARE counsel, Mr R. Chelliah, on grounds that the temporary injunction was conditional upon satisfying certain safety regulations. Since these had been fulfilled, the ARE could resume operations after the issuance of a new licence by the AELB (Chan and Leong, 1987; Leong, 1987).¹⁵

¹⁵ The temporary operating licence previously held by the ARE was authorised by the Health Ministry before the formation of the AELB.

The full court hearings of the case against the ARE brought by the seven (the eighth had throat cancer and passed away) Bukit Merah residents began in September 1987 and ended in February 1990. The hearings lasted 29 months. In July 1992, another 29 months after the last day of the court hearings, the Ipoh High Court judge, Justice Peh, announced his decision in favour of PARC. This victory was short-lived. The following month, the Supreme Court gave permission for the appeal by ARE to proceed and that in the meantime, allowed the ARE to resume operations. The justification provided was that closure of the ARE would bring hardship to the company and its 183 workers (Hong, 1992).

Finally, 16 months later, the ARE's appeal was finally heard before the Supreme Court in Kuala Lumpur in December 1993. The Ipoh High Court order for ARE to cease operations was overturned. The following day, Malaysian newspapers, quoting the Asahi Shimbun (a Japanese newspaper), reported that Mitsubishi Kasei Corporation announced its intention to withdraw from the ARE joint venture in Malaysia (Business Times, New Straits Times, 1993; Berita Harian, 1993). Subsequently, in January 1994, the Chairman of ARE, Ayub Mohamad Yatim, released a statement saying the ARE would shut down soon (Chong, 1993). Such an announcement seemed astounding to many observers of the Bukit Merah court case, who then concluded that the overturning of the Ipoh High Court order was an exercise in face-saving for Mitsubishi.

Due to a combination of factors, including lack of employment opportunities, low wages, lack of available land nearby for farming and the fears of harm to health and safety because of the ARE facility, the population of Bukit Merah has steadily dwindled. In the late 1980s and early 1990s, the population was approximately 10,000 (Interview, Mr Hew Yoon Tat, Bukit Merah, 13-08-2009; Faun Kum Yin, 1994). By 2009, there were less than 7,000 residents and the number of primary school pupils attending the only primary school in Bukit Merah decreased from 1,000 to 300 (Interview, Mr Hew Yoon Tat, Bukit Merah, 13-08-2009). Many residents have moved away as employment opportunities arose elsewhere in free trade zones in Penang, Kuala Lumpur and Singapore. As part of a multiple livelihood strategy in the 1980s and 1990s, many residents also worked overseas as temporary migrant labourers in countries such as Taiwan and Japan.

2.3 Conclusion

There were many similarities between the Broga and Bukit Merah campaigns despite the two decades that separated the start of each of the campaigns. In both campaigns, campaigners were concerned with the safe disposal of waste, the impact of pollution on their health and safety and the environment. Both campaigns undertook litigation in Malaysian courts, and launched international campaigns to demand justice and accountability. Furthermore, both the proposed incinerator and the Asian Rare Earth facility were joint business ventures between Malaysian and Japanese companies. The similarities do not stop there: Broga and Bukit Merah both share a common history of being New Villages, which were created to intern the Chinese rural population during the Communist Insurgency years.

Despite the similarities, there were also other experiences unique to each of the two campaigns. For example, in Bukit Merah, personal experiences of ill health and of leukaemia stood out as key issues that motivated campaigning; while in Broga, the role and portrayal of Ms Alice Lee as one of the leading campaigners stood out as important to campaign strategy.

This chapter has provided in-depth and detailed descriptions of the case studies of Broga and Bukit Merah. These descriptions are important because they enable the specificities as well as similarities of each of the campaigns to emerge. A more nuanced background of each of the campaigns is thus revealed. The next chapter proceeds on to an examination of the theoretical concepts that underpin the research.

CHAPTER THREE

THEORETICAL UNDERPINNINGS

This chapter explores the theoretical concepts that underpin the investigation of the Broga and Bukit Merah campaigns. In order to unpack the meanings of the two campaigns, I examined how and why those two campaigns were launched, and why they took a particular form. This examination involved eliciting both the perspectives of the campaigners as well as the state and business interests who supported the Broga incinerator project and the Asian Rare Earth facility. My research lies at the intersection of three bodies of literature: social movements and environmental justice theories; the interrelated fields of study of science and technology studies, the sociology of scientific knowledge and development studies; and environmental citizenship. I draw mainly on theories of social movements and environmental justice in order to analyse the discourses and practices of both campaigns. These theories are used to make sense of the articulations of campaigners and the way campaigners sought to conduct their campaigns. Such an investigation underlies research questions (2) and (3) which ask how campaigners demanded their rights and challenged the responsibilities of the state and business interests, and why such demands took the form they did, particularly in the light of the ways environmental justice concepts and discourse have been taken up in Malaysia (p. 15, **Chapter 1.1 Research questions**). The research also seeks to provide an analysis and interpretation of the responses of the state and business interests to demands for justice and accountability by campaigners, and how this takes shape in relation to Malaysia's colonial and postcolonial history, and the particularities of its political economic context (research question (1), p. 15, **Chapter 1.1 Research questions**).

The final research question (4) asks what the connections are between environmental justice and environmental citizenship, which arose from the overlaps in issues of democratic politics found in both literature of environmental justice and environmental citizenship. I explore the implications of the two campaigns for contemporary theorising of citizenship, specifically environmental citizenship. I draw attention to the literature linking environmental justice to environmental citizenship for two reasons.

First, concepts of environmental citizenship help to strengthen arguments for environmental justice and vice versa. Arguments for justice and rights made from the position of citizens actively claiming and demanding accountability, further strengthens such arguments. Furthermore, the issues of distributive justice, recognition and participation found in the Broga and Bukit Merah campaigns are also issues of democratic politics, and hence, clearly inter-relate with citizenship issues. Second, the turn towards making links between issues of environmental justice theories with those in citizenship studies is not only about improving democracy, but also about finding a better basis from which to understand many Third World environmental conflicts where issues of social justice, nature, rights and citizenship are inextricably linked (Wittman, 2009). By critically offering visions of participation through the idea that campaigners are bearers of knowledge and agency that are linked to their identities, cultures, values, ways of life and international solidarity networks, campaigners offer up an alternative vision of citizenship (Leach et al., 2005). By making connections between issues of environmental justice with those of environmental citizenship, the research on Broga and Bukit Merah contributes to those calls for the enlarging of environmental citizenship debates towards balancing rights with responsibilities, instead of focusing on personal responsibility and ethics (Latta, 2007; Smith and Pangsapa, 2008).

The overarching conceptual framework, thus starts at the intersection of three large bodies of literature. It engages with several theoretical themes that are multi-layered, overlapping and interlinked due to the interconnected nature of the different issues raised in the research. While theoretical criss-crossing is an ambitious endeavour, it is necessary in this study. Environmental justice scholars call for multi-disciplinary research precisely because of the multi-layered and overlapping nature of the many different issues found in environmental justice conflicts (Taylor, 2000; Brulle and Pellow, 2005; Schlosberg, 2007; Holifield et al., 2010; Walker, 2012). The research here draws and builds on debates that have developed in three different disciplinary contexts in order to thoroughly understand the implications of the conflicts in Broga and Bukit Merah. By explicitly linking overlapping issues across the three disciplines, the research extends and deepens the conceptions of environmental justice and environmental citizenship. This chapter is therefore organised around a discussion of these three bodies of literature, and the kinds of questions they raise in relation to the two Malaysian case studies.

Before this chapter proceeds any further, I would like to draw attention to fundamental premises that run through the entire thesis. First, the research takes the perspective that any conflict is a phenomenon that is historically-and place-bound, therefore, it has to be contextualised within the greater political economy and historical and socio-cultural roots of the phenomenon (Pellow, 2003; Peet and Watts, 2004; Robbins, 2004). For this reason, in Chapter Five, a political economy and historical background to Malaysia is discussed in terms of its relevance to understanding both the Broga and Bukit Merah campaigns. Second, the research also considers nature or the environment and knowledge as social constructions, therefore, the thesis also critically examines power and social relations embedded within historical and political processes (Fairhead and Leach, 1996; Taylor, 2000). The research places both campaigns within the particular political time frame of when each of those campaigns unfolded, as well as those historical processes that influence power and social relations between the state and its citizens (Chapter Five). By embedding both campaigns within the political economy, historical processes and social and power relations found in Malaysia, a more nuanced explanation of the phenomena of the Broga and Bukit Merah conflicts is formed.

3.1 Social movement theories

In order to understand collective action, many environmental justice scholars have relied on social movement theories to make sense of mobilisation rhetoric, discourses, strategies, demands, growth and spread of environmental justice movements (Taylor, 2000; Schlosberg, 2007). While environmental justice discourses originated in the United States of America (USA or US), it has in the last decade experienced renewed attention as it moved into other countries and broadened in scope (Schlosberg, 2004, 2007; Walker 2009, 2012). Many activists and campaigners of environmental justice conflicts in developing countries such as in South Africa, draw inspiration and ideas from similar conflicts in the US (Debbane and Keil, 2004; Schroeder et al., 2008; Walker, 2012). In the cases of Broga and Bukit Merah in Malaysia, inspiration is also found from the same source (see pp. 246-248, **Box 9.1, Consumers' Association of Penang**). However, environmental justice discourses and ideas have not been borrowed unchanged from the USA, but rather have been adapted to suit local conditions to galvanise collective action for change in conflicts where issues of the environment and social justice intertwine (Schlosberg, 2007; Walker, 2012). Therefore, any theoretical

underpinnings of environmental justice debates, are linked to and interface with those origins and are examined as well for how local adaptation takes place (Debbane and Keil, 2004; Schroeder et al., 2008).

The theorising of environmental justice has become a field in its own right, drawing on social movement theories to make sense of collective action (Schlosberg, 2007). In the case of environmental justice theorising, it focuses specifically on explaining collective action in the area where issues of social justice and the environment intersect. Hence, it cannot be separated from social movement theorising, and it makes sense to understand how social movement theorising has contributed to environmental justice theorising. A social movement is defined by the organisation of collective action or resistance for change (Carroll, 1997). There are different approaches to social movement theorising by scholars who examine collective action (Tilly, 1988; Melucci, 1989; McAdam, 1996; Edelman, 2001; Tilly and Tarrow, 2007). The research draws on political process as well as new social movement (NSM) theories (also known as identity politics). This is because NSM theories resonate more with issues of competing values, and with different conceptions and meanings expressed by campaigners, thereby calling into question the nexus of power and knowledge (Snow et al. 1986; Melucci, 1989; Edelman, 2001). In other words, NSM theories focused on ideas and discourses of a social movement, and how these ideas and discourses have been used to persuade people to organise collective action (that is to say, what were the ideas or arguments used or made to persuade people to support a particular campaign and to bring about collective action for change?). These issues of competing values, different conceptions and meanings are directly relevant to environmental justice's concerns with issues of recognition and participation.

NSM theories are predominantly European in origin and also popularly utilised by Latin American scholars while the social movement theories popular in the US began with resource mobilisation theory (RMT), which then developed into what is known today as the political process/political opportunity structure approach (PP/POS) (Buechler, 1995; McAdam, 1996; Carroll, 1997; Stanmiers, 1998; Edelman, 2001). While NSM theorising focuses on ideas and discourses, RMT focuses on the mechanisms and material aspects of what facilitates or hinders movement mobilisation (Tilly, 1988). In this understanding of movements, a social group engages in rational pursuit of its

common interests by pooling together resources (examples: money, labour, equipment, skills) to pursue a collective good/interest (e.g. higher wages and tighter environmental regulations). One of the criticisms (and by no means the only one) of RMT is about how RMT does not address consciousness in the way that NSM theories do. In focusing on tangible resources, the RMT does not take into account social-psychological contexts, discursive aspects of movement demands or formation, nor does it account for broader cultural transformation within which movements form and continue to exist (i.e. political consciousness, agency and collective identity formation). For example, it is not possible for resources to be pooled within a movement unless the organisation creates a collective will to participate, in other words, what is the frame used by a social movement? (Snow et al., 1986; Carroll and Ratner, 1996; Carroll, 1997). A frame allows for a common understanding of issues, goals and strategies of a social movement, but RMT does not address these issues.

Framing refers to a process as well as a category of discourse, through which the consciousness and understandings of a movement are analysed and where collective identity is formed. Based on these understandings, collective demands or claims for justice are made and collective actions are decided upon (Snow et al., 1986; Walker, 2012, p. 4). Carroll (1997, p. 16) defines a frame as an ‘. . . interpretive schemata through which movements define certain conditions as unjust, attribute responsibility for the injustice, and point to alternatives that might be achieved through collective action’. This type of frame will allow a common understanding of the issues, goals and strategies of a social movement that can resonate with members of a movement, as well as the wider public in order to recruit new members and gain wider public support (Snow et al., 1986). Thus, framing processes are concerned with issues such as consciousness, collective identity formation and agency.

Issues of consciousness, identity and agency are issues that concern NSM theorists. Therefore, concerns of framing processes overlap with that of NSM. Increasingly, proponents of POS came to see those concerns as one aspect of a broader political process that now had greater emphasis on cultural-historical sources of mobilisation, and called for the fusing of the US and the European paradigms. The result is the political process approach (PP) where organisation resources/strength, political opportunities, and insurgent consciousness (labelled ‘framing’) are the three central

categories of analysis (Tarrow, 1998). Thus, in Chapters Eight, I examine the frames used in the Broga and Bukit Merah campaigns: what discourses are used by campaigners to frame campaign issues; how issues and problems are defined and explained; and what solutions or campaign objectives are identified based on these definitions.

Therefore, the political process approach today involves examining three categories: mobilisation structures (or mechanisms), political opportunities and framing processes. Mobilisation structures and political opportunities both explain how movements form and engage in collective action by looking at mechanisms of organisation and the kind of political structures that help to determine the strategies used. The political process approach has developed in a more nuanced way into a ‘contentious politics’ approach (McAdam et al, 2001; Tilly and Tarrow, 2007). While the contentious politics approach also examines the three categories of mobilisation structures, political opportunities and framing in order to theorise social movements, this perspective pays more attention to the role of the state and state processes which ‘allow for’ or ‘bargain’ with activists. In other words, here, there is an emphasis on how state construction allows for protests (Lichbach, 2010). The importance of the role of the state in ‘accommodating’ protests is why the issue of political change and development is addressed in Chapter Five - to foreground the context within which the Broga and Bukit Merah campaigns took place and which influenced the trajectories of the campaigns.

I have divided the discussions on social movement organising into two sections: new social movements and transnational advocacy networks. The next section examines movement organising from the perspective of ‘framing’ whereas the discussions that follows, examines movement organising from the perspective of international advocacy campaigning.

New social movements

How this method of analysis is relevant to understanding the demonstrations seen in Broga and Bukit Merah is the emphasis on consciousness, agency and collective identity and through challenges that overturn dominant codes in protest actions (Melucci, 1989). New social movement (NSM) theories talk about social movements in a very different manner from the old left (Marxist theory and working-class struggle

traditions), whose political practices are state-centred, instrumentalist and modernist. They have also been labelled identity politics because they seek not to contest power, but to expose and reveal that which is hidden or excluded from decision-making processes. The focus is on 'collective identity' formation because the aim is to draw attention to the relationship between identity and various forms of oppression or injustice (Melucci, 1989). So for example, gay rights and women's rights movements have been regarded as new social movements because they highlight the injustices experienced due to sexual orientation and gender, respectively. Likewise in environmental justice struggles, attention is drawn to racial discrimination in locating polluting industries, or toxic dumping (Bullard, 1993). Thus, in the cases of Broga and Bukit Merah, I not only asked experts, consultants, government officials and business interests what their views were in terms of how decisions were made to locate particular industries, I also asked campaigners why they felt they were experiencing injustices and if they thought racial discrimination was a factor in locating polluting industries or waste storage facilities.

Alberto Melucci's (1989) *Nomads of the present: social movements and individual needs in contemporary society* portrays contemporary social movements as responses to complex societies of late modernity. New forms of popular resistance are organised around a constructed collective identity, and '... symbolic challenges which publicize novel dilemmas and problems, the clarification of which requires new freedom and recognition of new rights and responsibilities' (Melucci, 1989, p. 11). Social movements are based on discursive practices that will transform people's thinking about important issues such as power, reason, consciousness, development and democracy. In other words, through personal and cultural transformations that are not accommodated within existing institutions, NSMs can potentially reshape discursive politics in a radical manner. NSMs are networks of meaning whose collective identities are produced from ongoing practices submerged in their daily lives. Thus the creation of temporary spaces for the free expression of identity (or, the contestation for the democracy of every day life) is important (Bartholomew and Mayer, 1992). For example, when people portray themselves as openly gay in a protest, a challenge is being thrown to dominant codes. This creation of a constructed identity (of being openly gay) in a public, yet temporary space, reveals and exposes the fact that heterosexual communities do not allow gay people the same rights. Questions

surrounding sexuality are made visible and collective. These actions are seen as radical because in exposing power, movements pose ‘. . . symbolic challenges that overturn the dominant cultural codes’ (Melucci, 1989, p. 75). Likewise, dominant cultural codes were overturned when many different ethnic groups came together to form a multi-racial campaign in the Broga anti-incinerator protests (Chapter Nine).

I am aware of criticisms of the cultural reductionism directed at Melucci’s NSM theory in regards to the way Melucci’s constructions of identity do not address power relations. According to Bartholomew and Mayer (1992, p. 145), constructions of identity depend partially on present and past political engagements with the state, and that these ‘. . . inscription of relations of inequality and domination’ embedded in symbolic codes and regulations are not explained by Melucci. Despite this, the contribution of NSM theories is to call attention to the importance of injustice or oppression experienced based on collective identity (whose formation process is seen as socially constructed), and to the agency of protesters who, by their protest repertoire and discourses used, make explicit demands to address those injustices. This is seen as an empowering process for the individual or community or group involved in those protest actions (Eyerman and Jamison, 1991). This concept or concern with empowerment enables the exploration of the meanings and development of political consciousness and agency in campaigners in Broga and Bukit Merah (Chapter Nine). Understanding the limitations and potential of NSM theories has meant that investigations of the research have not remained focused only on the main concerns of NSM theories such as collective identity formation (poor people unfairly and unjustly burdened with radiation and dioxin risks) and questions of agency (claims-making for accountability such as rights to information and participation). The investigations in the research, while appropriating the concerns of NSM theories also go beyond them. Paying heed to the criticisms of the lack of an exploration of power relations, the research also explores the implications of historical and current power relations which contribute to the expressed lack of trust between the state and business interests with that of the protesting campaigners (Chapters Five and Seven).

The contributions of NSM theories to the understanding of the nature and characteristics of social movements cannot be overstated. Take for example, the concern with collective identity formation, and its association with the use of language

or 'frame' to persuade supporters to join and unite together in a common struggle. Dwivedi (1998) examined the anti-dam campaign, Narmada Bachao Andolan (NBA) in India over the Sardar Sarovar Projects (SSP, or popularly known as the Narmada Dams projects). In conducting this study, Dwivedi (1998) used social movement theories to examine three aspects of movement formation and development of the NBA. The first was how networks of social relationships could function within a wider political structure of opportunities and constraints. The second was on the construction of identity and its related practices based on the understanding of the protesters of themselves on who they were and why they were protesting. In the construction of collective identity, Dwivedi (1998) analysed articulatory and cognitive practices (discourses and understandings of campaigners) through focusing on the language of protest (Eyerman and Jamison, 1991; Laclau and Mouffe, 2001). He also further analysed how systems of meaning and knowledge were produced through the creation of collective identity (Dwivedi, 1998).

The articulatory politics of the NBA evolved around an amalgamation of identity and values to produce a 'highest meaning' (Dwivedi, 1998, p. 161). This meant an amalgamation of multiple discourses, often holding together conflicting idioms. For example, displacement risks and resettlement provisions, environmental impacts and sustainability issues, appraisal and evaluation techniques of dam projects, democratic rights to decision-making, alternative development and appropriate technology, Western growth model and neo-imperialism, indigenous knowledge and others. All of these discourses were drawn into a frame opposing the SSP, on the basis that the SSP was producing inequality, non-sustainability and inefficiency. Therefore, the network support of the NBA involved a wide range of activists: animal rights activists, peasant and indigenous peoples' organisations, action groups working among slum dwellers, trade union groups, women's organisation, environmental organisations and others.

In essence, what was created was an over-arching frame with the 'highest meaning' of alternative politics/development. The 'highest meaning' was deliberately constructed by conflating multiple discourses so constituents could plant and find their own interest and values. Therefore, Dwivedi (1998, p. 162) concluded that the significance of a contemporary movement like the NBA was not in its offers of alternative visions of development but in politicising risks (risk politics).

It is this conceptual lesson on the focus on the language of protest (discourses) and how meaning and knowledge are produced through the processes of collective identity formation, that point to the importance of exploring the discourses used by campaigners of Broga and Bukit Merah, and the importance of exploring the understandings of what the conflicts were about as expressed by the campaigners. What were the discourses and shared collective identity that campaigners rallied under? What kinds of discourses (or language of protest) were used to make arguments for justice and accountability?

It is important to note that the formation of collective identities does not mean that movements are homogenous (Melucci, 1989). Cardoso (1987, quoted in Escobar and Alvarez 1992: 6) has also said: 'Movements form a unity only when we look at them from the outside searching for similarities. If we prioritize their differences, they cease to form a uniform object, showing their fragmentation'. In other words, movements are heterogenous and diverse precisely because people and relationships evolve with time and history. As highlighted by Melucci (1989) and Laclau and Mouffe (2001), a collective identity is often constructed out of conflicting roles and positions. This is a necessary task because the question of a shared identity is intimately linked to movement strategy (Escobar and Alvarez, 1992). Therefore, these concerns led me to investigate, through the interviews conducted, questions of social differences. Was there a diverse range of interests amongst villagers, and between villagers and middle-class residents of Broga/other middle-class activists in both campaigns? If so, how did campaigners manage to collectively identify with or express support for the Broga and Bukit Merah campaigns? These issues will be analysed in detail in Chapter Eight.

Transnational advocacy networks

I investigate the mobilisation strategies used in the Broga and Bukit Merah campaigns. Both campaigns not only went to the law courts to seek justice, they also campaigned internationally using transnational advocacy networks (TAN) (Keck and Sikkink, 1998). The TANs campaigning model was widely used in the Broga and Bukit Merah campaigns. These campaigns exceeded the political space of the nation state, and the approach of TAN has emerged due to the context of globalising political processes and the growth of technologies that support and facilitate this type of international campaigning. What were the effects of this type of campaigning in Broga and Bukit Merah? (Chapters Eight and Nine).

Today, many movements (environmentalism, human rights, feminism, opposition to unfettered free trade and corporate power) are increasingly transnational in nature and theoretical work has reflected this trend with an explosion of research on concepts of global civil society and transnational activism in the 1990s (Keck and Sikkink, 1998; Tarrow, 2005). Global meetings such as the United Nation's global women's meetings,¹⁶ the 1992 Earth Summit and NGO forums held in parallel to all these meetings as well as with the World Bank, International Monetary Fund and Group of Seven Industrialised Countries' meetings held throughout the 1980s up to the present day, presented opportunities for activists and issues to connect (Brecher et al., 2000). Activists from a wide range of backgrounds – identity-and class-based and post-materialist movements - had opportunities to intermingle as never before. Together with the advancement of new electronic communication technologies and the development of cheaper air travel, opportunities for information exchange, personal contact and cross-border organising, increased significantly (Keck and Sikkink, 1998). These new internationalisms contain many elements that have been theorised both within the political process approach and NSM theories.

The concept of TAN combines the concerns of political process and NSM theories by examining mobilisation strategies (structures), political opportunities and framing (discourses, consciousness and agency) (Keck and Sikkink, 1998). The TAN approach begins by analysing nodal organisations that link local or national campaigns/issues to international ones using a network that includes the media, unions, social movements, NGOs, governmental as well as intergovernmental organisations. Campaigners try to make state governments change their behaviour or policies by going over their heads to an international platform (such as the United Nations or other governments) to bring pressure to bear on the state. Keck and Sikkink (1998) call this the 'boomerang pattern'. By putting pressure/leverage on governments to change their behaviour domestically through going over their heads to other governments or multilateral organisations to which states may depend on for material (usually economic or military aid) support, campaigns can successfully achieve their aims. Furthermore, the boomerang strategy assumes that the mobilisation of shame, where the behaviour of state are held up for international scrutiny, shames governments into changing their behaviour because they

¹⁶ The World Conferences on Women held every five years are organised by the Commission on the Status of Women, United Nations Entity for Gender Equality and the Empowerment of Women.

value the opinion of others and want to maintain a good reputation. International contacts, in the form of international NGOs and/or another state ‘ . . . can amplify the demands of domestic groups, pry open space for new issues, and then echo back these demands into the domestic area’ (Keck and Sikkink, 1998, p. 12). Political entrepreneurs are necessary to do this amplifying job. They also go venue shopping whereby they decide which type of arena would be best for the objectives of the campaign to be aired (Keck and Sikkink, 1998). Political entrepreneurs are those people who travel to international conferences or to meet with other international contacts to promote their networks and further their objectives and to strengthen network ties with activists from other countries. At the period of the Bukit Merah campaign in the 1980s, Malaysian NGOs were already active in TANs (Consumers Association of Penang, 1993). An example would be Consumers’ Association of Penang (CAP) based in Penang, Malaysia who had experience as political entrepreneurs who went venue shopping in order to bring about the ‘boomerang pattern’. The role of CAP and the effect this has had on both the Broga and Bukit Merah campaigns will be analysed in Chapters Eight and Nine.

Keck and Sikkink’s boomerang theory resonates with calls by environmental justice researchers to pay attention to the scales of mobilisation. How have environmental justice activists responded to a new neoliberal political-economic landscape where corporations are powerful figures (Pellow, 2001; Bickerstaff and Agyeman, 2009)? In broadening links with regional and international activists and networks, how have the nature, work and agency of activists changed (Bickerstaff and Agyeman, 2009)? Due to the fact that many transboundary environmental injustice struggles are related to or have roots in a globalised political-economic agenda, many local activists have been compelled to campaign on a global scale as shall be examined in greater detail in Chapter Eight.

3.2. Environmental justice theories

A second area of debate on which this study draws and to which it contributes is environmental justice theories. An environmental justice movement or campaign is a particular type of social movement and is classified as such because it embraces ‘ . . . the principle that all people and communities are entitled to equal protection of

environmental and public health laws and regulation' (Bullard, 1996). Although movements are widely varied, concerning themselves with a wide range of issues, they usually involve community groups with the help of non-governmental organisations organising against polluters and various government institutions in charge of regulating, disposing and managing environmental hazards (Szasz, 1994). The question of injustice in terms of the unequal distribution of environmental burdens is viewed through the lens of race, class and gender bias (Taylor, 2000). In other words, the movement recognises that oppression can arise not only from a single bias, but also from a combination of those biases that can be interlocking and inseparable (Taylor, 2000, p. 523).

The theorising of environmental justice conflicts originated with scholars in the USA (Bullard, 1994; Taylor, 2000; Schlosberg, 2007; Walker, 2012) The ideas found within the arguments made by campaigners, activists and organisations in environmental justice conflicts are made up of a very complex ideological package consisting of several principles that make up one coherent body of thought (Taylor, 2000, p. 539). Besides concerns with issues of distributive justice, some other issues of concern, as observed in Broga and Bukit Merah campaigns, are recognition (values, alternative knowledges and socio-cultural identities) and participation in decision making-processes. While all these issues are present in earlier efforts to define environmental justice movements as outlined in the *Principles of Environmental Justice*¹⁷ in 1991 (Taylor, 2000; pp. 566-567), most 'first generation' research concentrated on the unequal distribution of environmental burdens associated with race (Walker, 2009). In the 1980s in the US, research on environmental justice movements had resulted in two important studies that linked race with a greater chance of being exposed to toxic waste and other hazardous environmental conditions. They are: *Siting of hazardous waste*

¹⁷ This document came from The First National People of Color Environmental Leadership Summit held in the USA in 1991. The terms *environmental justice* and *environmental justice movement* emerged out of a series of meetings and workshops held in preparation for the 1991 Leadership Summit (Taylor, 2000, p. 537). The 17 principles that defined environmental justice was listed in this document as: concerns of social, racial and economic justice; community empowerment; democratic accountability; participation in decision-making processes; recognition and respect for differences in culture; issues of self-determination and sovereignty; eco-centric principles; environmental education; opposition to militarization; and social movement building (Bryant, 1995; Bullard, 1994; Taylor, 2000). Unfortunately, many of these concerns have become lost in the abundance of literature on environmental justice which emphasised the twin elements of race and equity as found in the 'first generation' of environmental justice research (Schlosberg, 2007, p. 74).

landfills and their correlation with the racial and socio-economic status of surrounding communities, authored by the US General Accounting Office 1983; and *Toxic waste and race in the United States: A national report on the racial and socio-economic characteristics of communities with hazardous waste sites*, authored by the United Church of Christ in 1987 (Taylor, 2000; Schlosbery, 2007). The latter report was especially important as it made an explicit connection between race and increased chances of being exposed to toxic waste and pollutants and thus, radicalised many activists in the US (Taylor, 2000, p. 535). Another good example of ‘first generation’ environmental justice research is Bullard’s (1994) seminal work, *Dumping in Dixie: race, class and environmental quality*. In this book, Bullard (1994) examines several case studies across several states in the US where polluting industries, garbage dumps and hazardous waste end up in poor, powerless, black (or ethnic minority) communities (Bullard, 1994). He also investigated environmental degradation in inner-city poor, ethnic minority neighbourhoods where there were poor air and water quality and where many basic municipal services were not available. He considered these situations to be not only unequal, but also unjust, and labelled it as environmental apartheid (Bullard, 1994).

It is not only the idea of environmental racism which has come out of environmental justice movements. Other ideas of environmental justice have also influenced thinking in environmental movements in the West. Although the environmental injustice arguments have been used by various environmental activists for more than a century, these arguments are primarily framed in terms of humans harming nature and unequal resource consumption within and between generations (Taylor, 2000; Tesh and Williams, 1996). In the 1960s, environmental activists, Rachael Carson, used a new type of injustice argument by linking several issues or frames together: she linked human health, pesticide contamination and wildlife health and survival in her book *Silent Spring* (Carson, 1962). She argued that people had a right to be protected by their government and to expect not to be harmed by corporations. However, if they were harmed, they had a right to redress. This type of injustice framing resonated with many people and so her movement gained many new supporters. What was novel about Carson’s framing of injustice was the idea that environmental problems were connected to people’s lives through the relationships between human health, toxins and nature. In the post-Carson era, a broader view of environmentalism was expressed by various

movements that critiqued the development of highly technical, large and energy-intensive industries such as nuclear facilities. Many activists holding this view had experiences in the antinuclear and civil rights movements (Milbraith, 1984). This new environmental frame, exhibiting post-materialist values and criticising the destruction of natural resources, favoured population control, pollution preventions, risk reduction and environmental clean-ups (Milbraith, 1984; Taylor, 2000). An example would be the thinking (and positions taken) on environmental issues of the Friends of the Earth International (www.foei.org).

Environmental justice theorising today

Environmental justice theorising has rapidly expanded since the ‘first generation’ research. It is today recognised that the environmental justice discourses involve different concepts of justice, such as procedural justice in terms of access to information, to legal justice and to decision-making processes, and also, ideas of recognition (Young, 1990; Schlosberg, 2007; Walker 2012). Schlosberg (2007) says, in reference to global movements that use environmental justice discourses:

These movements encompass notions of *environmental* justice because in each of the individual foci, part of what is to be distributed are environmental goods and bads, part of what is to be recognized are cultural and/or traditional ways of living with nature, one aspect of participatory demands relate to environmental decision-making, and capabilities and individual and community functioning are seen as threatened by environmental ills (Schlosberg, 2007, p. 81).

Through his study, Schlosberg’s (2007) calls for a diverse and plural definition of environmental justice that includes four categories of justice. These are: distributive justice (equity in the distribution of environmental risk), recognition of the diversity of identities and knowledges, participation in decision making-processes and the conditions or abilities to develop one’s capabilities to realise one’s highest potential (the capabilities approach). However, not all concepts of justice are present in all cases of environmental justice, just that some level of the concept of justice exists and are applied in a varied manner on different issues (Schlosberg, 2007, p. 173). In other words, Schlosberg is aiming for a broad and unified understanding of the term *environmental justice* and not ‘. . . a singular, universal, and unitary definition’ (2007: 98). This thesis asks what kinds of categories of justice are found in the Broga and

Bukit Merah campaigns through the examination of campaigners' views, discourses and practices in Chapters Seven and Eight.

Schlosberg's broadening of the concept of environmental justice into four notions/categories of justice has been influenced by developments in the justice literature in political theory (Schlosberg, 2007, pp. 1-5). Most work on justice in the last few decades has followed in the liberal tradition of John Rawls, that regarded justice as a singular notion of distributive inequality. Rawls' classic 1971 work, *A Theory of Justice*, develops a conceptual framework of justice for individuals focusing on how and what gets distributed in a just society. It has been hugely influential and has dominated studies of justice (Rawls, 1971; Schlosberg, 2007). Rawls (1971) believes all that is needed to arrive at a fair notion of justice is to begin from an imaginary original position where all are equal and ignorant of their strengths, weaknesses and positions in society. From this point of ignorance or impartiality then, anyone can develop principles of justice that are equitable to all of society (Schlosberg, 2007, p. 13). Young (1990), Fraser (1997) and Sen and Nussbaum (1992) have found shortcomings in this singular conception of justice. Young (1990), writing on the conceptions of oppression and its implications on theories of justice through the study of NSMs from the 1960s in the US, finds Rawls' imaginary position untenable because the real world of political injustice does not exist in a vacuum. She argues that the processes that have resulted in maldistribution must be investigated in the first instance because existing distributional patterns happen for a reason. In her research, she examines what determines poor distribution and argues that part of the reason for this is because there is a lack of recognition of group difference. She sees distributional injustice as coming directly out of social and institutional structures as well as cultural beliefs. In order to redress this injustice and undermine oppression, it is not enough to only focus on distribution, it is also necessary to acknowledge and attend to group differences. In other words, if inequality is partly as a result of social, cultural, political and economic processes, then any form of redress must also address not just structures but also practices, rules, norms, language and symbols that mediate social relations (Young, 1990, pp. 15-38). Thus, it is not just political and economic restructuring that are needed but also cultural and symbolic changes. Young (1990) and Fraser (1997) further argue that when respect and recognition is lacking, there is also a corresponding decline in participation in the greater political and institutional order. They also then argue for more democratic

decision-making procedures so that participation is possible for individuals or groups that lack recognition. The recognition-participation connections, share a similar intellectual genealogy as NSM concepts of consciousness, identity and agency.

It is clear that notions of justice have expanded beyond notions of equitable state distributions. Young (1990) and Fraser's (1997, 2000) arguments for recognition, participation and equitable distribution together, have also been supported by the capabilities approach or framework. This is a theory of justice developed by Sen and Nussbaum, economist and philosopher, respectively, in regards to human well-being and quality of life (Nussbaum and Sen, 1992). Sen uses the capabilities approach as a measure of the quality of life in different countries and argues this is a better indicator than a country's economic growth or GNP (Gross National Product) (Sen and Nussbaum, 1992; Sen, 1985, 1999). It is not enough that the redistribution of basic goods is the aim of economic growth, but more importantly, how that is translated into human well-being and functioning so that one has the capabilities to '... choose a life one has reason to value' (Sen, 1999, p. 74). What this means is that though one may have excess to basic goods but if one does not have the ability to use these – for example, due to poor health – then one will not flourish. It is this lack of flourishing that is an injustice. Thus the capabilities approach considers the wide-ranging variety of activities that are required for human beings to flourish, such as, for example, access to health care, political freedom and social affiliation. Another example would be the ability to read. Reading is a functioning and so the capability required is education or literacy; thus, following the capabilities framework, education would be a capability required in order to be fully functional in reading. Therefore, the triad of justice – equitable distribution, recognition and participation – would all be capabilities that are necessary for the full flourishing of life. Indeed, the triad of justice are recurring themes within the environmental justice frame and thus, the research pays particular attention to such articulations by campaigners in Broga and Bukit Merah.

How do environmental justice concepts travel?

Environmental justice concepts travelled far and wide across the globe and demands for environmental justice have been used by movements concerned with issues ranging from climate change, indigenous/cultural rights and knowledge and to critiques of the globalisation of the food supply system (Schlosberg, 2007). In a study of websites of

environmental justice movements in the US, Benford (2005) found that more than 50 issues were all covered by the umbrella term of environmental justice. It is clear that environmental justice as a call resonates at a global level despite being quite different from the original environmental justice discourse in the US (Schlosberg 2007, p. 81). According to Scholosberg (2007) there are three key differences. First, for most global movements, the environmental justice discourse utilised has been often one component of a larger discourse of social justice and is based on the context of local conditions and discourses; the issues at hand may or may not be about environmental contamination. Second, the environmental justice movement in the US draws on a pre-existing history of a race-based civil rights movement that is rarely seen elsewhere, although indigenous peoples' movements may use some of the same rhetoric and strategies. Third, the US movement had at their disposal detailed demographic data that linked the location of polluting industries or hazardous facilities to poor communities whose residents have moderate or low income and are more likely to be members of ethnic minority groups (see also Szasz and Meuser, 2000, p. 602). This is something that is often not available to other movements globally, especially in the Global South (Schlosberg, 2007; Walker, 2012). The use of this type of data is directly linked to the fact that under US civil rights law, compensation is possible if there is evidence of discrimination based on race.

Therefore, many environmental justice researchers as well as those who study environmental movements generally have been preoccupied with the question of whether or not it is possible to speak of a global environmental justice or environmental movement (Martinez-Alier, 2002; Debbane and Keil, 2004; Pellow, 2007; Rootes, 2007; Schroeder et al., 2008; Walker, 2012). Concerned with this question, Walker (2012) develops an environmental justice frame by examining campaigners' claims-making processes in order to gather evidence (how things are), process (why things are the way they are) and justice claims (how things should be) of environmental justice movements (Walker, 2012, pp. 39-76). When environmental justice campaigners make arguments for justice based on statements of how things are and why they are the way they are, they are involved in acts of claims-making (Walker, 2012). Walker's use and definition of 'a frame' is as that defined by Snow et al., (1986) and is as discussed above in the political process approach of social movement theorising. Thus, Walker (2012) builds an 'environmental justice frame' by examining the acts or processes of

claims-making in environmental justice campaigners' explanations of how things are, why they are so and how they instead should be.

Examining environmental justice claim-making in terms of evidence, justice and process, enables the comparison of environmental justice struggles in different places (Walker, 2012). In other words, Walker's environmental justice frame forms a template for assessing environmental justice movements, where the main issues in each environmental justice struggle are broken down, examined and compared to other environmental justice struggles. The frame would be able to help researchers elicit evidence to contribute to the debate as to whether or not there is a global environmental justice frame (Walker, 2012).

Since the environmental justice concepts have gone global by being flexible and open to reconstruction, one key question to ask in environmental justice research is to understand exactly how these concepts have travelled across the globe (Walker, 2012, p. 34-35). How have the ideas and meanings of environmental justice travelled horizontally across time and space? This horizontal spread is also related to the vertical spread of the frame where local or national issues also encompass international ones (Walker; 2012). When Friends of the Earth Scotland formulated its idea of environmental justice along the lines of: ' . . . no less than a decent environment for all, no more than a fair share of the earth's resources,' it conceived justice in terms of both local rights to environmental quality and global responsibilities deriving from patterns of consumption (Friends of the Earth Scotland, quoted in Walker, 2012, p. 34). Guided by such concerns in the environmental justice literature, the research investigates how environmental justice concepts become locally grounded in the context of Malaysia by geographically embedding the study. It specifically explores the history of the sites of the Broga and Bukit Merah asking how this mattered to the processes of becoming locally grounded.

While on the one hand, scholars are interested in how the environmental justice frame travelled, on the other, they are also critical of its widespread use. There are two main critiques about the problematic relationship between local environmental movements and the globalisation of an international frame such as that of environmental justice. One critique is that the environmental justice concepts cannot be globalised because

local environmental justice movements, such as those found in the North, contribute to the globalisation of environmental inequality by demanding more regulation of toxic pollutants and siting of polluting industries. As movements such as anti-toxics mobilisation succeed in the North in achieving more stringent and costly environmental regulations, toxic wastes are displaced to the Global South (Pellow and Brulle, 2005; Rootes, 2007). Likewise, tensions along North-South lines would increase with the relocation of polluting industries to the Global South as part of the transnationalisation of the 'treadmill of production' (Gould et al., 1996). This critique resonates with an earlier warning by Harvey (1996) of having to guard against 'militant particularism' whereby local concerns and interests do not pay attention to the larger critical analysis of capitalism, which only becomes evident at broader geographical and political scales (Swyngedouw and Heynen, 2003; Heynen, 2003). A similar argument is also made at the level of urban-rural or regional bias where, for example, in Barcelona, urban sustainability plans worked to displace environmental problems to other regions (Martinez-Alier, 2003). A second critique of the globalisation of the environmental justice frame is that too many issues dilute the potency of the environmental justice concepts. The term 'environmental justice' would lose its meaning and focus (Benford, 2005; Sze and London, 2008).

However, Northern environmental justice movements are increasingly aware of such tensions between campaigns in the North and South, as can be observed through the nature of global anti-toxics campaigning by international networks of environmental NGOs (for example, the work and campaigns advocated by Friends of the Earth International). Pellow's (2007) research charts the rise of several transnational environmental justice networks covering the North as well as the South, and how they organise collectively to resist the global movement of toxics. For example, he details transnational movements that organise against pesticide-use, the export of electronic waste and the use of incineration for disposing waste. These transnational networks: ' . . . positioned responsibilities for harm in distant internationally dispersed locations firmly within the frame, connecting globalised economic and political relations to their environmental consequences' (Walker, 2012, p. 35). Thus what connects environmental justice movements in the North and the South is the successful framing of environmental concerns as bound up with civil rights, social justice and human rights issues (Pellow and Brulle, 2005, p. 13). The fact that the environmental justice frame is

‘multivalent’ (Schlosberg, 2007) and can be reconfigured or ‘locally grounded’ (Walker, 2012) to fit particular local circumstances is regarded as a strength and not a weakness. Many researchers have found that core issues in the environmental justice frame remain the same despite having been adapted to fit multiple different contexts within new cultural and political settings (Schlosberg, 2007; Schroeder et al., 2008; Walker, 2012).

Here, in the thesis, I extend further the concerns of the environmental justice frame to that of questioning scientific knowledge and environmental citizenship. The second body of literature that the thesis draws on – science and technology studies, the sociology of scientific knowledge and development studies - helps to make sense of the controversies surrounding risk assessments which are carried out in order to guide decisions for where to site polluting industries. Very often, in many environmental justice struggles, the validity of risk assessments is contested in terms of the authority of the experts carrying out these assessments, how scientific knowledge is formed (scientific methods, analysis and interpretation), how science policy and planning decisions are made, and whether or not processes of risk assessments are participatory (Turner and Wu, 2002). Thus, I next turn to a discussion of this second body of literature before continuing with a discussion on the relevance of the third body of literature, environmental citizenship, to the campaigns of Broga and Bukit Merah.

3.3 Questioning science

Policy-makers, scholars, activists and campaigners associated with environmental justice movements have engaged with science and expertise at various levels. At one level, is the conventional environmental assessment method, called quantitative risk assessment or referred to as conventional risk assessment (Liu, 2001). In this method, scientists or experts seek to identify the effect of and risk posed by environmental pollutants or hazards on human health and/or eco-systems. According to Turner and Wu (2002), critics of quantitative risk assessment raise five issues. One, it is morally questionable that experiences and beliefs of communities need to be validated or legitimated by ‘experts’. Two, statistical analysis may be irrelevant in areas that are perceived to be unsafe because in any case residents in these areas already experience stress from worries about contamination and health problems. Turner and Wu (2002)

refer to the research of Roberts and Toffolon-Weiss (2001) on a working-class African American community in terms of the irrelevance of statistical analysis. This community experienced stress and negative reactions when they discovered their homes were located on a previous landfill site and subsequently became designated as a Superfund¹⁸ site. Despite the clean-up, the values of homes plummeted and with this, the life-savings of the African American community.

The other three issues centre on debates of the limitations of environmental health risk assessment methods. The first of the three debates draws attention to how risk assessment does not take into consideration ‘multiple, cumulative and synergistic risk’ (Turner and Wu, 2002, p. 26). This is because current risk assessment techniques examine only the health risks where ‘healthy individuals are exposed to a single hazard whose health effects are well-documented’ (Turner and Wu, 2002, p.26). Poverty, which is a factor in contributing to poor diet in children and the elderly and which increases vulnerability to harm is not taken into consideration. Neither is accumulative effects posed by exposure to multiple sources of pollutants; for example, where communities live close to several factories and also face increased exposure because they work in these factories. According to Turner and Wu (2002), despite the limits of risk assessment, its proponents suggest that science can and should be harnessed to include the measurements of these synergistic or cumulative risk effects.

The second of the three debates focuses on the assumptions of conventional risk assessment which is guided by concepts of cost-benefit analysis and utilitarian free-market economics principles (Turner and Wu, 2002). In this conception, the location of polluting industries in low income neighbourhoods is not regarded as necessarily a bad thing because it may make economic sense, even if morally repugnant, where residents are expected to have shorter, less healthy lives (Arquette et al., 2002). Other social and cultural risks are not taken into consideration. In this sense, conventional risk analysis may reinforce environmental injustice. As a way forward, Arquette et al. (2002) suggest that risk-based decisions should expand and become more holistic by taking into considerations other definitions such as for example, local and traditional knowledge.

¹⁸ A Superfund site is designated as highly contaminated by the Environmental Protection Agency of the USA through the Resource Conservation and Recovery Act; and funding is made available to remediate and decontaminate such designated sites (Turner and Wu, 2002).

The third of the three debates focuses on how expertise is defined, and is essentially about the contestation of scientific methods, analysis and interpretation (Turner and Wu, 2002). Given that conventional risk analysis is dependent on detailed data collection by trained technical experts, campaigners would usually need to hire an expert with skills in risk assessment. This can reinforce inequality because many campaigners do not have easy access to finances to fund such expertise (Turner and Wu, 2002). Hence, many environmental justice activists have strived to improve access to such expertise. They argue as well for the recognition that communities already possess detailed local knowledge about local conditions that would enable a more accurate assessment of local environmental health and other risks (Arquette et al., 2002; Corburn, 2002). Fischer (2000) and Goldman (2002) argue for a more progressive form of risk assessment where communities are the central actors, and where risk assessment draws from both local and technical expertise. In other words, just as much as communities provide local knowledge, they also educate themselves on matters of science, while on the parts of experts, their role as professionals should fundamentally shift from an authority role to one that is collaborative. Experts and communities learn from and engage with each other on an equal footing. Visions of such engagement of communities with science and expertise have been called ‘citizen science’ (Irwin, 1995; Couch and Kroll-Smith, 1997). According to Leach et al. (2005), when communities engage in such an active manner in co-generating knowledge, they are exerting their agency to become more informed and empowered citizens.

It is the third of the three debates that is relevant to the research in Broga and Bukit Merah where campaigners questioned expertise sanctioned by the state and business interests. In Chapters Six and Seven, I explore how campaigners questioned the findings and views of risk assessment experts. I also ask if they agree with the experts as to what constitutes acceptable risk.

The area of scholarship that examines the relationship between a lay public, considered to have no formal and institutional training in the generation of scientific knowledge, and science are known by several labels. These are variously known as: public understanding of science, science in/and society, science communication, science and technology studies, sociology of scientific knowledge and the political sociology of science (Irwin, 1995; Irwin and Wynne, 1996; Jasanoff, 2005; Frickel and Moore,

2006). Today, the relationship between science and the lay public has become increasingly scrutinised by the public, policymakers and scientific experts (Irwin, 1995). As a result, scholarly notions of the relationship between science and the public have also changed.

The earlier literature on the relationship between science and the public discusses two monolithic and competing characterisations of the public (Irwin, 1995). The first characterisation is the ‘deficit model’ where the public is regarded as ignorant because they lack scientific knowledge, are worried and/or disinterested (Irwin, 1995; Wynne, 1996). Science was seen to speak ‘truth to power’ and so the solution to resolving science-public conflicts lay in experts engaging with the public by educating them (Irwin, 1995; Stillgoe, 2007). Such a belief is rooted in the industrial revolution when scientific development and knowledge were regarded as central to the future of society (Irwin, 1995). At this period, science brought economic and social advancements and was thus seen as a liberator, and as revealing ‘truth’ (Irwin, 1995, p. 10). Hence, science, came to gain the status of being value-free (Irwin, 1995). Today, despite the progress in ideas that all forms of knowledge are contingent and not value-free, the belief that science is ‘truth’ and therefore, universally-valid, still exists. According to Rayner (2012), the top-down approach where the public has to be shown the way by experts because of a science skills deficit, is still very much alive despite the increasingly commonplace rhetoric of public participation.

The second characterisation arose from social science critiques of the first characterisation which regards the public as ‘. . . active, knowledgeable, playing multiple roles, and as receiving as well as shaping science’ (Einsiedel, 2007, p. 5). In the 1990s, studies of science increasingly turned their attention to and emphasised the ‘constructed, contested and contingent nature of scientific knowledge’ (Stillgoe, 2007). Irwin (1995, p. 176), drawing on insights from the sociology of scientific knowledge, points to the contextual and partial nature of all forms of understandings/knowledge and says:

[T]he prevalent notion of ‘good science’ shields scientific assessments from the contexts of application including, crucially, the social arrangements within which application occurs. The opportunity now . . . is to open up these constructions of the public to critical scrutiny – including, of course, that of the public itself. Such a move implies new possibilities

for science practice – and also for the social scientific appraisal of science-public relations.

The experts and institutions that support them and their opponents in matters of managing risk conflicts, are speaking past each other and voicing competing frames (Irwin, 1995). Hence, there should be a new approach to public engagement where all forms of knowledge are scrutinised and given as much consideration in decision-making processes and institutions, not just those of experts (Irwin, 1995). This is where public participation is used as the new approach to serve this purpose not just in a science and environmental policy process but also in areas such as the development field where, for example, World Bank experts are now required to use public participation methodology in project development and implementation. There has been an explosion of various forms or participatory methods and methodology being developed, practiced and written about in the last 25 years not just in the development field, but generally in developed countries such as the USA and the UK (Leach et al., 2005; Wynne, 2005; Jasanoff, 2003b, 2007). This is because the processes of public participation are regarded as contributing to bettering democracy (Jasanoff, 2003a). Thus the public and private sectors are increasingly used to public engagement as a statutory requirement in planning processes (Glasson et al., 2007).

At the core of the participation philosophy is the idea of the co-production of knowledge with experts because lay people have important and distinct local knowledge about their environment and therefore, a combination of lay and expert knowledge contributes to better environmental decision-making (Chambers, 1995, 1999). Through lay people's participation, the commitment to democracy is better served by allowing people to contribute to making decisions that affect their lives and by doing so, people will feel a greater sense of ownership of outcomes. This is seen to help reduce conflict. However, similar opportunities for public participation are not available in Malaysia and this issue shall be discussed further in Chapter Eight.

Despite the positive, second characterisation of the public, the literature on science and the public also warns against romanticising the public for their agency, participatory instincts and actions for justice (Jasanoff, 2005; Einsiedel, 2007). As scrutiny of the relationship between science and the public increased and therefore changed, so too

have those two competing characterisations of the public. There is now a more nuanced view of the public found in scholarly literature. The reality is that how the public is constructed probably lies somewhere between those two characterisations and both characterisations may even coexist within the accounts of a particular conflict (Irwin and Michael, 2003, p. 55). While there are publics that are interested and knowledgeable and active, there are also publics that are not ‘. . . full-blooded cognitive agents who test and appraise public knowledge claims, including those of experts, according to culturally sanctioned criteria of competence, virtue, and reasoning’ (Jasanoff, 2005, p. 271). This does not mean then that there should not be any public participation, but that researchers and planners should guard against how they imagine the public to be because such imagination will influence the approach to implementing participatory practices. Hence, in Chapters Six and Eight, how the public is imagined by the state, business interests and consultants in the cases of Broga and Bukit Merah shall be examined in detail.

Furthermore, while it is true that the lay public may not possess relevant scientific knowledge, they can reflect upon the epistemological status of their knowledge and therefore, discursively formulate relations of power between self and science/science experts (Michael, 1996, p. 123). According to Michael (1996, p. 107), who examined the way in which people reflect on their lack of scientific knowledge, his research reveals that people always conduct such a reflection in relation to expert sources such as ‘. . . scientists, the media, friends and relatives, and so on’. What this means is that the values that people place on their knowledge, the way they view themselves (identity issues) and issues of trust are implicated in this process of reflection. For example, do people trust the knowledge or the information they obtain from scientists or their friends or the media or from the government? Issues of identity, relations of power as well as issues and experiences of trust/distrust will affect the way that lay people understand science, and thus are involved in the process of reflection on the epistemological status of ignorance.

The research will explore the ways in which trust was a dominant influence in the campaigns of Broga and Bukit Merah. Many grassroots campaigners did not trust, or believe in what the state and business interests had to say about issues of risk and safety. Why? In order to shed some light on this issue, there needs to be an examination

of prior social and power relations between the state and its citizens. This is the reason why, as mentioned in the introduction of this chapter, the research investigations place the Broga and Bukit Merah campaigns within the particular political time frame of when each of those campaigns unfolded, as well as those historical processes that influence power and social relations between the Malaysian state and the residents of Broga and Bukit Merah. Chapter Five examines these contextual and historical factors.

In the new science populism observed in the US from the late 1970s, many environmental justice campaigners questioned expert knowledge and also used the language of science to question experts (Couch and Kroll-Smith, 1997).¹⁹ Campaigners also educated themselves and became more informed on matters of science and risk (Couch and Kroll-Smith, 1997). Despite this new science populism, lay knowledge or views were still regarded as unimportant, incorrect, biased or illegitimate (Wynne, 1996). According to Leach et al. (2002), such regard demonstrated a lack of cognitive democracy because knowledge or opinions generated by the public were treated as inferior to that produced by authoritative science. These trends of science populism and the lack of cognitive democracy have led me to investigate how the campaigners in Broga and Bukit Merah managed to navigate and challenge expert-led, institutionalised scientific knowledge and assessments in Chapters Seven and Eight.

The top-down view demonstrates the dominance of a belief in the authority of science as generating universally valid knowledge, and also falls in place with the ‘deficit model’ as discussed above (Irwin, 1995; Wynne, 1996). This ‘deficit model’ is not only based on the assumption that only scientific knowledge produced by expert-led, institutionalised science is universally valid knowledge; it also, at the same time, projects a particular standardised model or idea of how citizens are and how they should behave. According to Wynne (2005), it is the assumptions of how citizens are and how they should behave, and not due to the issue of how to ‘do’ participation better, that

¹⁹ The authors refer to cases such as the Love Canal campaign. Lois Gibbs rose to prominence as a woman who campaigned for the recognition of and compensation for the hazardous chemical contamination of homes, health and environment in Love Canal, New York, USA. The Love Canal community was built on a previous hazardous chemical waste landfill site. Lois Gibbs had to prove that the ill health experienced by her son and others in her community were due to chemicals leaking into their homes and schools. In order to do this, she utilised scientific information and technical and medical expertise as the basis for mobilising popular protest.

have caused institutionalised participation to fail in many programmes that attempt to empower citizens through public participation.

The assumptions of a standardised model citizen are (Wynne, 2005, p. 72):

- citizens are viewed as naturally agreeing to the core definition of risk discourses;
- citizens are viewed in a bivalent manner – either exposed to high risks or low risks without taking into consideration local or contextual conditions such as poverty, or the history of a particular affected community;
- citizens are viewed as incapable of dealing with uncertainty and thus expect experts or scientific institutions to deal with it;
- citizens are viewed as only concerned with the consequences or impacts of innovations (i.e. downstream concerns and not upstream concerns such as who defines or drives research agenda, and what human purposes drive innovation and knowledge creation. Upstream concerns remain invisible and unaccountable to citizens.) (see also Mayer, 2003);
- citizens' framings of issues are regarded as not valid because they are unable to independently construct public meanings through independently negotiated worlds and relationships outside of expert-led, institutionalised science and state authority (some examples are: What are the issues at hand? If the problem is about risk, who gets to define risk? How is risk defined?) (see also Fischer, 2005; Visvanathan, 2005).

Such rigid assumptions about the role and behaviour of citizens also mean that there is little room to recognise the role and agency of campaigners. Campaigners of Broga and Bukit Merah not only offer alternative understandings of the conflicts at hand, but they also demand for justice, accountability, participation, recognition, compensation and for further information (Chapters Seven and Eight). When campaigners take actions such as framing their arguments and demands in the way they viewed the conflicts, through demonstrations, through local, national and transnational lobbying and through taking

legal action, they become ‘makers and shapers,’ instead of being passive receivers of government or business interests’ decisions (Cornwall and Gaventa, 2001). By taking such a proactive role, campaigners are offering up a vision of expanded agency and role; thereby broadening the conceptions and meanings of citizenship (see Leach and Scoones, 2005). Arguing for rights from the position as citizens further strengthen the demands of campaigners involved in environmental justice issues (Latta, 2008). Thus, in the next section, I discuss a third body of literature - environmental citizenship – to which the thesis draws on and contributes to.

3.4 Environmental citizenship: broadening the political significance of environmental justice

In order to understand the significance of the two campaigns, it is necessary to understand the idea of citizenship, especially that of environmental citizenship. The contemporary citizenship debates that widen the definition of citizenship as performance and acts of contestation push the environmental justice frame in the direction of environmental citizenship concerns (Latta, 2007; 2008; Wittman, 2010; Latta and Wittman, 2010). This is because the issues of social justice and rights as found within the environmental justice frame are precisely the issues that are increasingly occupying the debates of environmental citizenship. Actions taken by campaigners to claim rights and to demand for answerability from both state and non-state actors serve to empower citizens and contribute to the processes of democratic politics because new spaces of debate and accountability are opened up (Jenkins and Goetz, 1999; Isin, 2002, 2008; Kabeer, 2005; Latta, 2007; Smith and Pangsap, 2008) (Chapter Nine). Using concepts of rights to claim accountability also raises questions of citizenship. On what basis are rights granted and who are those who qualify for them? This is the point at which the connection has to be made between demanding for rights and the questions of citizenship. According to Isin et al. (2008), when people engage in social struggles or mobilise around social issues, they are enacting citizenship. Citing Hannah Arendt (1958), Isin et al. (2008, p. 7) says that enacting citizenship means ‘. . . that individuals perform their fundamental right to have rights by asking questions concerning social justice’. Furthermore, in the age of globalisation, citizenship is no longer a matter of political or social affiliation but is increasingly determined by social behaviours of citizens and non-citizens alike (Isin et al., 2008). Gaventa (2002, p. 2)

concur and says that citizenship is not just ‘ . . . individual legal equality accompanied by a set of rights and responsibilities bestowed by a state on its citizens. . . ’ as often cast in traditional Western thought but that citizenship can take on a more actor-oriented approach and can be achieved through the agency of citizens based on their diverse identities. Smith and Pangsapa (2008, pp. 57-58) on the same matter:

. . . citizenship invokes more than legal statutes and political recognition. . . . Citizenship is a space or site of contestation where new configurations of entitlements and obligations can be articulated through different agents. Citizens and new ways of thinking about citizenship come into being through the development of civic engagement strategies that link awareness of injustices to responsibility. It is in that sense that we also need to think about *citizenization*, for the way we define and articulate what it means to be a citizen is in process, provisional and never completed.

The new approach to viewing citizenship means that the notions of rights have been extended beyond the traditional civil and political spheres to include economic, social, cultural and participatory rights (Isin et al., 2008). Participatory rights are seen to extend from local to national and international levels. The new shift also means that the nation-state is no longer seen as the sole custodian of citizenship, but that non-state actors have a larger role to play in the claiming, monitoring and enforcing rights (Newell, 2006).

Before I proceed to further exploration of the new approach to viewing citizenship and what this specifically means for concepts of environmental citizenship, it would be appropriate at this point to begin with a brief definition of citizenship and what it has historically meant before newer, more recent notions of citizenship emerged. Furthermore, the changing relationships between experts and expert-knowledge, science and public knowledge also means there are new opportunities for citizen engagement as expressed through the practice of ‘public participation.’ Indeed, one of the central demands of environmental justice campaigners is for the democratic right-to-participation in decision-making processes. However, who are these people who have rights (citizens), and who gets to participate? These questions are important because different traditions of thinking about citizenship and democracy mean that there are different ideas of how and what participation should be (Leach and Scoones, 2005).

What is citizenship?

One of the more widespread ideas of citizenship as found in Western liberal democracies is the individual, liberal tradition as exemplified by Marshall's classic work on *Citizenship and Social Class* (1950). Citizenship is regarded as a status which entitles individual citizens to a specific set of universal rights granted by the state (Jones and Gaventa, 2002). The granting of universal rights is considered as having bestowed equality (usually political equality). It also assumes that citizens have the necessary resources and opportunities to choose whether or not to exercise those rights. Marshall, considered a civic liberal, argues for a protection of the poor through state provision of minimal social and economic needs in order to reduce the risks associated with capitalism. According to Jones and Gaventa (2002), this argument is not one that calls for an elimination of inequalities but rather for protection through welfare provision. Similarly, Rawls (1971), regarded as a *utilitarian liberal*, did not view state redistribution mechanisms as a promotion of equality because redistribution meant increasing both the share of better off as well as the share for the worse off. That is to say, Rawls believed that increasing the share of the better off would mean an increase in the share for the worse off.

Such liberal perspectives can be observed from the assumed roles of the state and its citizens in contemporary society in regards to how the state should protect its citizens.

Leach and Scoones (2005, p. 22) on this:

. . . a similar role might be imagined for the state to intervene in risk amelioration, and for state-sponsored science to guarantee the safety of citizens, through food safety regulations, pollution risk management and so on. Liberal understandings of citizenship thus hold faith in the modern state's expertise, and science has become its currency in the technology arena. Liberal theories of democracy connected with these defer decisions to elected elites, who historically have been highly reliant on accredited scientific and technocratic expertise.

Such a perspective on citizenship underlies the idea of the 'deficit model' where individual members of the public are regarded as having to be brought to appreciate and understand the official scientific expertise and knowledge through education and effective communication (Irwin, 1995). Similarly, such a perspective also underlies many participatory programmes in the development studies field where receivers of a development project are conceived of as users, beneficiaries and customers of a

developmental state or of a liberalised market (Leach and Scoones, 2005). Individuals are able to choose from an array of services and options, but are not offered the opportunity to participate in agenda setting of science and policy processes (Leach and Scoones, 2005).

Another group of citizenship ideas with a common structuring dimension are those associated with communitarian thought. Communitarians believe that individual identity and interests can only be realised through the prioritisation of the ‘common good’ over individual interests and through public service (Smith, 1998, cited in Jones and Gaventa, 2002). This opens up the possibility of conferring legal and political meaning to group rights which contrasts with the liberal tradition where such rights lies with the individual. In the context of developing countries, ideas of communitarian citizenship are found in programmes of participation where people are seen to act together toward a common goal and to achieve a common good – i.e. egalitarianism is more important than self-interest. According to Leach and Scoones (2005, p. 23), an example of communitarian citizenship is found in ideas of contemporary community-based natural resource management programmes where group knowledge is regarded as defining group identity. Such knowledge, situated in its cultural and geographical surroundings, is captured in anthropological studies to be embedded not just in participation programmes but also to stand as critique of Western science and ideas of development and modernization (Leach and Scoones, 2005). Such a communitarian perspective has its equivalent in Europe and North America, and can be observed through movements such as anarchist or ‘green living’ which support local economic and technological development (Leach and Scoones, 2005). In both examples North and South, the common element is the idea that citizen participation emerges from being a community member, and the community takes precedence over the individual.

A third tradition in citizenship ideas is that of civic republican thought. This thinking tries to reconcile the prioritisation of the self-interested individual in liberal citizenship together with the communitarian framework of egalitarianism and community belonging (Isin and Wood, 1999). It focuses on collective action and responsibility in order to bind a community together. Instead of viewing basic rights as just individual rights, it regards basic rights as necessary in order to enable participation in community life (Jones and Gaventa, 2002, p. 4). Therefore, unlike the liberal emphasis on a

representative political system, the civic republican would prefer a deliberative form of democracy. Civic republicans recognise the fact that society is diverse, containing a diversity of interests or groups, but this diversity is united by a common civic identity. Different groups or citizens can have their say and arrive at an acceptable agreement collectively. The processes of arriving at such an agreement are viewed as deliberative and inclusionary so as to invite and enable claims-making of diverse interests. A good example inspired by a civic republican perspective would be the practices of citizen science which draw

. . . attention to how claims and interests related to knowledge and experience emerge and are refracted through political dialogue. Factional groups, united by common experiences of science, technology and its risks, may press claims based on their experiential knowledge, as in the actions of HIV/AIDS activists, toxic waste campaigners, 'NIMBY' protest groups or parents concerned about vaccine risks and side effects (Leach and Scoones, 2005, p. 24).

According to Jones and Gaventa (2002), many of the discussions in the contemporary literature on citizenship focus on reconciling the three different approaches to citizenship (see also Isin, 2002). The discussions focus on uniting liberal, individual rights, equality and due process of law, with communitarian belonging and civic republican deliberation, collective action and responsibility (Jones and Gaventa, 2002). The central concern is the need to reconceptualise citizenship as ' . . . a status, which accords a range of rights and obligations *and* an active practice' (Jones and Gaventa, 2002, p. 5).

The widespread turn in the conception of citizenship found in the literature of political and social analysis has also seen a parallel in green political thought and theory due to pressing global concerns for sustainability, and consequently, the search for greener forms of political organisation (Barry, 1999; Dobson, 2003). Most of the research on ecological or environmental citizenship is concerned with ideas of ethical personal actions/responsibilities of each person in not using up than his or her fair share of ecological resources (Dobson, 2003). However, this concept has been criticised for its overemphasis on ideas of personal responsibility and for not addressing rights and social justice (Latta, 2007, 2008). Many pressing conflicts in the Global South, are defined by ecological dimensions of social injustice (Wittman, 2009 and 2010). In Wittman's (2009) research on Brazilian peasant farmers' demands for land rights, she

describes the Landless Rural Workers Movement (MST) advocacy for local food production, political participation and environmental stewardship as ‘agrarian citizenship’. Rural farmers envision a change in land policy which historically has favoured an elite land-owning minority, to one where land is redistributed as a material right and public responsibility. This is very different from traditional ideas of individual rights linked to property. In making the case for an ‘agrarian citizenship’, interconnections are made between citizenship rights, social justice, democracy and environmental conflict. By broadening ideas of environmental citizenship to include justice, rights and democracy, a link is made between what were two separate fields of study: environmental citizenship and environmental justice (Latta, 2007, 2008).

Thus, in the next section, I explore in further detail contemporary debates and concerns for environmental citizenship in order to understand their connections to environmental justice. The new definition of citizenship as active practice is a central concern of those theorising about democratic politics in issues of environmental citizenship. In other words, amongst the range of concerns with issues of rights, entitlements, responsibility and ethics, concerns with issues of justice, rights-to-participation and recognition are also present. At the same time, these issues of justice, participation and recognition are also central to environmental justice concepts and discourses. Therefore, there are large overlaps between the democratic politics of environmental justice and that of environmental citizenship theorising. Thus, here, in the research where I am analysing two environmental campaigns which utilise discourses and practices exemplary of environmental justice movements, it makes sense to ask what the links are for expanding and changing ideas of environmental citizenship, and to include this in my discussions of the theoretical underpinnings of the thesis.

Wither environmental/ecological citizenship?

Some theorists make the argument for an ecological citizenship which is duty-based in order to achieve the aim of sustainable development (Smith, 1998; Barry, 1999; Dobson, 2003; Dobson and Bell, 2006; Carlsson and Jensen, 2006). Ideas of ecological citizenship are grounded within the sphere of justice where each human being is entitled to his or her fair share of ecological space. Dobson (2003) refers to ecological citizenship as founded on ideas of post-cosmopolitan citizenship. In cosmopolitanism, everyone has rights due to their common humanity and also have citizenship and

political space in a shared cosmopolis/space. In other words, the political space is a given in cosmopolitanism but in post-cosmopolitanism, political space is a product of human activity:

In this conception, the political space of obligation is not fixed in taking the form of the state, or the nation, or the European Union of the globe, but it is rather “produced” by the activities of individuals and groups with the capacity to spread and impose themselves in geographical, diachronic . . . ecological space (Dobson, 2003, p. 23)

Spreading globalisation is regarded as causing environmental harm to future generations as well as the poor. So the political space or relationship of citizenship is regarded as one where harm is being established (Dobson, 2003, p. 97). In other words, a non-territorial political community is established when a practical, material, causal relationship can be established between the causer of harm and its victims. This ecological conception of political relationship/space focuses on the duties or obligations of the well-off to correct its overlarge ecological footprint; it does not say much about the citizenship duties of the victims of harm. It also says little about reciprocity because the globalisers are called upon to perform their duty without the expectation of receiving some benefit in return. However, what is laudable about Dobson’s ecological citizen is that it focuses on concrete relationships of injustice as the reason for concrete political obligations (Latta, 2007). To sum, the primary concern of Dobson’s conception of an ecological citizen is the individual responsibility to not foreclose the ability of others and that of future generations, to pursue options important to them (Dobson, 2003).

Dobson (2003) also makes a distinction between ecological citizenship and environmental citizenship. He emphasises personal responsibilities and actions; and calls for changes in attitudes as well as behaviour; and for a commitment to recycling, reusing and conserving (Dobson, 2007). In contrast, environmental citizenship, rooted in the liberal tradition, is an extension of rights-claiming and discourses. It extends political, civic and economic rights to include environmental rights. So, for example, it is often conceived of in terms of rights to particular environmental goods such as clean air or water, or protection from environmental bads (Bell, 2003). However, Bell (2003) argues that Dobson’s (2003) distinction between ecological and environmental citizenship is misleading, and the two terms mean the same thing. These disagreements

seem to have influenced Dobson (Dobson and Bell 2006; Dobson, 2007). In his later publication, Dobson (2007) talks a lot more about environmental citizenship rather than use the term ecological citizenship.

Bell on his disagreement with Dobson's definition of the ecological citizen:

If ecological citizenship is grounded in a right to a fair share of ecological space and the right to a fair share of ecological space is plausibly construed as a liberal right, ecological citizenship is grounded in environmental citizenship (Bell, 2003, p. 4).

Dobson's definition is too narrow because he assumes a negative duty whereby one's responsibility or duty for personal change does not extend to having a duty to stop other people from using more than their fair share of ecological space. In other words, as an ecological citizen, one's duty is **only** not to violate one's right to a fair share of ecological space (Bell, 2003, p. 6).

Latta (2007) also argues that the Dobson's distinction between environmental and ecological citizenship is misleading but for a very different reason from Bell's (2003). Latta (2007 and 2008) is more interested in democratic politics, and he argues that while democratic politics are discussed, there is too little of that in most of the literature that is concerned with ecological or environmental citizenship. Contributions instead focus on normative and instrumental appropriations of citizenship – that is to say, the making of green citizens who make individual decisions for green consumption patterns and lifestyle (Latta, 2008, p. 244; see also Smith and Pangsapa, 2008). When such a concern is scaled up to the political level, it means that the solutions necessary would be for appropriate institutional infrastructure and international co-operation to govern the rights and duties of global environmental/ecological citizens. According to Latta (2007), there are two problems with such thinking. The first is the unproblematic construction of people as global environmental citizens. The second is the unproblematic construction of environmental problems (global warming, biodiversity loss, etc.) to which the global environmental citizen is supposed to respond to. There is an assumption that these global environmental issues are globally relevant and that they can be governed through good governance and individual vigilance. Latta (2008, pp. 244-245) on this issue:

Without wanting to diminish the importance of such issues of the value of normative visions, the questions of who environmental actors might be, how environmental problems are experienced in specific places, and what constitutes 'responsible' citizen conduct or 'good governance,' are all highly political. In other words, they are issues that would seem to beg treatment within the democratic practices of an evolving citizenship, rather than as scientific and/or philosophical a priori to citizenship.

Even though Latta (2008) lauds Dobson (2003) for his concerns of justice and democracy in his conception of ecological citizenship, Latta does not think it goes far enough. Dobson's (2003) formulations largely leave out negotiations for more just arrangements that involve a wide-range of social actors. It sets up victims of ecological 'wrongs' as passive recipients of justice and not as active protagonists who equally and actively participate in the definition of what ecological problems there may be and the terms within which these should be resolved (Latta, 2007). With the emergence of the nexus of ecological concerns with contemporary citizenship, there should be an understanding of environmental citizenship not only in terms of personal or institutional 'green' responsibilities, but also in terms of citizens' capacities to '*. . . actively politicize* that which is understood as ecology or environment, as well as the broader social relationships that constitute such understandings' (Latta, 2008; p. 245).

Struggles for environmental justice are crucial for the understanding of citizenship, and in particular, for current debates on the definition of ecological/environmental citizenship (Smith, 2005; Latta, 2007, 2009; Latta and Wittman, 2010). As mentioned previously, struggles for environmental justice go beyond the scope of distributive justice (Schlosberg, 2004, 2007). The struggles also include issues of recognition, participation and calls for the development of capabilities to enable a meaningful life. These issues have a direct impact to the debates about what constitutes citizenship because, for example, the links between recognition and political voice point directly to implications for citizen practice. Many who write on the politicising of subaltern voices talk about affirming positive identities of self in order to imagine the possibility or resistance (Young, 1990; Pulido, 1996). The non-recognition of identities mean they lie outside the normal spaces of citizenship and are not seen. As Schlosberg (2004, p. 519) has pointed out: 'if you are not recognised, you do not participate'. Hence, there are connections between justice, recognition, political agency and citizenship. Are these

connections seen in the Broga and Bukit Merah campaigns? This issue will be examined in Chapters Six and Seven.

A similar pursuit of local autonomy was evident in the community of St. James Parish, Louisiana in the controversial siting of a polyvinyl chloride facility (Kurtz, 2005). In describing this controversy, Kurtz (2005) identified three citizenship discourses: a discourse of distributive justice in the location of the facility; a discourse of procedural justice; and a communitarian discourse of participatory rights. She identified the environmental justice movement in St. James Parish as one that advanced a collective notion of citizen rights embedded in a local environment, as opposed to individual liberal rights, and much like the campaigns in the research undertaken here. Thus citizenship is a process of transformation and construction where citizens' actions are conceptualised in terms of their expanding qualities (Jelin, 2000). Citizenship is both a framework of political practice as well as the outcome of actions/struggles. This follows not just Jelin (2000) but also Gilbert and Phillips (2003), MacGregor (2006) and Latta (2007, 2008) who all emphasise the importance of citizenship as an outcome of contentious practices, and of the importance of when citizens become political through either resisting or identifying with the definitions placed on them by others (Isin, 2002, 2007). What the Broga and Bukit Merah campaigns succeeded in doing was to publicly politicise, problematise and reconfigure key social issues of justice, recognition and participation. For example, Broga campaigners argued for the local municipal authority (instead of Federal authority) to take charge of waste disposal decision-making processes, and for them to have participatory rights in such processes. In other words, campaigners sought for greater local autonomy in economic and environmental planning.

For the reasons outlined above, the research follows the definition of citizenship as both framework and outcome (or, status and practise), and considers environmental justice as a space of contention where inequality is embedded in landscapes, communities and nature. Thus, the terms environmental and ecological citizenship are used interchangeably since the focus is on the democratic impulse of this type of citizenship. The research understands environmental citizens as '... actively contributing to the evolution of a public sphere, in which different kinds of ecological questions are

construed as political matters, and the terms which define legitimate speech about those questions are negotiated' (Latta, 2008, p. 245).

3.5 Conclusion

This chapter provided an overview of the theoretical concepts that will inform the analysis of the discourses and practices of the Broga and Bukit Merah campaigns, and of the responses of the state and business interests to these discourses and practices. Using social movement and environmental justice theories, this chapter first discussed how they can be used to understand not just the issues of injustice, demands of campaigners and campaign tactics, but also issues of agency, political consciousness and empowerment. The discussion then moved on to the debates in science and science policy processes in order to shed light on the contestation of views and knowledge presented by risk assessment advocates. This contestation reveals the changing nature of the relationship between expert-led, institutionally created knowledge and experientially created local knowledge, leading the research to further examine the nature of knowledge contestation in the cases of Broga and Bukit Merah (Chapters Six and Seven). A key demand in the issue of knowledge contestation is for community participation not just in the creation of scientific knowledge but also in policy processes. Community participation is often conceptualised in public discourse in a manner which usually does not recognise agency or independently constructed knowledge. Many environmental justice activists argue for a 'citizen science' where the information (or experiential knowledge or localised understandings) communities can provide are regarded as just as important and necessary as the information provided by experts; furthermore, local communities and not scientists (or experts) should be the central actors in accurately assessing environmental health and other risks. These claims and the actions of campaigners and activists offer up a more robust vision of the meaning of citizenship because protesting citizens are viewed as having asserted their agency by claiming their rights and challenging the responsibilities of the state and business interests. Thus, demands for participation by environmental justice campaigners often pose challenges to the normative conception of participation. Reconceptualising communities as central actors, and experts as specialised members of communities not only mean that experts and the lay public are on an equal footing, it also means strengthening the ideals of a strong participatory democracy. Such concerns

for democratic politics are not only found in environmental justice movements/campaigns, but increasingly, also in that of environmental citizenship. Therefore, the third section of this chapter investigated conceptions of environmental citizenship in order to illustrate its relevance to environmental justice. As ideas of environmental citizenship broaden beyond concerns of responsibility and ethics to include social justice, rights and democracy, a link is made to the concepts of environmental justice. The research investigates how such a link can be made in the context of Broga and Bukit Merah, and why it is important to do so. The next chapter proceeds to methodological considerations that will be necessary to apply the theoretical concepts discussed in this chapter; it also describes methods for data gathering, analysis and interpretation, and discusses fieldwork experiences.

CHAPTER FOUR

RESEARCH METHODOLOGY AND FIELDWORK

This chapter outlines the research design and the ethics and complexities involved in the research. The research design here refers to the empirical research process which includes the methodological approach taken, the methods employed and the management, analysis, interpretation and validation of data gathered. Since knowledge production is a process that is co-constructed between the researcher and his or her research subjects, issues of ethics, reflexivity and fieldwork challenges are also addressed, thus, recognising the role of the researcher in gathering, analysing, interpreting and writing-up data (Doucet and Mauthner, 2002; Mauthner and Doucet, 2003; Cupples and Kindon, 2003; Carter and Little, 2007).

The research design was selected in order to meet the aims of the four research questions which emerged from the overarching thesis question. The central thesis question is: what are the implications of Broga and Bukit Merah conflicts for theorising environmental justice and environmental citizenship? The first research aim was to investigate how the state and business interests respond to campaigners' demands for justice and accountability, and why they did so in a particular manner. The second research aim was to understand why the campaigns began in the first place, how campaigners made their demands and challenge the responsibilities of the state and business interests, and why the demands and challenge took particular forms. The third research aim was to analyse how environmental justice concepts and discourses were adapted in the context of Malaysia, using the cases of Broga and Bukit Merah. Furthermore, the analysis of the first two research aims will also be used to answer the second part of the third research aim of how to rethink the global travel of environmental justice concepts and discourses, in light of the Broga and Bukit Merah experiences. The fourth research aim was to make links between the overlapping concepts of environmental justice and environmental citizenship (p. 15, **Chapter 1.1 Research questions**).

The four aims of the research questions were achieved through using a qualitative approach of building two in-depth case studies, one each in Broga and Bukit Merah, embedded in their respective political, social and historical time frames. Specifically, this included thematic analysis of data from interviews, fieldnotes and documents gathered. The data generated were used to investigate what the environmental conflicts were about; as well as understand how the environmental justice frame travelled to Malaysia and became locally grounded in order to fit local circumstances. Furthermore, the data were also used to understand how environmental justice issues could be linked with that of environmental citizenship.

The research uses a qualitative approach that will allow the details and constraints of daily life to be meaningfully placed within their social context (Denzin and Lincoln, 2000). The approach involved analysis of interview data and textual sources in order to trace the development of each environmental campaign, to understand the issues of science used as the arbitrator of environmental conflicts, political consciousness, empowerment, justice, recognition and participation raised in the course of interviews. Detailed interviews enabled me to elicit interpretations and narratives of campaign events that had since ended. During interviews, participants were encouraged to talk freely beyond the confines of the semi-structured questions in the style of narrative inquiries (Chase, 2005). In using narrative interviews, the interviewee or participant is treated as the narrator, a social actor in his or her own right who attaches subjective meanings to events and conditions in their life. It enables the narrator to tell the story from her point of view, demonstrating the wide-ranging diversity of an individual's self and reality constructions that are enabled and constrained by the power of historical, social and cultural circumstances (Chase, 2005; Creswell, 2007). Textual documents (campaign leaflets and letters, transcripts of meetings, email correspondence, media releases, newspaper articles, publications from government sources and from NGOs, notes and other forms of records kept by campaigners) from each campaign were sought because these documents provide a collective memory of a culture and an entrenchment of knowledge and truth, and are therefore important representations of social processes (Atkinson and Coffey, 2004).

4.1 Reflexivity

This section discusses the importance of reflexivity in the research process. Reflexivity is important because data analysis methods are not neutral techniques, but reflect epistemological and ontological assumptions (Mauthner and Doucet, 2003; see also Bourdieu, 1977, on practice). In other words, the creation of knowledge is influenced by understandings of subject and subjectivities and how knowledge is constructed and produced (Mauthner and Doucet, 2003).

Reflexivity involves ‘. . . reflection on the unthought and unconscious categories of habit which are themselves corporealized preconditions of our more self-conscious practices’ (Adkins, 2003, p. 25; see also Marcus, 1994, for different types of reflexivity). Reflexivity means understanding our unthought (unconscious) categories and our assumed shared meanings precisely because the self (as in the author of the research) is always present, making presentations of knowledge created or produced by the author as also a form of self-presentation (Denzin, 1994). In other words, knowledge, as presented by the author of the research is filtered through the unconscious beliefs of the author. These unconscious beliefs influence the entire research process – from planning and design, reading, data gathering, interpretation and write-up (Mauthner and Doucet, 2003). However, reflexivity is difficult to do in practical terms because it requires the researcher to identify and interrogate personal and professional practices (Finlay and Gough, 2003). Other criticisms suggest that reflexivity is used as a means of authenticating the ‘objectivity’ of qualitative research, thereby reproducing the discourse of positivism, which qualitative researchers supposedly reject (Finlay and Gough, 2003). It has also earned the criticism of allowing the researcher to wallow in subjectivity and emoting (Finlay, 2003). However, I maintain that reflexivity is an important dimension of enquiry, since the use of introspection should help to provide general insight into the topic of investigation, act as a starting point for interpretations and help intersubjective reflection (see Finlay, 2003). Intersubjective reflection refers to the ‘. . . situated, emergent and negotiated nature of the research encounter. . .’, and also the unconscious processes which structure the relationship between the researcher and the interview participant (Finlay, 2003, p. 8). In other words, practising reflexivity can help bring to the fore (to the conscious self) the biases and beliefs that may influence the processes of production of

knowledge, for example, during interviews. Being aware of those unconscious processes, therefore, can enable the research to be more honest and to provide a more complete picture of the situations under investigation.

In the thesis, reflexivity is used to enhance the understanding of the topics being investigated, to provide general insight, to situate the research project and for intersubjective reflection. Therefore, the practice of reflexivity is interwoven into the entire research process, from design and planning right to the end process of write-up. An example in intersubjective reflection would be how I found I could relate to one of my key informants, Ms Alice Lee, from the Broga campaign. I returned to meet with, interview, validate data, and chat with Ms Lee right up to the period of writing-up the research (the last meeting was 2013). Ms Lee was born in the same year as I was, and is also ethnic Chinese. While there are class and educational differences, I found I could relate to her because of shared experiences of being the same age and race,²⁰ and through experiences of activism in the political context of Malaysia. There was a certain level of affinity. Therefore, being reflexive in this context would be being aware of the fact that I could relate to her in some areas and not others, and recognising how this affinity contributed to the ease of eliciting interview data and other general information and help relevant to the research. Practising reflexivity here also meant being aware that had I been much older or younger or of a different race, the relationship I cultivated with Ms Lee could have been very different; it could have perhaps influenced the pathways my field research took. I was also aware that the relationship I developed with Ms Lee influenced the kinds of questions I deemed important as the research developed in the field, and perhaps also shaped my relationship with the others (from the state and business interests) I interviewed.

According to Mauthner and Doucet (2003), the literature on reflexivity tends to limit itself to issues of social location, theory, emotional responses to research participants and the documentation of the research process. It does not offer many practical suggestions on how to operationalise reflexivity in the stages of data analysis and interpretation. However, Mauthner and Doucet (2003) suggest that reflexivity should be expanded to include interpersonal issues, the institutional contexts of the research in

²⁰ Despite class and educational differences, being Chinese meant that Ms Lee and I shared a common history in terms of the way the Chinese have been governed in Malaysia.

question, and the ontological and epistemological assumptions embedded in research methods that influence research processes and outcomes. This would be a way to bridge the gap between empirical research practices and abstract epistemological discussions (Mauthner and Doucet, 2003, p. 413).

In this regard, I will briefly say something about my personal biography. I am aware that in the research process, I am led by my personal beliefs as well as particular choices of academic texts that 'see' and 'hear' in ways that conform to my epistemic and theoretical positions. I had an activist background in Malaysia when I worked with a human rights NGO, and I am sympathetic to environmental justice struggles. However, as a researcher, I am duty-bound to conduct rigorous research. What this has meant was that the research process was one of frequent dialectical tension between keeping a distance from participants and identification with them. However, this is not necessarily a bad thing (Mauthner and Doucet, 2003). It means that I am able to embrace my ontological and epistemological assumptions and be aware of how these have influenced me throughout the processes of data collection, analysis and writing (Carter and Little, 2007).

Embracing these assumptions means questioning the traditional norms of objectivity. As pointed out by Michel Foucault (1980), the generation of knowledge is always a process that is embedded in broader contexts of history, power, politics and society. As such, knowledge generation is not value-free. In such an approach, the researcher cannot help but become personally involved. Irwin (1995) has argued that all forms of knowledge are contextual and partial in nature. As have Jasanoff (2006) and Wynne (1996) who highlight how social and institutional arrangements that are brought to bear in the process of generating and applying knowledge. Similarly, and as discussed in Chapter Three, the research adopts such a view to knowledge generation and application.

It is also acknowledged that the research process is imbued with power relations because I, as the researcher, interpret, select and piece together various sources of information. I choose the contexts within which the data is applied and emphasise some data over others. My dialogue with participants actually continues beyond the

interview(s) and flows into the analysis and write-up stages to produce the thesis (Denzin, 1994).

Besides being conscious of my epistemological and ontological biography, I used these principles to guide research praxis: the practice of ethics (being accountable and responsible), being reciprocal, being sensitive, and having an awareness of issues of power and inequality, and the possible impact of the research on the lives of those being researched (Scheyvens et al., 2003). These issues as well as further discussion of how ethics governed the process of research is found in section **4.3 Data collection: methods, strategies and ethics**.

4.2 Justification for a case study methodology/approach

A case study methodology is an approach to research design. Methodology refers to a ‘theory of what can be researched, how it can be researched, and to what advantage’ (Baxter, 2010, p. 82). A case study methodology can encompass both qualitative and quantitative methods of data collection even though it is often considered equivalent to other qualitative methods such as participant observation and ethnographic research (Baxter, 2010). The research in this study used qualitative data exclusively and the justifications are provided below.

The central thesis and research questions lend themselves best to a qualitative case study methodology. This methodology is appropriate for the research because the two campaigns are events that are now over, and are also two separate events located in different sites (Creswell, 2007). The two campaigns also have clear boundaries that would enable comparison between the both of them. It is also appropriate because I seek to provide an in-depth understanding of the campaigns in order to understand what the implications are for theorising environmental justice and citizenship (see also Yin, 2014).

Through the collection of qualitative data from multiple sites (in Broga and Bukit Merah), people, connections, issues, associations and relationships are examined across space to meet the whole of the objective of a study. This enables the pooling of knowledge that is not located in just one local space (Marcus, 2005; Falzon, 2009) (for

example, knowledge about environmental justice issues from both Broga and Bukit Merah are pooled enabling a comparison of similarities and differences). The table below (Table 4.1) is derived from Creswell (2007, p. 79) which explains when a case study approach is appropriate as a research design.

Characteristics of a case study approach	Case study
1. Focus	Developing an in-depth description and analysis of a case or multiple cases
2. Type of problem best suited for the design	Providing an in-depth understanding of a case or cases
3. Discipline background	Drawing from psychology, law, political science, medicine
4. Unit of analysis	Studying an event, a programme, an activity, more than one individual
5. Data collection forms	Using multiple sources, such as interviews, observations, documents, artefacts
6. Data analysis strategies	Analysing data through description of case and themes of the case as well as cross-case themes
7. Written report	Developing a detailed analysis of one or more cases

Table 4.1 Case study characteristics

The focus of my research is to develop an in-depth analysis of two campaigns that took place in two separate periods in Malaysian history. What unites the concerns of campaigners are the disposal and generation of waste and the potential harm to human health and the environment. These issues have arisen as a result of the fast economic growth and urbanisation experienced by Malaysia in the last three to four decades. Using a case study approach, I conducted interviews with those on different sides of the conflicts in order to elicit opposing views and understandings of conflict issues, investigated campaign strategies or practices, collected documents and published material related to the two campaigns. The objective was to develop detailed analyses of these two events/campaigns in order to compare and contrast them as well as identify cross-case themes.

Furthermore, multiple case studies provide a broader basis for explanations of events and for exploring theoretical concepts. They are not approached with the purpose of

establishing statistical generalisations (Baxter, 2010; Yin, 2014). They may be regarded instead ‘. . . as ways of both deepening and expanding the theoretical concepts’ (Baxter, 2010, p. 90). Analytical or theoretical generalisation is possible and is deemed so through the transferability of the explanations of the phenomenon being investigated (Lincoln and Guba, 2002) (for example, environmental justice issues). Transferability is accomplished through careful selection of cases and creating a useful theory that is not too case-specific or abstract (Yin, 2014). For example, two prominent criteria stood out as to how I chose the Broga and Bukit Merah campaigns as case studies. First, both used the environmental justice frame throughout their campaigns. Second, because one of the research aims is to understand how the environmental justice frame travelled, the two different locations and the 19 year difference between the start of the Bukit Merah campaign with that of the Broga campaign, enabled an analysis of how the environmental justice frame evolved through two decades of changing political and social contexts in Malaysia. There were other anti-incinerator struggles, such as the campaign against hazardous waste incinerators which were constructed in Negeri Sembilan by Kualiti Alam Sendirian Berhad (p. 154, **Box 6.1 Kualiti Alam Sendirian Berhad**). This campaign was not chosen as a case study even though it utilised an environmental justice frame because the campaign died out fairly quickly after being demobilised by narratives of economic progress and development (p. 265, **Chapter 9.5 The limitations of environmental justice**). I would not have been able to examine how the environmental justice frame was used and its effects because of the short lifespan of the campaign.

While quantitative researchers use the term external validity or generalisability, qualitative researchers prefer the term transferability because the concern is not ‘the more cases the theory applies to, the better’ but rather how credible the explanations of a phenomenon are (Baxter, 2010, p. 94; Silverman, 2010, p. 11). Hence, the credibility of explanations is judged through the lenses of analytical or theoretical explanations and not through statistical generalisations found in large probability samples (Baxter, 2010, p. 94). In the case of my research, I investigated two environmental campaigns with the aim of explaining what happened, how it happened, and why. The data gathered was then used to deepen and expand on the theoretical concepts of environmental justice and citizenship.

4.3 Data collection: methods, strategies and ethics

The data collection process involved two periods of fieldwork in Malaysia, gathering primary and secondary sources of information between February-August 2009 and between July-August 2010. Semi-structured interviews provided the main primary sources of data. Other primary sources included e-mail communication, petition documents, letters and campaign flyers related mainly to the Broga campaign. Similar materials were harder to find for the Bukit Merah campaign as it ended more than 15 years ago. Many of the Bukit Merah campaigners interviewed had not kept documentation related to the campaign as the issue is considered 'closed', having taken place a long time ago (1984-1994). Despite this, I managed to locate some such materials at the Consumers' Association of Penang (CAP) office in Penang. The materials available at CAP in relation to the Bukit Merah campaign and the Asian Rare Earth (ARE) court case were: all documents and evidence submitted in court, including reports on tests carried out on the children of Bukit Merah and journal articles on the biological effects of ionising radiation, minutes of meetings, transcripts of interviews, financial reports, accounts and records of expenses of CAP in relation to the court case and campaign, letters, memos, email communication, and other notes and records kept by CAP staff.

The secondary data included publications by local and international NGOs, research institutions, newspaper articles, government statistics and information from websites that are relevant to both the environmental campaigns. In relation to the Bukit Merah campaign, two publications by CAP prove to be very useful to my research: CAP's bi-monthly magazine, *Utusan Konsumer*, and the monograph 'Wasted Lives: radioactive poisoning in Bukit Merah'. The *Utusan Konsumer* provided reports on the progress of the ARE court case as it unfolded, while the monograph provided details of the entire campaign as well as the court case. These CAP publications were found in the CAP library. The library of the Centre for Malaysian Chinese Studies (CMCS), located in the annexe of the Selangor Chinese Assembly Hall in Kuala Lumpur, stores all newspaper publications in relation to the Bukit Merah campaign and ARE court case. The majority of these newspaper publications were reports generated by reporters who attended the proceedings of the ARE court case. Others were opinion editorials, opinion columns or letters to the editor. This collection of newspaper publications, consisting of cut-out and

pasted newspaper clippings, was compiled from all English, Malay and Chinese language newspapers in circulation in Malaysia during the time of the Bukit Merah campaign. This collection is very extensive because, as the librarian at the CMCS explained to me, the radioactive poisoning in Bukit Merah was regarded as one of the most important issues affecting the Chinese in Malaysia in the 1980s. I asked a translator to translate into English some of the more important Chinese newspaper articles as I am not able to read Chinese. The information about Bukit Merah and the ARE court case found in the news clippings were cross-checked with that of the primary and secondary sources of information obtained from CAP, as well as with the information obtained from interviews. Likewise, in the Broga campaign, primary sources of information were cross-checked with that of secondary sources. Both the CAP and CMCS libraries are accessible to researchers as well other members of the public. Field research was supplemented by further library and online research in the United Kingdom (UK), and these enabled the exploration of the political economy and historical context within which the campaigns were embedded, including government policy agendas

In total, I conducted interviews with 44 people, and spoke with many more others involved in both campaigns on an informal basis. Interviews lasted between one to two hours, with the average length being almost two hours. Interview participants ranged from low-income to middle-income villagers and middle-class residents located at the sites of the two conflicts, to bureaucrats, politicians, business organisations, consultants, NGOs and other individuals (for example, journalists and academics) located far away from those neighbourhoods being investigated. Interview participants were chosen based on three categorisations. The first category was made up of those who supported the two campaigns which included not only grassroots campaigners but also individual activists, NGOs and politicians. The second category was made up of the proponents of the Broga incinerator and those who owned and operated the Asian Rare Earth (ARE) facility. The third category was made up of those who were connected to both the proposed incinerator project and the ARE facility, but exhibited neither support nor disagreement, such as environmental and social impact assessment consultants and politicians. The objective of interviewing all the different parties involved in the two campaigns was to gain as wide a range of perspectives as possible on what, how and why the campaigns occurred.

All the interviews were conducted in Manglish – Malaysian English - spoken widely on a daily basis in Malaysia, with the exception of a few which were conducted in standard English. Where the interviewees spoke the Chinese dialects of Mandarin or Cantonese or Hakka, or all three, I used a translator. With the exception of a few interviews where I was requested not to turn on the audio-recorder, all others were recorded. Detailed fieldnotes were kept in several exercise books, and I wrote almost on a daily basis about events, encounters and interviews that occurred on a particular day.

Semi-structured interviews were used for the research because they are flexible and allow for the interviewer to improvise or exercise independent judgement in terms of the information gained depending on the interview situation (Fontana and Frey, 2000). In such interviews, the areas for questioning, general topics to be investigated, and the setting and participants are pre-determined in order to provide some organisation and structure around the interviews, and to capture the relevant information. The questions used to guide the semi-structured interviews are listed in Appendix One (**Questions used to guide semi-structured interviews**). In the interviews with the grassroots campaigners, I asked questions about how they challenged the state and business interests, and the implications of being a campaigner. Discourses, strategies, motivations, networks formed and what the campaigns meant to campaigners were the main focus. In interviews with government officials, the business sector and consultants, the focus was on how they managed the resistance they faced. In interviews with NGOs, politicians, and other individuals who supported the campaigns, their motivations and roles, the implications of the campaigns, and how their interventions have affected the communities involved in the campaign were the main focus. I wanted to understand the roles played by the NGOs, opposition political parties and individuals who supported the campaigns.

An initial round of semi-structured interviews was conducted with all parties involved in the environmental conflicts, after which key informants were identified and selected for in-depth interviews. Interview participants were recruited through a combination of methods: introductions made by former work colleagues and friends as well as ‘cold calling’ through emails requesting for interviews. I made use of contacts I had obtained while working for a Malaysian human rights NGO, to request for introductions to those

involved in the Bukit Merah campaign. For the Broga campaign, personal friends were involved in the production of the documentary film, ‘Alice Lives Here’, and through them, I requested for introductions to the campaigners in Broga. I emailed politicians, government officials, journalists and consultants to request for interviews without any introductions made by known contacts. Table 4.2 below provides a brief profile of the 44 interview participants. Key informants were chosen based on two primary factors: the depth of their involvement in the two campaigns since this meant they had insight into the development of the campaigns, and their willingness to participate in further interviews. Other factors that influenced the choice of key informants were the level of trust and the rapport gained with interviewees, and as well as who the key campaigners were (e.g. leaders of both the campaigns).

Repeat interviews with key informants:

- Ms Alice Lee, Lead campaigner, Broga and Kajang, 2006, 2009, 2010, 2013.
- Mr Hew Yoon Tat, Lead campaigner, Bukit Merah, 2009, 2010.
- Madam Chen Kim Lean, Lead campaigner, Bukit Merah, 2009, 2010.
- Ms Mageswari Sangaralingam, Consumers’ Association of Penang, Klang and Penang, 2009, 2010.

Community members of the Broga and Bukit Merah campaigns (interviews in 2009, 2010): four women and sixteen men

- Female, Broga community member
- Two females, Kajang²¹ community members
- Female, Papan community member
- Three males, Broga community members
- Male, Lenggeng (a village adjacent to Broga) community member
- Three males, Taman Tasik Semenyih²² community members, near Broga
- Male, Kajang community member
- Male, Puchong anti-incinerator lead campaigner (the original proposed Puchong incinerator became the Broga incinerator project)
- Two males, Papan community members
- Male, formerly a Papan community member
- Male, Bukit Merah community member
- Two males, Bukit Merah community members and plaintiffs in the Asian Rare Earth (ARE) court case

²¹ Kajang is a town approximately seven km from Broga New Village.

²² Taman Tasik Semenyih is a middle class housing area, and is closer to the proposed Broga incinerator than Broga New Village

<ul style="list-style-type: none"> • Male, formerly a Bukit Merah community member and plaintiff in the ARE court case
<p>Non-community members who were supporters of the Broga and Bukit Merah campaigns (interviews in 2009, 2010): six women and nine men</p> <ul style="list-style-type: none"> • Female, Kuala Lumpur resident, supporter of the Bukit Merah campaign • Female, former Councillor, Legislative Assembly of Perak, supporter of the Bukit Merah campaign • Female, lawyer for Bukit Merah plaintiffs in the ARE court case • Female, lawyer for the plaintiffs of the Broga court case • Female, lawyer, supporter of the Broga campaign • Female, journalist, supporter of the Broga campaign • Two males, lawyers for the Bukit Merah plaintiffs in the ARE court case • Male, doctor, supporter of the Bukit Merah campaign • Male, former Councillor, Legislative Assembly of Perak, supporter of the Bukit Merah campaign • Male, Semenyih resident, supporter of the Broga campaign • Male, Councillor, Legislative Assembly of Selangor, supporter of the Broga campaign • Male, professor, supporter of the Broga campaign • Male, lawyer, supporter of the Broga campaign • Male, documentary film producer, supporter of the Broga campaign
<p>Other interview participants who were not supporters of either campaign (interviews in 2009): two men</p> <ul style="list-style-type: none"> • Male, Councillor, Legislative Assembly of Selangor • Male, consultant
<p>Government officials (interviews in 2010): three men</p> <ul style="list-style-type: none"> • Raja Dato' Abdul Aziz bin Raja Adnan, Director-General, Atomic Energy Licensing Board, Malaysia. • Dato' Nadzri Yahaya, Director-General, Department of National Solid Waste Management, Ministry of Housing and Local Government, Malaysia. • Dr Muhd Noor Muhd Yunus, Deputy Director, Technical Services Programme, Nuklear Malaysia.

Table 4.2 A summary profile of the 44 interview participants²³

²³ The table lists those participants whom I interviewed, and do not include the many others from whom I collected information or held conversations with in regards to the Broga and Bukit Merah campaigns. Names of some participants are used where permission has been given. Otherwise, names have not been

Research with villagers and middle-class residents (grassroots campaigners) located within conflict areas was more flexible in that it was possible to return repeatedly for discussions and further meetings. These were used to follow-up on emerging issues and to cross-check information obtained from other sources or interviews. Meetings with those not directly affected by the ARE factory and proposed Broga incinerator (that is, those who did not live close to those sites), such as bureaucrats, politicians, business organisations, consultants, NGOs, journalists and academics were usually undertaken on a one-off basis. The approach taken in these interviews was similar to the subject-oriented one used with grassroots campaigners. The responses were different in terms of the reception I received. Amongst campaigners, participants were generally happy to share with the researcher, whereas amongst the business interests and the bureaucrats who supported the ARE and Broga projects, some were slightly antagonistic as they were ‘battle-weary’ from having had to face what they regarded as ‘emotional’ grassroots campaigners and negative publicity (Chapter Six).

I based myself in Kuala Lumpur. The fieldwork involved travelling long distances to Penang, approximately 370 km from Kuala Lumpur and to Broga and Bukit Merah that were less than 50 km southeast and 200 km north, respectively, from Kuala Lumpur. I went to Papan, once, and Bukit Merah, three times, to conduct interviews. I went to Penang, four times, for interviews and archival research and to Broga, Lenggeng and Kajang, a total of seven times, for both interviews and document searches. I also went to Ipoh, eight km from Bukit Merah, to interview two retired politicians who were involved in the Bukit Merah campaign. All other interviews and gathering of materials took place in Kuala Lumpur.

Ethics

Ethical issues are important for research not just in terms of falsifying data, plagiarism or misappropriation of funds, but also in terms of negotiating research and in the field in thinking through issues such as avoiding harm to research participants (Scheyvens et al., 2003). The participants’ needs and concerns must be taken into account: ‘The

used for reasons of personal security. As mentioned in Chapter Five, the Malaysian government still considers communism a potential national security threat and therefore, any participant who spoke about being involved in events during the Communist Insurgency of 1948-1960 may still potentially be in danger of a government backlash.

research must ensure the participants' dignity, privacy and safety' (Scheyvens et al., 2003, p. 140). For example, in the context of my research, I took the decision not to reveal either the name or the village (despite being given permission to use her real name) of an elderly woman who gave an account of the role she played in helping communists during the Communist Insurgency because communism is still regarded as a national security issue by the Malaysian government (Weiss, 2006; see Chapter Five for a historical background).

Related to concerns for the wellbeing of research participants, most university codes, for example, the University of Brighton School of Environment and Technology's Research Ethics Committee, are concerned about several main issues for conducting research: informed consent, privacy, conflict of interest and security. In relation to these issues, four documents were produced as instructed by the Research Ethics Committee: semi-structured interview questions, participant information sheet, participant consent form and a risk assessment (see Appendices One, Two and Three for the first three documents). Submitting the appropriate ethical research forms for approval assisted me in thinking systematically about the well-being of my participants. The three main issues important to the wellbeing of participants in the context of the study were: informed consent, privacy and conflict of interest. I would also add two other issues for ethical consideration in carrying out research in the field: being responsible and accountable, and being aware of the dynamics of power and inequality (Scheyvens et al., 2003).

Informed consent involves obtaining the voluntary agreement to participate in the research after full and open information is supplied. The full objectives and expected outcomes of the research were explained to the participants. They had the freedom to withdraw from the research at any stage. Each participant was presented with an information sheet to explain the purpose of the research, and a consent form to sign in order to provide formal agreement. Before the commencement of interviews in the field, the information sheet and consent form were translated into Mandarin by a translator. These were then made available to all participants who had a choice of either the Mandarin or English information sheet and consent form. The semi-structured interview questions were not shown to them but verbally conveyed. There were some participants who refused to sign the consent form but gave verbal agreement to be

interviewed. Those who refused to sign were mostly government officials who explained that they were not permitted to do so (see below).

The respect of privacy means providing anonymity, confidentiality and security to research participants as required by the ethics research committee. Safeguards such as not disclosing the identities of people and research location in situations where the security of the participants may be at risk were operationalised, unless consent was explicitly given to disclose the name and locations of interviews. However, I was pleasantly surprised that the majority of interview participants were happy to give consent for their names to be used. Ms Alice Lee, one of the leaders in the Broga campaign, especially, wanted her name to be used in quotes and references in the research as she saw being named as a process of asserting agency. In her view, she had nothing to hide or to fear as she had done nothing wrong. She regarded remaining anonymous as akin to having something to hide, and this would therefore, confirm the state's views that exhibiting dissent actively and campaigning were 'recalcitrant behaviour'. Therefore, she saw herself as behaving as if she did not have the right to protest and to free speech, if she hid behind a curtain of anonymity (Interview, Ms Alice Lee, Kajang, 11-05-2009)

Conflicts of interests may also arise which threaten the researcher's objectivity and ethics, and relationships of trust and loyalty (Scheyvens et al., 2003). This is because research is based on relationships of trust and loyalty with a wide range of people such as one's supervisor, informants, sponsors/funders, universities and professional organisations or societies (Scheyvens et al., 2003). For example, in the context of development research, many students from developing countries who return to work in their home countries after completing their studies at Western universities may find that they are not able to pursue job opportunities that influence government processes and policies. Through their process of research where they may have investigated and questioned certain state policies and processes, they may be viewed more as threats to the political order (Cernea, 1982, cited in Scheyvens et al., 2003). In my case, such an issue of conflict of interest was not present.

Being responsible and accountable means demonstrating that the researcher values the information and knowledge being shared (Scheyvens et al., 2003). For example, often

with grassroots campaigners, I brought small gifts such as a small packet of tea, or sometimes paid for the drinks (such as coffee or tea) that were consumed in the course of the interviews. Furthermore, once, a participant requested that I help to obtain information or a book on early childhood education, and I agreed because it was a simple request and by doing so, I could demonstrate reciprocity and appreciation.

Another key ethical consideration is that of power and inequality. The researcher is frequently more powerful in relation to some participants in terms of access to money, education and other resources. Furthermore, informants may feel they are inferior or researchers may feel they are more superior. Robert Chambers (1997) has recommended that researchers recognise such power dimensions by making participants feel comfortable through behaviour, attitudes and mannerism. In this regard, in the context of Malaysia, I ensured that I was dressed appropriately (no short attire above the knees and no sleeveless tops); I often interviewed participants at home because it was more convenient for many grassroots campaigners; I also ensured that the information sheet explaining my research was available in both English and Chinese because many of the grassroots participants could only read Chinese. I often, though not always, had a translator who could also speak either Hakka or Cantonese besides Mandarin because many villagers interviewed, while multilingual, felt more comfortable speaking in their own Chinese dialects.

Not all participants were subaltern voices or the middle classes, and therefore, power differentials were inverted in the case of researching elites or studying up (Aguiar, 2012). Conducting interviews with bureaucrats was similar to conducting research amongst elites whereby access and terms were largely determined by adherence to rules laid down by elites (Aguiar, 2012). Hence, I had to constantly readjust my position in the field as I moved from the subaltern to the middle classes, from the local to the national, and from the official to the private. For example, in interviews with officials, I was told I could not discuss politics and racial issues, and I could not obtain signatures in writing for consent forms. This was not the case in interviews with subalterns or the middle classes. Only a verbal consent was given by government officials as it was made clear to me that government officials were not to sign anything unless it was considered official government business. In order to conduct the interviews with government officials, I had to obey the rules they laid down.

Aguiar (2012) has emphasised the importance of conducting research among government or business elites because the decisions made by this small group of people have major impacts on the lives of many. While not wanting to diminish the positive aspects Aguiar (2012) has highlighted about investigating how elites work, I found my experience interviewing government officials relatively restrictive in terms of the conditions laid down by the elites and experiences I was subjected to. In one particular interview of an official, the entire interview was captured on video, and while the filming was on-going, many close-up photographs were taken of me from all angles. The balance of power was clearly skewed on the side of the government official in this situation.

The Director-General of the Atomic Energy Licensing Board (AELB) made clear to me that he consented to the interview because it was an exercise in public relations (Interview, Raja Dato' Abdul Aziz Raja Adnan, Dengkil, 06-08-2010). One of the reasons for agreeing to the interview request was so the AELB could send out a public message to reassure those protesting against the new Australian foreign direct investment in a rare earth plant – Lynas Advanced Materials Plant (LAMP) – that it would do its job and responsibly monitor LAMP (LAMP is discussed further in Chapter Nine). Despite my assurances that I was not involved in the protest movement against the LAMP project and that I was only there to talk about the ARE plant, the responsiveness and high standards to which the AELB adhered to in managing the LAMP project were repeatedly emphasised to me. In response, I several times made it very clear that I was there in my capacity as a PhD researcher to investigate the Bukit Merah campaign and not the LAMP facility which was under construction at the time of the interview.

The usual constraints applied to researching elites as with researching others except that the constraints appeared to a greater degree amongst elites. So for example, I spent much more time attempting to fix interviews with officials, who often appeared busy with work commitments, and also appeared to be uninterested. Some did not reply despite repeated calls and emails. In these cases, I had to rely on statements made by government officials or politicians published in the press, or in government publications, such as reports and statistics in order to substantiate some of the

arguments made in the thesis. However, I managed to gain access to three interviews with government officials who all agreed to their names being used in the thesis. They are: Raja Abdul Aziz Raja Adnan, Director-General of the Atomic Energy Licensing Board (AELB) of Malaysia; Dato' Nadzri Yahaya, Director-General of the Department of National Solid Waste Management, Ministry of Housing and Local Government; and Dr Muhd²⁴ Noor Muhd Yunus, Deputy Director-General, Technical Services Programme, Nuclear Malaysia, Ministry of Science, Technology and Industry.

The lack of interest on the part of officials is not all that surprising. An atmosphere of nervousness exists as the Malaysian government has historically not hesitated to use different types of repressive legislation to counter dissent. Both the Broga and Bukit Merah campaigns evoked considerable controversy. In the case of the Bukit Merah campaign, activists were arrested in 1987 under the Internal Security Act (ISA) which allows for detention without trial. The Malaysian government has also frequently used the threat of arrests under the Official Secrets Act to control the dissemination of information. Under such conditions, it is not surprising that some government officials may have perhaps felt nervous about engaging in discussions over controversial issues.

The situation with interviewing business interests and consultants was similar to interviewing government officials. However, one consultant who played a smaller role in the detailed Environmental Impact Assessment (dEIA) of the proposed Broga incinerator did agree to be interviewed. Repeated requests through e-mail and telephone calls for interviews with Asian Rare Earth and the company they hired to process the contaminated waste at the long term storage facility in Bukit Kledang, GSM Consultancy,²⁵ went unanswered. The consulting company, Perunding Utama Sendirian Berhad,²⁶ that won the main contract to carry out the dEIA for the Broga incinerator was not willing to be interviewed despite several telephone conversations requesting an interview. I asked why and was told it was company policy, and that the protestors were too 'emotional' and the situation was too 'political'. Many business interests and consultants viewed conflicts such as Broga and Bukit Merah as 'politically sensitive' and were not generally welcoming of research students interviewing them.

²⁴ Muhd is a commonly used abbreviation for the name Muhammad in Malaysia.

²⁵ GSM consultancy is a subsidiary of a US company called Geosyntec, an engineering and consulting firm specialising in the remediation of pollutants in the environment.

²⁶ This company had been bought up by Worley Parsons, an international consulting firm.

4.4 Practical issues and complexities of fieldwork

There are several practical issues and complexities that deserve attention in the context of doing qualitative research. In this section, I highlight more universal issues that can arise and may also be experienced by other researchers conducting fieldwork (Leslie and Storey, 2003). These issues are: gatekeepers, distances travelled, networking and building relationships with participants, language and interpretations during interviews, and bringing a child into the field.

Gatekeepers are those that have the power to withhold access to people or situations in the context of the research process (Scheyvens et al., 2003, p. 153). In the context of the research, there were a series of gatekeepers, not just one. I had to rely on personal links to activist networks for introductions to the appropriate persons who in turn introduced me to those involved in the Broga and Bukit Merah campaigns. In this regard, the networks I became acquainted with during my previous work experience in a human rights organisation turned out to be invaluable. The main leaders I was introduced to then helped, in turn, to access other participants in both campaigns.

The Broga campaign was easier to access as it was recent and many who were involved were interested in spending time to speak about the issue. Furthermore, distance played a critical role in participants' willingness to meet with me. Broga was close to Kuala Lumpur where I had based myself. So it was easy to set up meetings and make repeated trips to areas within Kuala Lumpur as well as in or near Broga for interviews or chats in the process of networking. While Bukit Merah was physically further and its campaign against the ARE plant a thing of the past, there were more written and published materials, journal articles included, on Bukit Merah than on Broga. The existence of more published material was due to the length of the Bukit Merah court case (eight years), as well as the amount of international campaigning and attention gained through the years of legal proceedings. In other words, while there were more primary materials gathered on the Broga campaign relative to secondary ones, the opposite was true of the Bukit Merah campaign. Either way, the data gathering process was not hampered by a lack of data.

I was aware, however, that drawing more on secondary data for building up the case study of Bukit Merah as opposed to drawing mainly on primary data for that of Broga meant that a more nuanced picture of the Broga campaign emerged. Broga campaigners still remembered most of the events that took place in regards to the campaign and gave very detailed descriptions as opposed to Bukit Merah campaigners whose recollections were not as detailed, fresh or vivid. Being very aware of this, I tried to offset the imbalance by going through the details of the Bukit Merah campaign from materials available at the libraries of Consumers' Association of Penang (CAP) in Penang and the Centre for Malaysian Chinese Studies (CMCS) in order to gain as nuanced a picture as I could of the Bukit Merah campaign. As mentioned in paragraph two of section **4.3 Data collection: methods, strategies and ethics**, a substantial amount of both primary and secondary materials were successfully obtained from CAP and the library of the CMCS, and thus a fairly detailed account of the Bukit Merah campaign and court case emerged from these sources of information.

Considerable time was spent on networking and telephoning people to initiate contact and develop rapport. I found both these activities absolutely crucial in order to achieve the ultimate objective of securing interviews with the right people. So not only was a substantial time allocated to chatting with people in a social setting, the cost of telephone bills was very high. I found that rapport was built mainly with key leaders amongst grassroots campaigners and individual activists who were not part of NGOs because these were mostly the people who responded to my requests and spent a substantial amount of time with me. What this has meant was that while I managed to capture the voices of campaigners, and some voices from the state sector, these voices were not as diverse as it possibly could have been. As discussed in detail in Chapter Three, there is always a range of diverse views within a campaign as well as without (the diversity of views within the state and business interests).

Participants to whom I paid repeated visits warmed up with further visits as we got to know each other better. Repeated visits tend to help participants understand the researcher's intentions better. With increased warmth and understanding, increased discoveries were made. I now understand better why some anthropologists spend as long as two years in the field. It takes time to build relationships and it is with increased trust and warmth that more discoveries are made for the purposes of the research

project. In this regard, there are two more important factors I note here: the ability to speak in the same language, as well as introductions from or associations with the right networks. Having used three different translators with the same participant over several interviews, I noticed that the participant in question warmed up most towards the translator that spoke the same mother tongue. This translator also previously worked for a local councillor who was much respected by the participant and so this contributed to a much warmer reception.

In particular, Ms Alice Lee, one of the leaders of the Broga campaign, was very helpful and generously accompanied me in many interviews with other participants in and around Broga, Lenggeng and Kajang (a town close to Broga New Village). She mainly used her days off-work or the evenings to assist me. As we struck up a rapport, I learnt many things which would not have been possible with a one-off visit or interview, and made a difference to the kind of data I managed to gather. She welcomed me into her home to conduct most of the repeat interviews I requested.

Another complexity that arose was that of language and interpretations. While most urban interviewees spoke English or Manglish with me, many of the village participants spoke Cantonese or Hakka or Mandarin or all of these Chinese dialects. Unfortunately I only speak the Chinese dialect, Hokkien. In order to overcome the language barrier, I hired a total of three translators, each used in different interviews on different occasions. Only one of the three was highly proficient in standard English. Thus, I had to interpret what they had translated and some details were lost in the double translation. Another problem in the interpretation of the interviews was the awareness that differences of class and cultural locations may therefore mean my interpretations of interviews and observations may not have matched many of my interview participants who were from low income groups. In order to mitigate against those problems, I triangulated. I checked the answers obtained in interviews with my translator after each interview was over. I also confirmed the information I obtained by checking with published materials, with other participants or with English-speaking activists who were involved in the Broga and Bukit Merah campaigns. In the case of repeat interviews, I returned to participants to clarify the information I had obtained from the initial interview.

Before concluding this section, I would like to raise a final point. Bringing children into the field can be very challenging, unlike the experiences of Levey (2007) who experienced her son being a 'wedge' that helped her open up relationships in her ethnographic fieldwork in Africa. In other words, for her, bringing her son into the field worked positively in her favour because her son helped to promote trust and opened up barriers between her as the researcher and with her research subjects who were of different age groups. Levey (2007) lived in a rural African village whose community had close ties with each other and in such a tightly knit community, Levey's child helped the community to relate to her. This was not the case with being based in an urban area in a secular manner as opposed to being in the midst of a tightly knit rural community. Based on my personal experience, childcare was the most pressing issue. Researchers should plan to arrange multiple networks of support (or at least, for example, a partner) who would be available for childcare duties at all times. I brought my then five-year old son into the field, leaving my partner in the UK. It was difficult to find childminders who were willing to work on a stand-by basis to accommodate the occasional night time interviews I had to conduct, or the social events that I learnt about in the last minute. These events were relevant for the purposes of networking in order to gain contacts with potential interview participants. Furthermore, my son attended a day care on the weekdays only. Thus, weekends were not available for further data gathering. Any gaps in research were made up later in the second field trip a year later in July-August 2010 when I returned, alone, to Malaysia.

4.5 Data management, analysis and interpretation

This section discusses the way the data gathered was managed, analysed and interpreted in order to fulfil the research aims. The University of Brighton's code of practice was adhered to in data management. Names of participants were changed unless otherwise indicated, and primary and secondary data gathered (fieldnotes included) was kept locked in a cupboard during and after the fieldwork period. Any data generated electronically, such as interview transcripts and memos, was kept in a password protected computer. In accordance with ethical requirements of the University, data will be kept securely for ten years.

I wrote notes in exercise books during each interview as well my thoughts and ideas immediately after interviews were conducted, or later on at night on the same day of the interviews. In cases where the participant did not agree for the interview to be audio-recorded, very detailed fieldnotes were written both in the course of the interview and afterwards. The majority of interviews were summarised while a few key interviews were fully transcribed. This is due to the nature of the fieldwork and semi-structured interviews conducted in the manner of long conversations which did not make transcriptions practical and cost effective. Interviews often contained large volumes of superfluous material. For example, many interviews exceeded two hours with one interview/conversation lasting five hours. In the five-hour interview, the two participants were both retired and were keen on chatting with me. I did not stop this long interview as I found it provided very interesting background information about Broga New Village. Hence, interviews were subjected to an initial round of summarisations from which key themes and cross-themes were found through an inductive thematic analysis approach (see Miles and Huberman, 1994; Boyatzis, 1998; Corbin and Strauss, 2008; Guest et al., 2012).

Both the primary and secondary data were subjected to thematic analysis in order to identify key themes in the data (or patterns within data) (see Ritchie et al., 2006). This is consistent with the aims of this research (see Brewer, 2000; Braun and Clarke, 2006). This type of analysis is a circular process whereby many steps are repeated and initial data analysed is returned to and redefined when new codes emerge or are created, merged, further divided or removed (Miles and Huberman, 1994; Richards, 2009). In each step, there is a level of interpretive analysis as is throughout the research process such as during the literature search, the writing of fieldnotes, conducting interviews, transcription and summarisation of interviews, and the reading of other textual materials gathered. Using methods of inductive analysis from the bottom-up means that themes are allowed to emerge from the data, as opposed to trying to fit data into a pre-existing coding frame. Inductive analysis is a process of coding the data where codes are identified and not pre-empted as is done in theory testing (Braun and Clarke, 2006, p. 12). However, it is recognised that in this thematic analysis approach, the research questions (What are you aiming for? What are you seeking? What can you achieve?) and the key issues identified in the literature search will influence (or place limits on) the process of analysis and interpretation (Richards, 2009, pp. 133-138). In other words,

some level of analysis begins during the start of the data collection process and the ongoing analysis will shape the rest of this process.

I followed these steps in analysing my data: familiarising, writing memos and open coding, interpretive indexing categories, identifying inconsistencies and being reflexive (Mason, 2002; Richards, 2009). First, I familiarised myself with the data by reading and re-reading the primary and secondary data gathered. This was followed by open coding. A code is a formal identification of a topic/theme (Guest et al., 2012). The process of open coding involves looking for core themes or sub-themes which emerge or recur as well as their meanings and form, naming/labelling the themes (i.e. coding) and indexing them into categories (Miles and Huberman, 1994; Brewer, 2000). I wrote reflective memos/notes to capture my thoughts, ideas and reflections in relation to the categories. Some memos formed their own categories; others did not. For example, I found that demanding for rights to health and safety, and for a basic right to information were two strong recurrent themes in both the Broga and Bukit Merah campaign demands; these two issues were indexed into two categories with topic codes of 'right to health and safety' and 'right to information'.

From the open coding process, I further synthesised the categories/codes obtained by looking for relationships between those categories (the interpretive indexing categories) (see Dey, 1993; Mason, 2002). This process involved interpretation of the categories that emerged in order to identify broader umbrella groups of categories. Some of the categories I merged, others remained separate and some were discarded. For example, 'right to health and safety' and 'right to information' were merged into one category which was coded: 'discourses of environmental justice campaigns'. Meanwhile, the category of 'transnational advocacy network', which arose when both environmental justice campaigns took their issues to the international arena through linking to international advocacy networks, was placed in the category of 'environmental justice practices/strategies'. While in the process of interpretative indexing categories, I also identified inconsistencies and practised being reflexive. For example, some campaigners in the case of Bukit Merah talked about environmental injustice in terms of environmental racism but not others. Campaigners in Broga also did not talk about environmental racism at all. So this discourse of environmental racism was an

exception, and therefore, placed in its own category which was topic coded as ‘environmental racism’. Further analysis on this matter is found in Chapter Nine.

Practising being reflexive was applied throughout the process of research, recognising that all knowledge is co-constructed and that the result of a research process is the interpretation of the researcher of the phenomenon under investigation (see Denzin, 2004; Silverman, 2010). The memos I wrote were also used to feed into the interpretive indexing categories to help to identify the researcher effect. For example, and as mentioned before, I was acutely aware of being ethnic Chinese and how this impacted on the kind of information being elicited. This is because those who felt that environmental racism was a factor in galvanising the Bukit Merah campaign due to Chinese political, economic and social marginalisation would have found it more difficult to give voice to this belief if a Malaysian of Malay or Indian ethnicity posed the same question about being Chinese and experiencing environmental racism in the Malaysian context. The answer elicited might have been very different. I wrote reflective memos about this issue and fed them into the process of indexing categories.

The circular process of the inductive thematic analysis also meant that as analysis and interpretation progressed, the various literature which were relevant to explaining campaign discourses and practices also became more apparent. I had prepared myself for fieldwork by reading the environmental justice literature, and as expected, the themes of justice, recognition and participation emerged from the data collected. However, several themes were not originally anticipated, but emerged from both the primary and secondary data collected in the field. These were: the centrality of the issue of lack of trust which governed the relationship between the government and the communities involved in the Broga and Bukit Merah campaigns, and the politics of scientific knowledge (in terms of whose knowledge counts; see Chapter Six) and environmental citizenship. Through interviews, it emerged that many campaigners did not believe government officials and politicians who said they had the campaigners’ wellbeing at heart. Through newspaper articles, interviews and court documents of the Bukit Merah case, it became apparent that it was the contestation of scientific information that featured prominently: for example, the argument made by the state and business interests that radiation at permissible levels causes no harm, as opposed to the argument made by campaigners and their supporters that radiation at whatever level

causes harm to human health. Through a combination of reading secondary materials such as journal articles and news articles, as well as primary materials such as campaign letters to government officials, politicians and business interests, it became increasingly apparent that issues of who is responsible for the harm caused to human health and the environment (who should be accountable?), who has rights to demand change and who has the power to make change happen, were all critical issues of debate in both the campaigns. These issues pointed me in the direction of the issues found in the debates in the environmental citizenship literature. Thus, the analysis and interpretation stages were a circular process, of going back and forth between primary and secondary data, as well as the literature review. Accumulatively, these processes brought to my attention the importance of not just the environmental justice literature to my research, but also the literature of science and technology studies (also known as the public knowledge of science or the sociology of scientific knowledge) and of environmental citizenship. Thus, upon returning from the field, I immersed myself in the reading of the literature of the latter two areas as these were missing in earlier readings which were focused mainly on the environmental justice literature.

Furthermore, following Creswell (2007), both the central thesis and research questions which emerged from the research, were further used as a guide to derive procedural sub-questions in order to aid the process of data analysis.

The procedural sub-questions were:

- (a). How might the similarities and differences between the two case studies be described?
- (b). What themes emerge from gathering information about the two case studies?
- (c). How would I interpret these themes within the literature of environmental justice/social movements, science and technology studies and environmental citizenship?

These questions provided guidance in the data analysis and interpretation processes: throughout familiarisation of text, writing memos and open coding and the interpretative indexing of categories.

4.6 Validity and reliability of research findings

Concerns for validity and reliability (or rigour) of research finds stem from the issues that researchers have of ‘getting it right’. In other words, such concerns address the accuracy of an account and the standards that are used in judgement (Creswell, 2007; Bradshaw and Stratford, 2010). There are many ways in which researchers ensure the validity and reliability of the research process: from design to collection and analysis and write-up (Bradshaw and Stratford, 2010). One method to measure validity is to demonstrate that the research design chosen provides for the use of appropriate data collection methods in order to generate data to answer the research questions (Mason, 2002). In other words, is what is explained indeed the topic of investigation? I have done this through demonstrating the processes I have undertaken in research design and implementation: through examination of the relevant theoretical concepts (Chapter Three); through justification of methodology and methods, operationalising reflexivity and ethics, taking into consideration how power dynamics affect the data gathering process, and practising validation techniques (see next paragraph) as recommended by qualitative researchers (Lewis and Ritchie, 2006; Creswell, 2007; Corbin and Strauss, 2008; Silverman, 2010; Yin, 2014) (in this chapter). Another method is to ensure that the entire research process is open to the scrutiny of both participant and interpretive communities (Bradshaw and Stratford, 2010). This checking process is carried out as described in the previous point made about being able to demonstrate research design and implementation processes, and also through triangulation of data which is described below.

There are many perspectives on validation processes in qualitative research not just in terms of definition and terms used, but also in establishing procedures for the practice of techniques of validation (Creswell, 2007; Yin, 2014). These perspectives range from those that view qualitative validation in terms of quantitative equivalents to that of postmodern and interpretive perspectives (Creswell, 2007). The interpretive perspectives emphasise researcher reflexivity and includes challenges such as the

questioning of ideas developed in the research process. Here, validation is based on negotiation with participants; the writings of the researcher are temporal and located interpretations, thus, they are always open to reinterpretation. Despite these wide ranging perspectives on validation, processes of validation ultimately translate into strategies and techniques (Creswell, 2007). Creswell (2007, pp. 207-209) outlines eight validation strategies that are frequently used by qualitative researchers. He recommends that at least two of the eight are used in any qualitative research (see also Yin, 2014). I practised four strategies: triangulation, clarification of bias, member checking as well as using thick and rich descriptions wherever I can in the write-up (see Denzin and Lincoln, 2000; Creswell, 2007; Yin, 2014).

Triangulation is where the researcher uses multiple sources, theories, methods, or even investigators in order to elicit corroborating evidence on a particular theme or perspective. For example, I checked out the information I obtained from participants by comparing it to information I obtained from other participants as well as with other published sources such as monographs, peer-reviewed journal and newspaper articles, websites and publications by NGOs. Another example lies in the research design in that I selected a wide-range of interview participants. They ranged from those who opposed the ARE facility and proposed Broga incinerator, to those who approved of and supported them. In other words, I interviewed participants on the opposite side of the fence in order to gain a more balanced view of the two environmental conflicts, as well as to corroborate information.

The clarification of bias refers to when the researcher discusses past experiences, biases and her own orientations, and is aware how these may influence the interpretation and approach of the research. Such awareness was expressed and operationalised throughout the entire research process, and is described in sections **4.1 Reflexivity** and **4.3 Data collection: methods, strategies and ethics**.

Member checking refers to when the researcher brings back her findings to informants before the final write-up of the thesis, and ask for their views as well as what is missing. Examples of the type of information taken back are: data, analyses, interpretations and conclusions (Creswell, 2007). In the case of this research, I took back mostly data, to two interview participants for the purposes of verification.

The provision of a rich and thick study refers to when the phenomenon/event being investigated, and the informants and/or setting are described in detail. This allows the reader to make decisions about the transferability of the findings due to shared characteristics (see Baxter, 2010). In the context of this research, the main in-depth descriptions of both the Broga and Bukit Merah case studies are found in Chapter Two. Furthermore, rich and thick descriptions are also interwoven into the entire thesis through the various descriptions of discourses, practices/strategies, and roles and understandings of a wide-range of actors found in both environmental campaigns (Chapters Six, Seven and Eight).

Finally, the quality and reliability of the research project are also ensured through the formal process of application and approval by the Research Ethics Committee of the School of Environment and Technology, University of Brighton. The main data gathering process did not begin until approval had been given by the Research Ethics Committee. The guidelines laid down by the Committee were adhered to while in the field (See section **4.3 Ethics**).

4.7 Conclusion

This chapter placed the research design and the chosen methodology and methods within the context of carrying out investigations into two environmental justice campaigns in Malaysia. Through using a case study methodology, core environmental justice issues and related themes can be identified through comparisons of two in-depth, rich and thickly described case studies. Semi-structured interviews and the gathering of secondary textual material enabled the research questions to be answered through capturing the perspectives and actions of a wide-range of interested stakeholders on opposite sides of the two environmental conflicts: from grassroots campaigners, activists and NGOs who opposed the proposed Broga incinerator and ARE facility, to government, consultants and business interests who supported them. The views, understandings, discourses and practices of two groups of opponents, which emerged from the data collection process were then used to analyse the implications for theorising environmental justice and citizenship issues. In Chapter Nine, links are made between environmental justice discourses and practices which emerged from the two

case studies, to contemporary debates within theories of environmental citizenship, in order to broaden and deepen the theory and practice of environmental justice.

CHAPTER FIVE

THE RACIALISED POLITICAL ECONOMY OF MALAYSIA, NEW VILLAGES AND SUSTAINABLE DEVELOPMENT

How environmental justice conflicts develop is context specific (Walker, 2012). Thus, in order to better understand the development of the environmental justice conflicts of Broga and Bukit Merah, these must be situated with the wider politics, political economy and historical processes of Malaysia. Three key themes are explored in this chapter. The first of these concerns is the history and development of racialised politics in Malaysia and how this has resulted in the political and social marginalisation of the Chinese. Related to this and particularly relevant to both case studies is the history of the creation of both Broga and Bukit Merah as New Villages (NVs hereafter). NVs were sites of resettlement created in the latter part of the colonial period when rural Chinese farmers were rounded up and interned as they were viewed by the British Colonial administration as a communist threat. They were heavily fortified encampments guarded round the clock by both police and military personnel, and were created in 1948 at the start of the Malayan Communist Insurgency of 1948-1960. This history is central to how these places became stigmatised as places of poverty and deprivation after Independence and through successive postcolonial administrations. In a manner similar to that found in other parts of the world, NVs came to be viewed as appropriate sites for polluting industries or waste repositories (Walker, 2009). This historical geography of the NVs underscores the elements of vulnerability, uncertainty and risk that many grassroots villagers in Broga and Bukit Merah have experienced. Due to these historical negative experiences, a lack of trust characterises the relationship between the state and residents of NVs. Given this lack of trust, many low income grassroots campaigners in both cases did not believe the information given out by the state about the ‘safety’ of low level radiation emitted by the Asian Rare Earth facility and its waste, or of the ‘safety’ of the proposed Broga incinerator project.

The second key theme to be examined is the sustainable development pathway taken by the Malaysian government because this has had an impact on ideas of pursuing growth and development through using technical advancements and solutions. Malaysia’s rapid

economic growth beginning in the early 1980s and continuing through to the present, has been led by a developmental state, characterised by a high degree of state intervention in the economy (Wade, 1990; Woo-Cumings, 1999). The Malaysian state has played an important role in steering resources towards private firms to achieve development goals; thus state and business interests more often than not merge (Gomez and Jomo, 1997). The developmental state has also been influenced by ideas of sustainable development and green modernisation that focused heavily on looking for technical solutions (Khoo and Rau, 2009; Hezri and Ghazali, 2011) to postmodern problems such as pollution and climate change (see Beck, 1992). Therefore, this chapter examines how growth, development, narrow ideas of sustainable development and technical solutions merged, and underpin state and business interests, accounting in part for why protestors' views are dismissed as narrow and ignorant.

The third theme explored here is the political development of *Reformasi*, a national political movement calling for widespread political reform. In 1998, opposition political parties and civil society organisations, united in protests and demonstrations, to the call for *Reformasi* (in English, Reformation). *Reformasi* demanded protection of civil rights, good governance and an end to corruption, cronyism and nepotism, and did much to change national political consciousness. Ordinary citizens who were neither members of opposition political parties nor related in any way to civil society organisations also joined in the demonstrations (Weiss, 2003). As political opportunities changed and shifted, so too did the paths and means for activism. *Reformasi* provided a different political context in which the Broga campaign unfolded in early 2003 compared to when the Bukit Merah campaign began in the 1980s. This difference, including changes in the dynamics of state-civil society relations between these two periods, goes a long way to explain the different ways in which the two case studies unfolded. They help to explain, in part, how the environmental justice frame travelled in space and time, evolving from demands for justice in health, safety and the environment in the 1980s (the Bukit Merah campaign), to a wider environmental justice frame that also speaks of justice in terms of rights to participation and democracy in 2003-2006 (the Broga campaign). Hence, the impact of *Reformasi* on the Broga campaign is analysed in this chapter.

Before examining these three themes, it is important to note the long term association by both scholars and the media, of the Chinese in Southeast Asia with wealth and businesses (Purcell, 1952; see also Jomo and Folk, 2003; Suryadinata, 2006; Gomez and Hsiao, 2013). The marginalisation of the Chinese in Malaysia is not on a universal scale. The treatment of the Chinese by Southeast Asia nation states has varied from extreme discrimination (for example, speaking Chinese, having Chinese names and Chinese schools were banned by former President Suharto of Indonesia after he came to power in 1965; see Purdey, 2006), to none at all (for example, Singapore, which is ruled by a predominantly ethnic Chinese government). In Malaysia, the accommodation of the Chinese is partial. While in economic terms, there is a relatively high level of political and social accommodation of big Chinese businesses and Chinese elites, the same cannot be said about small- or medium-sized businesses and those occupying the lower rungs of the social hierarchy.

In Malaysia, there exists a stereotype that the Chinese are urban dwellers and members of wealthy business communities, and that they hold considerable economic clout not just in Malaysia but also in various different countries in Southeast Asia (Mahathir Mohamad, 1970; Zurairi Ar, 2014). While there is certainly a basis for such a stereotype, this ignores the existence of political, economic and social policies that have the effect of putting particularly low-income Chinese at a disadvantage. It also ignores, how in times of political upheaval, the Chinese have been targets of violence (see for example, the use of rape of Chinese women as a method for waging terror on the Chinese community during the fall of Indonesia's President Suharto in 1998, in Purdey, 2006). The Chinese who live in NVs fall into such a category of marginalisation.

In the next section, I begin with an examination of racial policy in the colonial period because this was when the marginalisation of the Chinese in Malaysia began. I then examine the creation of NVs in detail to highlight why and how the Chinese were marginalised further during the Communist Insurgency. The history of marginalisation, and in particular, how NVs became places of stigmatisation is not something that is well-researched. NVs were not just geographical expressions of racialised politics and political economy but also expressions of a racial hierarchy in colonial Malaya. Colonial society was ordered around an incorporated (Malay) aristocracy and a racial division of labour. This sets the stage for negotiations at independence in 1957 where

politics and society were structured along ethnic lines – a racialised politics, culture and society (Mandal, 2002; Verma, 2004; Weiss, 2006). As I go on to explain, later, the reaction of the colonial and postcolonial governments to the Communist Insurgency and the creation of NVs further contributed to entrenching a racialised society in which certain sections of the Chinese population were marginalised in social, economic and political terms, contributing to a lack of trust in the contemporary period between residents of NVs and the state.

5.1 The marginalisation of the Chinese: from colonial Malaya to New Villages

The history of Malaysia's Chinese population is inextricably linked to the commercial imperatives of British colonial rule. With the Anglo-Dutch Treaty of 1824, Malacca (today, a state in the peninsular part of Malaysia) was transferred over to the British. The treaty was to settle disputes over territory and the lucrative spice trade rights between the Dutch and British in the Far East, and the geographical boundaries drawn to determine which territories were Dutch and which were British are the very same boundaries that delineate present-day Indonesia and Malaysia (with the exception of Singapore). With the possession of Malacca, British influence began to expand over what were independently governed states, eventually bringing the whole of the Malay Peninsula under British rule by the end of the 19th century.

Although there had been trade between various kingdoms based in the Malay Peninsula with China and India since at least the first century (Purcell, 1952), mass migration did not occur until British rule, when the forces of colonial economic expansion were combined with a direct policy of importation of labour to deal with labour shortages in rubber and tin production. By the mid-nineteenth century, the economy of British Malaya was dominated by tin, and in the last quarter of the century also, by rubber. The British discovered that the Malay Peninsula was ideal for planting rubber. Monocultures of rubber plantations thrived because the rubber trees, originating in Brazil, were far from natural predators or diseases that would quickly destroy them. Rubber was in demand not only for car tyres, but also in everyday items such as braces/suspenders, and as the industrial revolution boomed in Europe and North America, the demands for rubber escalated. Peninsula Malaya became the largest world producer of both rubber and tin. In order to fuel the production of those two products, and in the face of a

shortage of labour locally, the British imported hundreds and thousands of labourers from India and China between 1870 and 1930 (Weiss, 2006, p. 54).

This changed the ethnic composition of Malaya dramatically. By 1947, the Chinese and Indian populations numbered 2,614,667 (45% of the total population) and 599,616 (10% of the total population), respectively, out of a total population of 5,848,910 in Peninsula Malaya (Purcell, 1952, p. 277).²⁷ The extractive industries of tin and rubber were dependent on cheap and expendable labour and monopolistic practices (Breman, 1990). In order to ensure the stability of colonial rule and the profitability of those extractive industries, colonial policies reinforced the political, economic and social divisions between immigrant communities and local indigenous populations.²⁸ While immigrant communities were kept in the mining and plantations sectors, the local Malay populations were kept in the rice-planting rural economy, which was key for providing the staple food crop for the whole colony (Reid, 2001).²⁹ Despite the fact that nearly three-quarters of all the Chinese in the 1947 Malayan census were born locally (Purcell, 1952, p. 269), the British continued to refer to and talk about the Chinese in terms of being temporary sojourners/immigrants who wanted to return to China as soon as they had made their money through tin mining, thereby reinforcing their marginality in Malayan society (Reid, 2001).

The British maintained a hierarchical division of labour based on efficiency, economy and ideology/moral mission. The British position at the top of the political or administrative authority was legitimated by a belief of racial superiority (Hirschman, 1986). Racial ideology was intertwined with political economy (for example: 'lazy natives' who were suitable as peasant farmers, and 'industrious Chinese' who were suited for mining tin and business-oriented activities), and race as a construct came to define the 'imagined communities' of the Malays, Chinese and Indians, the three dominant races in colonial Malaya (Anderson, 1983). In the position beneath the British

²⁷ In 1947, Peninsula Malaya included Singapore.

²⁸ Earlier Chinese immigrants had blended into local populations and adopted local language and culture. However, assimilation slowed down in the 19th century due partly to the large numbers of immigrants as well as to the economic segregation into mining and plantation communities.

²⁹ That was the idea of the British colonial administration but in reality, Malaya was not self-sufficient in rice. The majority of Chinese tin miners were also subsistence farmers, farming where they could find land (sometimes in very marginal lands such as beside railway lines and hilly areas) as they did not earn enough to feed their families (Loh, 1988).

were the traditional Malay aristocracy whose positions were maintained through a system of Malay special rights in terms of land, education and positions in the colonial civil service. For example, in 1909, the Malay College, Kuala Kangsar, Perak, an all-boys boarding school, was built to train the sons of the Malay rulers and the higher classes for admission to government service. So while a tiny minority were privileged and English-educated, the vast majority of Malays remained rural cultivators confined to villages. Likewise, a similar pattern of division of labour was witnessed in the non-Malay communities. While the non-Malays made up the bulk of the workforce in the tin mines and rubber plantations, a small minority of English-educated Chinese and Indians occupied low-level government clerical and technical jobs. Regarding the Chinese and Indians as 'more industrious', the British also permitted them to involve themselves in commerce, such as trading, and becoming urban shopkeepers, small business owners and manufacturers. Despite this, the British continued to regard the Chinese and Indians as transient migrants and therefore, unassimilable (Hirschman, 1986).

Such stereotyping of the various races fundamentally altered how the various races viewed each other as well as the external perceptions of others from outside Malaya. Hirschman (1986, p. 355) on this matter:

Since the colonial government never accepted the Chinese as permanent residents of the country and frequently questioned their loyalties, it is not surprising that Malay elites (and masses) also believed the Chinese should not be considered as having equal political rights.

It was during the nineteenth century British colonial rule that the word 'Malay' became used as an ethnic category rather as a reference to a geographical place (Weiss, 2006). A unified 'Malay' communal consciousness thus developed, as did a unified Chinese and Indian consciousness despite the fact that there were cultural and linguistic differences within each of those groups. The Malays themselves were made up of many different ethnicities originating from the wider Malay Archipelago (in what is today Indonesia). Although the majority of Indian plantation workers were from the state of Tamil Nadu in India, and divided by caste, the Indians in Malaysia on the whole were also further divided by class, religion (for example, there were Sikhs and Muslims besides Hindus), culture and ethno-linguistic differences especially those Indian civil servants who originated from other parts of India. The same situation applied to the Chinese, who, although largely from southern China, spoke languages that were not

mutually comprehensible. So in reality, the Chinese and Indians were divided by religious, cultural and ethno-linguistic differences within their own respective groups. By placing highly diverse peoples into three neat categories of Malay, Chinese and Indian (as reflected in the 1947 Malayan census) for the purposes of treating each group differently with different sets of policies, the British successfully divided and ruled through communal politics (Abraham, 1997; Mandal, 2002).

Popular group identity amongst peasant Malays was expressed for the first time with the large influx of immigrants, which also included Europeans and others. According to Weiss (2006, p. 55), it was probably the comparison drawn between Chinese and other wealthier non-Malay Muslim immigrants that contributed to the increasingly common expressed grievance of the problem of the backwardness (*kemunduran*) of the Malay peasants, who were being left behind or confined to rural areas and economic activities. The economic plight of the masses of rural Malays was pitted against that of the Chinese, who were mostly concentrated in urban areas and occupations, despite large numbers in low-paid work in tin mining.

An emerging pattern of ethnic distrust was further underlined through the association of a Chinese identity with dissent. When the Japanese occupied Malaya from 1942-1945, these communally and ethnically based divisions continued to be reinforced. The Communist Party of Malaya (CPM), which had a predominantly Chinese membership, was armed by the British to wage war against the Japanese, while Malay nationalists, armed by the Japanese, fought a proxy war against the British as they fought against the Chinese communists (Andaya and Andaya, 1982). Even though Chin Peng, the secretary-general of CPM was awarded an OBE (Order of the British Empire) for helping the British fight the Japanese in occupied Malaya, the OBE was subsequently withdrawn when the CPM demanded independence for Malaya and retreated into the jungle once again, to wage guerrilla warfare in 1948. This time, the jungle warfare was waged against the British, and led to many disruptions in the operations of rubber plantations which were often located in jungle terrain. Many European plantation owners stood to forfeit their insurance claims if their economic losses were caused by warfare, and so the British colonial administration instead called the war against the CPM as the Malayan 'Communist Insurgency'. The Insurgency, in the form of jungle-

based guerrilla warfare, lasted from 1948 to 1960; trickles of it continued until the last holdouts surrendered in the 1970s. A formal peace treaty was not signed until 1989.

Racial and communal divisions were further accentuated during the Communist Insurgency. The chief aim of the CPM was to carry on a struggle for national liberation, to overthrow imperialism and feudal aristocracy and to establish a communist state. Therefore, the Chinese were regarded as anti-British and an enemy of Malaya whereas the Malays, through their leaders who co-operated with British interests, were regarded as friends. The CPM remained largely Chinese in composition despite not considering itself an ethnic party and despite persistent efforts to recruit others, such as Malay and Indian workers and teachers, as well as the Orang Asli (indigenous people) of the Malay Peninsula (Weiss, 2006). This is because the CPM recruited heavily from the mining labour force which was largely Chinese, and its policies had more Sinocentric leanings, such as its support for dual Chinese and Malaysian citizenship. Furthermore, the fact that the CPM had indiscriminately attacked Malays in the immediate post-war period did not make them attractive to the Malay population (Weiss, 2006). Simply put, the British made arrangements that were most conducive to protecting colonial economic interests. Benedict Anderson on this:

The British branded the insurrectionaries as above all ethics, and in fighting them played ethnic politics to the limit, most significantly disfranchising a large part of the Chinese community and enhancing the position of the conservative Malay leadership (Anderson, 1998, p. 325 quoted in Weiss, 2006, p. 79)

The fight against communism would come to define treatment of the Chinese not just in colonial Malaya but also in present day Malaysia. An example of how communist threats are officially viewed by the current government and its racial connotations would be the prevention of the entry of Chin Peng's cremated ashes. On 16 September 2013, a day short of his 89th birthday, Chin Peng died of cancer in a hospital in Bangkok. The Malaysian government decided that his ashes would never be allowed into the country (Farik Zolkepli, 2013). For more than 20 years previous to Chin Peng's death, he had applied unsuccessfully to return permanently to settle in Malaysia despite that being an agreement of the 1989 Haadyai Peace Treaty between the Malaysian government and the CPM. The treaty negotiations were mediated by Thailand, and also allowed CPM members to formally settle in 'peace villages' in southern Thailand.

Those who wished either to return and settle permanently in Malaysia, or just to visit would be allowed to do so. However, the Malaysian government reneged on this agreement and Chin Peng lost his court appeal to be allowed to return to Malaysia in 2009 (Loh, 2009; Bernama, 2009). The Prime Minister of Malaysia, Najib Razak, declared that Chin Peng would not be allowed to return despite the fact that two Malay CPM members, Abdullah CD (Chairperson, CPM) and Rashid Maidin (Central Committee Member, CPM) had resettled permanently in Malaysia (Bernama, 2009). This prompted many to ask if this decision was made along racial lines; including a former Minister in the Prime Minister's department, Zaid Ibrahim, who asked if Chin Peng would have been treated with as much hostility if he were Malay (Shanon Shah, 2009).

The controversies surrounding Chin Peng's attempts to return to Malaysia while alive, as well as the return of his cremated remains for burial after his death, highlight the fact that the Malaysian government views communism as still a national security threat. According to Weiss (2006, p. 79), the 'communist bogey remains a pet government scapegoat'. This situation also underscores how life in Malaysia is constantly viewed through racial lenses. It also provides an understanding of the social and economic stigma that is attached to NVs, and goes a long way to explaining the distrust that many villagers feel towards the Malay-dominated state/government up to the present day.

Hirschman (1986) has argued that racial ideology is entrenched in all aspects of contemporary Malaysian life, having been established during the colonial era. He writes:

Even if Asians rejected the colonial assumptions of white superiority and the stereotypes of their own ethnic community, they tended to accept the unfounded generalizations[sic] of innate racial differences about other communities. Once established, ideas have a life of their own. Moreover, racial ideologies tended to legitimate actions by Malay and non-Malay leaders in both colonial and postcolonial society. More than rubber and tin, the legacy of colonialism was racial ideology (Hirschman, 1986, p. 346).

Post-independence politics: towards entrenchment of a racialised order

The communal divisions described in the previous section had already dictated the way society was ruled for quite some time before Malaya achieved independence in 1957.

The 'independence contract' negotiated between the Malay, Chinese, Indians and British, stipulated that Malay would be the only national and official language, Islam the official religion, and the Council of Rulers (made-up of the nine royal houses who each ruled a different state in Peninsula Malaysia), the constitutional monarchs of the Federation of Malaya. The Chinese conceded on: demands for Chinese to be accorded a second national language;³⁰ and that citizenship rights be liberalised and that Malay special rights be slowly phased out. Malays continued to enjoy the system of special rights granted by the British as it was guaranteed by Article 153 of the Federal Constitution drafted during independence negotiations. Malays hold a *kedudukan istimewa* (special position) and this has translated into additional rights and privileges that are not applicable to non-Malay citizens. Malays or *Bumiputera*³¹ automatically gained citizenship in independence, whereas for non-Malays, only those born locally after 1957 were conferred citizenship (Kua, 2007). Furthermore, the interests of the Malays would be protected through the establishing of quotas in civil service, in the allocation of public scholarships and public education. This was implemented through the preferential extension of a wide range of economic opportunities to Malays not only through employment in the public sector, but also in access to education and training, credit, land and the awarding of licences (Crouch, 1996).

At independence on 31 August 1957, Malaya was handed over to the Alliance, a multi-ethnic coalition for consociational governance.³² The idea was that each communal group would be able to extract concessions from each other through negotiations facilitated by consociational institutions. The Alliance was made up of three political parties representing the three dominant ethnic groups: UMNO,³³ representing the

³⁰ After Singapore was expelled from the Federation of Malaysia in 1965, English, Chinese, Malay and Tamil were made the four national languages of Singapore.

³¹ The word *Bumiputera* means 'sons of the soil' and refers to groups of peoples who are indigenous to Malaysia. This includes not just Malays but also the Orang Asli (the indigenous peoples of Peninsula Malaysia) and the indigenous peoples in the Malaysian Borneo states of Sabah and Sarawak. A Malay citizen is defined by Article 160 of the Malaysian constitution as someone who speaks Malay, adheres to Malay customs and culture and is a Muslim. Therefore, it is possible for a Muslim convert to lay claim to being a 'Malay' if all definitions of being 'Malay' are met. Such a phenomenon can be observed through the widespread use of the colloquial phrase *masuk Melayu* which literally means 'to become a Malay' (*masuk* is the Malay word for enter or to go inside) when a person converts to Islam in Malaysia.

³² Consociational democracy is associated with the work of Arend Lijphart (1977) who describes a model of power-sharing democracy. It has also been used by Mauzy (1978), Brown (1994) and Haque (2003) to describe Malaysia's system of power-sharing despite it being less democratic and more unbalanced than the Lijphart model. The Malaysian government tightly restricts political competition in order to provide political stability and prevent ethnic confrontation.

³³ United Malays National Organisation

Malays; MCA,³⁴ representing the Chinese; and MIC,³⁵ representing the Indians. The MIC initially balked at the idea of accepting a communal political framework but it had little power or choice (Weiss, 2006). Likewise, the MCA initially did not agree with issues of citizenship, Malay special privileges and wanted Chinese as a national language but had to concede these to Malay hegemonic status (Weiss, 2006). The British favoured those three political parties as they were led by wealthy and well-educated elites who were Western-oriented in outlook. These elites had similar economic interests. There was also an implicit bargain between the Malays and Chinese that the Malays would be in charge of politics whereas the wealthy Chinese would be able to continue in their business pursuits and hold on to economic power. The pattern of race relations shaped by colonial, political, economic and ideological structures was thus reaffirmed in the Federal Constitution.

After independence, political organisations and civil society, still communally divided, expanded. Political parties, opposition parties included, experienced sometimes serious, factional squabbles. As the government curtailed opposition political activities as well as the growth of civil society organisations with periodic crackdowns, both became more marginalised. However, while opposition parties ‘developed in a rather ambiguous space between government and civil society’, those suppressions had the effect of increasingly politicising some portions of civil society (Weiss, 2006, p. 81). It is for this reason that over time, political parties and civil society organisations moved towards closer cooperation. This helps to explain why the Broga and Bukit Merah campaigns drew opposition political party and civil society organisation support, and how patterns of campaigning reflected the political context within a particular time period (Chapters Seven and Nine).

The race riots which took place after the general elections of May 1969 marked a critical milestone in Malaysian politics and history because the government policies which were adopted afterwards to redress the grievances regarded to be the cause of the riots further entrenched not just communalism as a way of life, but was responsible for the rise of the new Malay capitalist class (Gomez and Jomo, 1997; Weiss, 2006; Kua, 2007). In the years preceding May 1969, racial violence had erupted several times. The

³⁴ Malaysian Chinese Association

³⁵ Malaysian Indian Congress

Malays were not happy with their elites whom they felt helped a select few and did little to redress the economic difference between themselves and the largely urban Chinese. The lower income Chinese were critical of how MCA only protected wealthy Chinese business interests while the wealthy Chinese were not happy with MCA for not curbing government intervention and regulation of the economy. In the May 1969 general elections, the Alliance and opposition parties won equal numbers of seats in the state of Selangor, and before it was clear how the state government would be formed, two Chinese-majority political parties held exuberant victory parades. The official version of the 1969 riots claimed that these victory parades inflamed Malay sentiments, and at the same time, rumours were spread of Malays being attacked (Weiss, 2006, p. 84). An alternative explanation was that the riots represented a planned coup d'état to oust the Prime Minister.

Writing in 1977, a Malay journalist had this to say about the 1969 riots:

The May 13 Incident did not occur spontaneously. It was planned quickly and purposely. The identity of the planners of the incident cannot be stated with accuracy. But whatever it was that happened, the May 13 Incident was a form of coup d'état directed against Tunku Abdul Rahman. The Tunku's power in fact ended from then onwards. Although he continued to be Prime Minister and the President of UMNO, he was no more than a figurehead (Subky Latiff, quoted in Kua, 2007, p. 3)

After the outbreak of the riots, a state of emergency was declared, curfew was imposed in Kuala Lumpur and several other major cities, parliament was suspended for 21 months, and rule of the country was placed under the National Operations Council led by Tun Abdul Razak. 9,143 people were arrested, of which 5,561 were charged in court (Kua, 2007). Similar harsh crackdowns also took place in 1974 and 1987 when there were moments of protest. When emergency rule ended, many new changes were introduced, and with that, a new Malaysia emerged. The Alliance was recreated as the *Barisan Nasional* (BN, or in English, the National Front) because it co-opted several opposition political parties with the reasoning that all parties needed to work together to stop racial politicking. Any discussion of Article 153 in the Constitution, which guarantees the *kedudukan istimewa* (special position) of Malays/*Bumiputera* was banned and made punishable under the Sedition Act. This has meant that those who questioned Malay/*Bumiputera* preferential policies, or anything deemed to be 'racially sensitive' have been threatened or charged with sedition. The National Culture Policy,

introduced in 1971, also further aggravated communal tendencies as it was Malay-centric.

Furthermore, in 1970, the government announced its New Economic Policy (NEP) which had two aims: to restructure Malaysian society to eliminate the identification of race with economic function and the eradication of poverty regardless of race. In reality, the eradication of poverty was applied largely to Malay Muslims, and not across different communities. Affirmative action in rural development programmes did not include low income Indian communities who became increasingly displaced from their homes, especially from the 1980s onwards as Malaysia's economy rapidly shifted to one based on export-oriented manufacturing (Ooi, 2007). As plantation workers, Indian communities were classified as residents on private property, but as the structure of plantation ownership and land use changed, displaced Indian communities not only lost their homes but also their means of supplementary income through vegetable farming and cattle grazing. Their entire communal existence also came to an end as rubber plantations they lived in were broken up. Most displaced Indians migrated to urban areas such as Kuala Lumpur ending up as the urban poor. So while one of the aims of the NEP was to eradicate poverty in Malaysia, it was selectively carried out with its focus on Malay Muslims, leaving out other non-Malay low income communities. As a result, both urban Indian poverty and also the rise of Indian gangs have been blamed on such neglect (Ooi, 2007; Gopal and Karupiah, 2013).

In order to alleviate Malay poverty, one of the aims of the NEP was to increase Malay ownership of equity in limited companies from 1.5% in 1970 to 30% in 1990 (Ooi, 2007, p. 187). Thirty percent of initial public offerings of shares were reserved for Malays/Bumiputera. The government was so successful that by 2006, Malay ownership of equity was close to 45 percent (Ooi, 2007). This figure was obtained from the Centre for Public Policy Studies (CPPS), a section of the think-tank, Asian Strategy and Leadership Institute (ASLI), which has close ties with the Malaysian government. However, this research data has not been recognised and the official position is that the Malay share of equity reached 19% in 1990 and has remained just under that (as of

2006) (Ooi, 2007, p. 187). With the introduction of the NEP, preferential quotas³⁶ in all areas mentioned above were further strengthened. This has resulted in, for example, the fact that 85 percent of the Malaysian civil service, excluding teachers, is now made up of Malays (The Economist, 2013). The NEP has since been replaced by the National Development Policy (NDP) in 1990, and by the National Vision Policy (NVP) in 2001. Although these two initiatives were supposed to focus more on rapid economic growth and industrialization, they have been perceived to have kept in place many features of the NEP such as Malay quotas in corporate wealth ownership, and education and employment opportunities (Jomo, 2004).

While the socio-economic targets of the original vision of the NEP have been achieved, it has not served to improve interethnic relations. According to Jomo (2004), this is because the interests of entire ethnic groups have been conflated with the economic interests of their respective elites thereby generalising other tensions associated with inter-ethnic and intra-class competition. Thus, communal divisions continue to plague Malaysia. While these divisions have been popularly labelled as racist, Sumit Mandal, an academic at a local university, has argued for the use of the word racialisation to describe Malaysian society and the way it is ruled.

Rather than the systematic structural and ideological implementation of social divisions, as in the case of South Africa under Apartheid, racialisation has been a function of politics in Malaysia in complex, uneven and contested ways. Take for instance the notion of *ketuanan Melayu* [Malay supremacy] noted earlier. While the chauvinist expression remains in use today, it has ebbed and flowed in both rhetorical flourish and popular support. Should it have been the basis of government, then Malaysia would appropriately have been characterised as racist. Under the circumstances, racialisation rather than racism best covers the range of experiences in the country's race politics (Mandal, 2002, p. 55).

Up to this point, the discussion has traced the development of how Malaysian society was historically divided politically, economically and socially along racial lines. This racialised order of society became further entrenched after independence. In particular, it has highlighted the historical circumstances of the Chinese who were placed at a political and economic disadvantage. Not only do the Chinese villagers residing in

³⁶ Quotas also exist for housing units sold by private developers. Besides this, all *bumiputera* buyers also receive a seven percent discount when purchasing homes. In terms of educational opportunities, government-accredited local universities and university colleges reserve 70% or more of their places for Malays/*Bumiputera* (The Economist, 2013).

Broga and Bukit Merah NVs share this history of marginalisation, they also share yet another historical process that is peculiar to their origins: the Malayan Communist Insurgency which brought about the formation of NVs. The forced relocation of Chinese rural farmers into heavily fortified NVs had the impact of further contributing to the marginalised status of the Chinese in Malaysia. It is to this issue I turn to next.

Land, labour and livelihood: the formation of New Villages (NVs)

This section provides a historical account as to how NVs, occupied largely by Chinese miners and farmers became places associated with poverty and marginalisation. NVs are geographical spaces where racialisation was expressed through land and livelihood.

The ancestors of the overwhelming majority of residents of Broga, Bukit Merah and Papan New Villages were tin miners who came from China. The popular historical stereotype of the Chinese as either urban coolie/labourer or tin miner fails to provide an accurate picture of the fact that most of the tin miners were also farmers. Wages earned from tin mining simply were inadequate for sustenance of entire families. There was mention of ‘market garden activities’ of Chinese tin miners in the Kinta District, Perak, in official government reports (Loh, 1988, p. 20). This is the district within which Bukit Merah and Papan are located. Here, vegetables, some cash crops, livestock and fish were farmed. At a later date, rice was also cultivated when the government relaxed their Malay-only rice planting policy and initiated a rice cultivation scheme in Lower Perak for non-Malays in the 1930s due to food shortages brought about by an economic slump (Loh, 1988, p. 37).

Despite widespread farming activities, the Chinese farmers had no land rights and were viewed as squatters on the lands they farmed and lived on. The Chinese farmed wherever they could: in the case of Perak, it was recorded that the Chinese tin miners farmed on abandoned tin mines, in rubber estates, by railways, in Forest Reserves and on Malay Reserves, and also on Unreserved State Land (Loh, 1988). However, at various periods, such as the outbreak of the First World War when food was hard to come by, or when there was no mining work when tin prices dropped and labour unrest threatened, the government actively encouraged farming and set up food growing reserves for Chinese farmers. During economy slumps such as in the periods of 1920-1922 and 1938, the colonial government in Perak distributed seeds and instructions,

relaxed farming policies as to what could be planted and issued annual Temporary Occupancy Licenses (TOLs) to Chinese squatters (Loh, 1988, p. 23 and p. 36). However, as soon as the economy picked up and tin mines started operations again, the government would withdraw the TOLs, such as in the periods of 1934-1937 (Loh, 1988, p. 36). Thus, the TOL was ‘. . . a most appropriate legal document, easily issued when needed and just as easily withdrawn when old priorities once again prevailed’ (Loh, 1988, p.27)

Those priorities were to preserve the viability of the colonial economy and of capital. The colonial state can be viewed as working on behalf of the capitalist to keep mining land unencumbered and a ready supply of wage-labour for the tin and rubber industries (Loh, 1988). This was reflected in the priority given to tin mining in land issues, especially in the Kinta Valley, Perak. No permanent titles were given to mining or potential mining lands, and this was universally applied to everyone including Malay peasant interests in land. For this reason, the lease period that was granted was very often for 30 years,³⁷ and conversions from TOL to such a long-term lease involved expenses many Chinese squatters could not afford. Another reason for the lack of available agricultural land for the Chinese population was the pro-Malay stance in colonial administration policies whereby small-scale agriculture was regarded as the preserve of Malay peasants. This is in line with British colonial policy elsewhere, such as in India and East Africa, where the association of occupation with ethnicity or religion was the *modus operandi* of a divide and rule strategy (Mamdani, 1996). With the priority given to mining, and preference given to the Malays when agricultural land was available, the Chinese farmer remained a squatter with or without a TOL. By the time the Japanese occupied Malaya at the end of 1941, it was estimated that, in Peninsula Malaya, 150,000 Chinese were squatters on land without TOLs (Ramakrishna, 2002, p. 7). This uncertainty in terms of access to land and livelihood contributed to the economic and social marginalisation of the Chinese population in colonial Malaya.

³⁷ Land matters are under the jurisdiction of State governments, and so the length of lease differs from state to state. For example, while it is 30 years in Perak (Loh, 1988), it is 60 years in the state of Selangor and 99 years in the state of Johor.

As the Second World War loomed, the question of what to do with the thousands of illegal Chinese farmer squatters not just in the Kinta Valley but elsewhere in Malaya, was left on the wayside. During the Japanese Occupation of 1942-1945 when food imports were restricted, not only did the Japanese encourage many Chinese squatters to continue farming to ensure a continued food supply, they also encouraged new settlements and carried out forced colonisation of rural land by the Chinese. This meant that, by the end of the Japanese Occupation, even more Chinese families (about 300,000) were farming on land without TOLs (Ramakrishna, 2002, p. 7).

Once the returning colonial government re-established themselves at the end of the Second World War, it started to address what it saw as the Chinese squatter problem. Security was becoming a consideration as the Communist Party of Malaya (CPM), who were supplied by and fought with the British against the Japanese during the Occupation, were outlawed and retreated into the jungle in 1948 to wage guerrilla warfare to demand independence from colonial rule.

The Malayan Emergency, declared for the years 1948 to 1960 in order to battle the Communist Insurgency, further entrenched the racial divisions that had grown out of earlier colonial racial ideologies. The Chinese, who were regarded as immigrants despite being overwhelmingly local-born, were considered by the British as sympathetic to communism because the CPM was overwhelmingly Chinese. Such stereotyping which formed the basis of colonial treatment of the Chinese during the Communist Insurgency was representative of European beliefs in racial ideology; whereby 'race' was considered to be innately linked to particular characteristics (Hirschman, 1986).³⁸ Chinese squatters were regarded by the colonial government as sympathetic to the CPM, and with thousands of them scattered across rural lands, it was very hard to control them. Government officials at the state and federal levels started to discuss the issue of resettlement a few months before the 1948 declaration of a state of emergency.

As part of the government's response to the Communist Insurgency, one-seventh of the population (1.2 million people) registered in the 1947 Malayan census, was resettled

³⁸ A popular exemplar originating from the USA would be the thinking or often expressed thought that 'all black people are good basketball players'.

between 1950 and 1952³⁹ (Loh, 1988, p.124). This mass resettlement was known as the Briggs Plan as it was conceived and carried out by the Director of Operations, General Sir Harold Briggs. Some 572,917 people were resettled into 480 newly formed, barbed-wired and guarded settlements throughout Peninsula Malaya and these settlements were named 'New Villages' (Loh, 1988, p.124). The occupants of the NVs were overwhelmingly, though not exclusively, Chinese. There were some who were resettled elsewhere, close to factories, sawmills and timber businesses. The logic behind this mass resettlement was to deprive the CPM of access to resources from the large numbers of rural Chinese scattered in remote areas.

Despite the Briggs Plan being claimed a success, as is generally described in most literature, fiction and otherwise, the reality for the New Villagers was very different as they saw life as akin to being in a detention camp (Loh, 1988). Life was harsh; with curfews enforced, bodily searches carried out daily at the entrance of NVs, collective punishment meted out if any rules were broken and every aspect of life proscribed by the authorities. Villagers feared both the communist insurgents as well as the apparatus of the state that placed them in those NVs as violence was experienced from both sides. A Broga interview participant spoke about being a very young boy and witnessing dead bodies of communists piled up in a truck which was left in the Broga NV public square for all to see (Interview, Mr Z, Broga, 23-06-2009). This served as an 'example' to Broga residents as to how communists were treated. Another interview participant, an elderly woman in her early eighties, informed me that she was both fearful of the communists and of the British authorities.⁴⁰ She said life was terrible in NVs with restricted movements and strict collective punishments if rules were broken. Each day as she went to tap rubber in the forests she was terrified of being approached by a communist guerrilla. Eventually this was something that did happen and she smuggled food for some time for the guerrillas; not out of sympathy but out of fear. Not going out to tap rubber was not a choice as it meant not being able to make a living. So she felt she had no choice but to co-operate as her life was threatened. Some people in her NV

³⁹ The Emergency took place from 1948-1960. However even after 1960, some NVs still had restrictions imposed on daily movements of villagers because they were in or close to communist 'hotspots'.

⁴⁰ I have chosen not to reveal the village this woman lives in because in Malaysia, being a communist or associations with a communist are still viewed as 'dangerous' to internal security as demonstrated by the responses of the Malaysian government to Chin Peng's wishes, while alive, to return permanently to settle in Malaysia and to be buried in his hometown after his death.

were aware of this, but did not report her as this would have resulted in harsh collective punishment.

Some NVs had no schools, piped water, proper roads or electricity, even though these were promised in the original Briggs Plan. If it was deemed too dangerous, the villagers were not permitted out of the NVs to farm or tap their rubber trees, and this would mean a loss of income. Furthermore, abuses occurred, such as what became known as the Semenyih incident in January 1956 where a large riot took place in Semenyih NV (in the state of Selangor, and approximately seven km from Broga) because Chinese women were bodily searched by British soldiers and sexually assaulted (Ramakrishna, 2002, p. 172). The way the Chinese people who were herded into NVs have experienced the Emergency years, is something that is not largely talked about in public discourse; especially in terms of emotional, mental and physical terror and suffering, or of just plain hardship for having restricted movements and being closely monitored.⁴¹ Due to the conflation of the idea that a Communist is a Chinese and that NVs are hotbeds of communists or potential communists, the Chinese had the label ‘communist’ added to their other labels of ‘immigrant’ and ‘sojourner’, further adding to their marginalisation in Malayan, and later Malaysian society.

After the Insurgency ended and most curfew conditions lifted, the NVs were excluded from rural development plans of the government (Loh, 1988, p.178). State and district level War Executive Committees were absorbed into the newly formed Ministry of Rural Development, who was in charge of rural development, such as the resettlement of the landless, the upgrading of agricultural production and providing credit and marketing facilities. NVs were not part of this programme or funding available for rural

⁴¹ The stigma associated with NVs, and the negative attitude of the present Malaysian government towards alternative portrayals of the Emergency years can be observed when authorities banned the film ‘The New Village’ in July 2013 (Tam, 2013). This local Chinese film depicts a love story between a young Chinese girl from a NV with a communist guerrilla, and it offers a glimpse into the lives of the Chinese in NVs in the Emergency years. Local filmmaker, Amir Muhammad, whose documentaries ‘Village People Radio Show’ and ‘The Last Communist’ were banned in 2006 and 2007, respectively, said ‘Those who grew up in new villages have their own stories behind the barbed wire. Some people may find that challenging. We have never seen their lives presented to us in fictionalised form, so it is potentially a very rich source of stories’ (Tam, 2013). The only other source of fiction which recounts the suffering of Chinese New Villagers is in a 1956 book called ‘And the Rain My Drink’ by Han Suyin. She is best known for her fictional book written based on her life experiences and which was turned into the 1955 Hollywood hit film ‘Love is a Many-Splendored Thing’. The lack of published stories, fiction or otherwise, depicting the experiences of Chinese New Villagers right up to the present day, and the continued suppression of any alternative portrayal of the Emergency years highlight the marginalisation and stigmatisation of NVs.

development despite the fact that the vast majority of them were occupied by rural Chinese farmers. This was because rural development was a ‘. . . euphemism for a politically-charged high-priority national goal of uplifting the Malays’ (Esman, 1972, quoted in Loh, 1988, p. 179). NVs were excluded because they were predominantly Chinese. In the Kinta District, illegal farming continued, some with TOLs and others, without. It was only in late 1973 after the MCA (Malaysian Chinese Association) had attempted to address the landless issue that a new Ministry of Local Government and New Villages⁴² was formed to improve the development of NVs. Only then were funds for development of NVs made available despite these funds being meagre, and initially provided on an ad-hoc basis (Loh, 1988, p. 250).

Whilst the association with the Communist Insurgency positioned the Chinese population on the margins, other material and social deprivations contributed to the creation of NVs as spaces of marginalisation and exclusion. Uncertainties around land tenure, high levels of poverty and unemployment, and a lack of government attention all contributed to this pattern, playing out in particular ways in Bukit Merah and Broga.

Due to the lack of available land and the small allocation of funds for the development of the NVs, at the start of the Bukit Merah campaign in the 1980s, poverty and land hunger characterised the conditions of grassroots campaigners of Bukit Merah (Faun, 1994). Unemployment was also high as the population of the NVs had increased rapidly in the previous three decades. The lack of available jobs meant that many in Bukit Merah migrated to free trade zones in Penang, Kuala Lumpur and Singapore to work in factories in the manufacturing sector. Many from NVs in the Kinta District have gone as undocumented (as well as documented) migrant workers to Taiwan, Hong Kong, Japan and Korea. One lead campaigner in Bukit Merah who is now in his sixties, told me in a 2009 interview that his wife had worked illegally in Japan looking after young children, and that going overseas to work in the services or domestic sector was common practice. In 2009, when interviews were conducted in both study villages, Mr Hew Yoon Tat of Bukit Merah and many villagers in Broga, were still living in houses on land within their respective NVs held under TOLs after more than 50 years. This is still a very common situation in NVs throughout Malaysia today, despite Land Code

⁴² Later, the Ministry of Housing and Local Government, and since 2013, the Ministry of Urban Wellbeing, Housing and Local Government.

regulations that state that TOLs can only be held for three years. This has meant that security of housing has not been available to many in NVs.

In this section, through exploring the history of the formation of NVs, a picture has emerged of how the Chinese became further marginalised through the Malayan Emergency and through forceful relocation into heavily fortified villages. It also explored how and why NVs became marked places of poverty underscored by feelings of vulnerability and uncertainty. Historically speaking, many residents of NVs have experienced violence, poverty, and other deprivations, such as insecurity and uncertainty in livelihood and in housing. This political and economic marginalisation has meant that the residents of NVs do not hold the colonial government or the Malay-dominated government in high regard, historically as well as contemporarily. It would be appropriate to describe the relationship between the Malaysian state and New Villagers as suffering from a lack of trust. This has bearing on why the villagers chose not to believe what the government had to say in terms of potential pollution risks in both cases of Broga and Bukit Merah. This issue of the lack of trust will be further explored in Chapter Seven.

5.2 Sustainable development

In this section, I will turn to issues of sustainable development. The Malaysian government regards economic growth, development and technical solutions as more important and more relevant to the Broga and Bukit Merah conflicts than the reasons offered by campaigners as to why they are against the proposed incinerator and the ARE facility. One reason for this state of affairs is the singular priority given to the pursuit of economic growth and development in state policy, especially under the rule of Dr Mahathir Mohamad, Malaysia's fourth Prime Minister (Crouch, 1996). One of Dr Mahathir's central goals and motivations was to secure a 'Malay' future through the pursuit of economic growth and development together with preferential policies of the New Economic Policy (see previous section). Following a developmental state model, where the state maintains tight control over the economy, and where the private sector is utilised to achieve growth and development, the interests of the state and that of business become conflated as one (Gomez and Jomo, 1997; Gomez, 2012). Hence, a pattern has developed in Malaysia where anyone who raises social injustice and

environmental concerns in protesting against a particular development project will inadvertently be considered ‘anti-development’ and ‘ungrateful’ (Weiss, 2006, pp. 122-123).

Furthermore, in pursuing rapid economic growth relentlessly, Dr Mahathir came up against ‘green’ international development, environmental activists and NGOs who campaigned, for example, against unsustainable development, such as the rapid rate of deforestation in Malaysia in the late 1980s and 1990s. Dr Mahathir was hostile to the green agenda which he regarded as an attack on third world sovereignty and nationalism. In particular, Dr Mahathir used the language of eco-imperialism to describe those who campaigned against deforestation in Malaysia. He viewed the eco-imperialist agenda as one that is bent on preventing developing or third world countries from ‘economic growth’, ‘modernisation’ and ‘development’. It is then all the more surprising that the Malaysian government eventually embraced worldwide trends of ideas and policies on sustainable development. In order to understand how this came about, I will trace how responding to the Sarawak tropical timber campaign in the late 1980s and 1990s eventually led the Malaysian government to embrace ideas of sustainable development with new interest and rigour.

Dr Mahathir is known as the ‘father’ of modernisation in Malaysia (Fernandez, 2007). Not only did he bring about rapid economic growth in the 22 years (1981-2003) he was in power, he also pursued heavy industrialisation as one of his strategies for growth, such as establishing the first Malaysian car company, Proton, as well as many large infrastructure projects in order to achieve a ‘developed nation’ status in 2020.⁴³ This plan and vision for development called - Vision 20/20 - was introduced by Dr Mahathir in the Sixth Malaysian Plan in 1991. Its aims were to achieve economic prosperity, social well-being, world-class educational facilities (which was pursued through permitting the expansion of private tertiary education) and political stability so that by 2020, Malaysia would qualify to be considered a ‘developed nation’. Dr Mahathir was well-known as a nationalist and a strong defender of third world sovereignty, as well as

⁴³ Dr Mahathir had a penchant for megaprojects, that is to say, expensive prestigious projects (Jomo, 2003). Examples are the Petronas Kuala Lumpur City Centre Twin Towers (briefly, the tallest buildings in the world), the Formula 1 Grand Prix race track, the Kuala Lumpur International Airport, and the new administrative capital, Putrajaya, which contains a palatial official residence for the Prime Minister of Malaysia.

a critic of colonialism and imperialism. In his book ‘The Malay Dilemma’, published in 1970, he not only harshly criticised the Chinese for oppressing Malays and stealing their economic wealth in the historical context of Malaysia, he also similarly accused the British, as former colonial masters of Malaysia, of doing the same thing. Dr Mahathir believed in development and modernisation in order to uplift Malay society out of poverty. Therefore, it is unsurprising that such a driven man, with almost an obsessive belief in achieving national prosperity through economic growth, development and modernisation, would label dissenters of development projects as ‘anti-development’ (Chapter Six). Dr Mahathir labelled those who campaigned against the Asian Rare Earth factory (ARE) as ‘anti-development’, as he did NGOs who campaigned against development projects (see pp. 246-248, **Box 9.1 Consumers’ Association of Penang**).

In this section, I argue that environmental activists, local and international, who agitated to protect the rainforests of Sarawak against deforestation in the 1980s and 1990s managed to force the Malaysian government to respond to their environmental concerns though not necessarily in ways that the activists envisaged. Through the Sarawak campaign, the Malaysian government was made to take action and put in place environmental policies in regards to sustainable harvesting of tropical timber. I argue that this subsequently evolved into an enthusiastic embrace of a national sustainable development policy, mimicking contemporary international trends. These international trends utilise neoliberal approaches to balancing economic growth and environmental protection, and the Malaysian government similarly used the same approaches. Therefore, while on the one hand, adopting sustainable development policies is to be lauded, on the other hand, these policies are narrowly interpreted through neoliberal solutions to environmental problems.

The Sarawak campaign

The international tropical timber campaign began in the 1980s and continued into the 1990s in protest against rapid deforestation in the state of Sarawak (located on the island of Borneo). The loss of rainforests was also highlighted alongside its impact on the indigenous peoples of Sarawak. Thus, another concern of this international campaign was also the rights of indigenous peoples to their livelihoods and way of life.

The Sarawak campaign was linked to an international call for a boycott of the use of tropical timber. This international campaign, launched by environmental NGOs in Germany, the Netherlands, the United Kingdom, Australia, Japan and the United States, called for a boycott of all tropical timber unless it is sustainably harvested. The Dutch Green party recommended to the European Parliament in 1988, that European Union members boycott the use of Malaysian timber until its logging became sustainable (Keck and Sikkink, 1998, p. 158). While this recommendation was eventually overturned, environmental organisations managed to organise local government boycotts of the use of tropical timber in municipal construction in many European countries. In addition, corporate boycotts were also called for by this international campaign. According to Keck and Sikkink (1998, p. 158), ‘. . . by November 1990 local boycotts had so incensed Malaysians and Indonesians that they threatened trade retaliations’. This had become a serious issue, and it brought environmental questions into the centre stage of mainstream politics and public discourse. It became the main topic in the keynote speech of the Association of Southeast Asian Nations (ASEAN) economic ministers meeting given by the then Prime Minister of Malaysia, Dr Mahathir Mohamad. Dr Mahathir spoke against linking trade with environmental issues, regarding this as a serious threat to development (Keck and Sikkink, 1998, p. 159).

In this period, Malaysians were flooded with government views on the injustice of linking trade with environmental issues. The Malaysian print media, controlled by the BN government, published widely Dr Mathathir’s views on the logging issue. Dr Mahathir saw the international boycott of tropical timber as grossly unfair, and expressed this in terms of: the sovereign rights of developing country governments to profit from timber extraction which would then translate into jobs and provision of services (the right to development); the colonial history of natural resource extraction (European colonialists had the right to resource extraction for profit); the unequal terms of trade where developed countries should be paying more than it does for natural resources from developing countries; and not least, the hypocrisy of the West who had, historically, destroyed their own primary forests in order to develop.⁴⁴ Thus, in terms of

⁴⁴ Dr Mahathir’s views on eco-imperialism were very strongly expressed in a three-page response (dated 15 August 1987) to a 10-year-old school boy in the United Kingdom. Darrell Abercrombie from Camberley, Surrey, had written to Dr Mahathir expressing his disgrace at tropical deforestation because there will be no more tropical rain forests for him to study animals if Dr Mahathir allowed lumber companies to ‘carry on’ (www.freedomfilmfestlondon.blogspot.co.uk/2009/02/t2.html). Dr Mahathir told

environmentalism, the Malaysian government took a very strong position, rooted in ideas of eco-imperialism (Driessen, 2004; Lim and Shirley, 2009), and regarded those campaigners who take up environmental issues as being ‘anti-development’ or ‘anti-modernisation’ as is witnessed through the way the state and business interests viewed Bukit Merah and Broga protestors (Chapter Six).

In terms of international trade processes during the Sarawak campaign, Malaysia attacked countries which passed tropical timber country bans. At a 1993 meeting of the International Tropical Timber Organisation (ITTO), Malaysian representatives accused a Dutch government covenant to restrict timber imports to those from sustainable sources of being discriminatory as it restricted developing country timber imports but not those from developed countries (Keck and Sikkink, 1998). Malaysia also threatened to boycott Austrian goods when the Austrian government passed a tropical timber ban. The following year, in 1993, the Austrian government retracted the ban (Keck and Sikkink, 1998, p. 159).

The experiences of having to defend the interests of the state and business for logging on a global scale alerted the Malaysian government to the importance of playing a major role in international political processes on environmental issues. After this experience, the Malaysian government very noticeably played very active roles in international fora on the environment, especially on issues related to forestry, biodiversity and sustainable development. For example, the Malaysian government obtained advice from the Malaysian NGO, Third World Network⁴⁵ in preparation for the Earth Summit in 1992.⁴⁶ Subsequently, the Malaysian government went on to make international media headlines for its strong position on green imperialism and Third World sovereignty during the Earth Summit. Partly as a result of taking such a position

Darrell that it was disgraceful that he was being used by adults and that he should study indigenous British animals before studying tropical animals. Dr Mahathir also said: ‘. . . tell the adults who made use of you to. . . expel all the people living in the British countryside and allow secondary forests to grow and fill these new forests with wolves and bears. . . .’
www.freedomfilmfestlondon.blogspot.co.uk/2009/02/t2.html).

⁴⁵ Third World Network is well-known internationally for its research and policy work on trade, financial and economic liberalisation, the environment and sustainable development. It is a spin-off organisation from the Consumers Organisation of Penang (CAP). The Research Director of CAP, Martin Khor, was the first Director of Third World Network.

⁴⁶ The Earth Summit is the popular name for the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, 3-14 June 1992.
<http://sustainabledevelopment.un.org/index.php?menu=1130>

in defence of the interests of developing countries, a Malaysian representative to the United Nations, Razali Ismail, was made the chair of the first session of the Commission on Sustainable Development (CSD) which commenced the following year.⁴⁷ By the late 1990s, environmentalism, or concerns for the health of the planet, had become popular in public discourse as can be evidenced by the frequent Malaysian newspaper articles on such issues (Harding, 1996).

Thus, for the Malaysian government, what started out as a campaign to defend state and commercial logging activities using terms of eco-imperialism, evolved into a deeper international involvement in international sustainable development political processes and policies.⁴⁸ It was unsurprising that ideas of eco-imperialism and sustainable development coalesced. Sustainable development worked on the principle of sustaining both economic growth while protecting the environment. Dr Mahathir accused Western environmentalists and environmental NGOs of eco-imperialism in order to be able to continue advancing Malaysia's economic growth and industrialisation. The unifying theme of both philosophies was the pursuit of economic growth. Furthermore, adopting sustainable development policies not only puts Malaysia in a favourable position in international political processes, but it also means Malaysia could still pursue its ambitions of economic growth and industrialisation. Researchers, Hezri and Hasan, have this to say about the evolution of sustainable development policies in Malaysia:

Despite an impressive array of policy statements and strategies to implement sustainable development, many challenges remain today. . . . Many of the principles of sustainable development – subsidiarity, community empowerment, policy integration – are too foreign for the Federal Government to accommodate. The political and economic costs of incorporating these reforms are very high for the existing political system. . . . As a result, environmental policy for sustainable development inevitably has become a business-as-usual endeavour (Hezri and Hasan, 2006, p. 37, pp. 47-48).⁴⁹

⁴⁷ The CSD was established by the United Nations General Assembly in December 1992 to ensure effective follow-up of the Earth Summit.

⁴⁸ This is not to say that Malaysia had not responded to the concerns raised in previous international regimes such as the United Nations Conference on Human Environment, held in Stockholm in 1972. Post-Stockholm, Malaysia had introduced administrative changes and legal authority such as establishing an environmental agency, environmental laws and a ministry for the environment (Hezri and Hasan, 2006, p. 40).

⁴⁹ A Friends of the Earth International October 2013 report titled, 'From policy to reality: 'Sustainable' tropical timber production, trade and procurement. A critical analysis on forestry governance in Malaysia and the timber importation and procurement policies of Japan, South Korea and Australia', is critical of Malaysia's claims to sustainable timber production. It has found deep structural problems such as, the lack of transparent timber licence issuance processes and of public access to information and

There is another issue with the implementation of sustainable policies using a neoliberal approach which is the emphasis on technological solutions. This approach has influenced the way the Malaysian government and business interests viewed the problems in the Broga and Bukit Merah conflicts as exclusively technological problems requiring technological solutions (Chapter Six). Alternative views of what the conflicts were about were not seen as valid (Chapters Seven). The sustainable development approach favours environmental protection mechanisms that make use of market-based policies (for example, emissions trading) and technological advances in order to produce win-win outcomes for economic growth and environmental health (Latta, 2008). Such an approach is based on neo-liberal ideological values, and researchers have labelled it ‘green modernisation’ (Christoff, 1996; Scott and Oelofse, 2005; Oelofse et al., 2006; McDonald, 2008). The Malaysian government favours such an approach.

An example of efforts to ‘green’ economic development, is the incorporation of a green technology portfolio in the newly established Ministry of Energy, Green Technology and Water in 2009 (Hezri and Ghazali, 2011).⁵⁰ Included in the green technology portfolio is the plan for building two nuclear power plants in Malaysia (Yep, 2013). Currently, Malaysia uses fossil fuels for the generation of power as it is fairly rich in oil and gas reserves. In light of the fact that demand will outstrip oil and gas reserves, Malaysia has been investigating and developing manpower capabilities for a nuclear power programme in the last three decades (History, www.nuclearmalaysia.gov.my). Furthermore, a nuclear power plant is considered more environmentally-friendly than a fossil fuel power plant. The agency currently in charge of such a programme, Nuclear Malaysia, has arrived at a stage where it is ready to build the two nuclear power plants (Yep, 2013). Nuclear Malaysia’s mission is to conduct research and development of nuclear technology for the purposes of sustainable development (Mission and Vision, www.nuclearmalaysia.gov.my). However, due to national and international reactions to the Fukushima Daiichi nuclear power plant disaster in 2011, the Malaysian government

participatory decision-making. Timber production continues to be linked to violations of customary land rights of indigenous peoples especially in Sarawak (www.foei.org).

⁵⁰ This follows international trends in adopting a green economic framework. Malaysia’s approach is similar to that outlined by the United Nations Environment Programme (UNEP) and the Organisation for Economic Co-operation and Development (OECD) (Hezri and Ghazali, 2011).

has decided to temporarily put on hold the construction of the nuclear power plants (Yep, 2013). Similar to the preference for nuclear energy production, the incineration of waste is considered more environmentally-friendly than landfill alternatives (Interview, Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010).

The experiences of having to defend its policies of deforestation made the Malaysian government more receptive to environmental issues and partake in international environment-related political processes. However, the policy responses were narrowly funnelled through the paradigm of sustainable development and green modernisation. While sustainable development was desired, the emphasis was on growth, and the solutions to environmental protection relied on technological tools/advancement. Thus, campaigners who used the discourses of environmental protection or environmentalism as part of their campaign strategy faced a double-edged sword: while the adoption of sustainable development policies by the Malaysian government meant that political opportunities for making environmental arguments have increased, it also meant that these opportunities were filtered through ideas of green modernisation. Very often and as observed in the cases of Broga and Bukit Merah, the central issues of dispute were interpreted as technological problems that needed technological solutions. Alternative views of why the conflicts in Broga and Bukit Merah arose in the first instance, and campaigners' views on a range of issues were summarily dismissed by the state and business interests as irrelevant (Chapters Six and Seven). That was why environmental justice arguments - rights to information and participation, distributive justice and recognition – gained resonance in the Broga and Bukit Merah campaigns. By using environmental justice arguments, ordinary citizens claim their agency and empower themselves by contesting dominant socio-ecological orders and power. These environmental justice arguments are also in themselves arguments about the nature of democratic politics. Hence, in Chapter Nine, further conceptual arguments are made for linking environmental justice issues to that of citizenship.

5.3 Reformasi

Before this chapter comes to an end, it is important to briefly examine the issue of *Reformasi* – a widespread political agitation and call for change which began in 1998. This is the third key factor that influenced the socio-political context in which the

campaigns developed. The Broga campaign took place at a period of increased national political consciousness. Therefore, I argue that this is linked to the campaign garnering greater public support, having many more ordinary, grassroots citizens stepping-up to take the lead, and not isolated as a Chinese issue as was the case in the Bukit Merah campaign (Chapters Seven and Eight). Broga campaigners also utilised a far wider range of discourses in its framing of arguments against the incinerator project compared to the emphasis on health and safety in Bukit Merah (Chapter Eight). Thus, it makes sense to have some understanding of the background and implications of *Reformasi* on the Broga campaign.

While politics and society remain racialised today, there has been some progress made by opposition political parties and civil society in attempts to undo this racialised order. A movement which began with protests in Kuala Lumpur and swept through the country demanding political and social changes coalesced under the banner of *Reformasi* in 1998. Protestors demanded for protection of civil liberties, respect for the rule of law, freedom of the media and an independent judiciary, a repeal of the ISA (Internal Security Act; with allows for detention without trial which was originally set up to detain those who were threat to national security, for example, terrorists),⁵¹ and an end to corruption, cronyism and nepotism. Demands also focused on issues of good governance such as the importance of transparency and accountability.

The story of *Reformasi* began when the then Prime Minister, Dr Mahathir Mohamad unceremoniously fired his Deputy Prime Minister (who was also Finance Minister), Anwar Ibrahim, in 1998.⁵² Earlier in 1997, during the Asian financial crisis, Mahathir, disagreed with Anwar on the ways to mitigate the crisis. Anwar favoured IMF (International Monetary Fund)-style free market rescue policies (cut government spending but liberalise trade, foreign investment and finance). For Mahathir, this was

⁵¹ Suaram, a Malaysian human rights organisation, has been campaigning for the repeal of the ISA since 1987. Historically, the ISA has been used to detain political prisoners and hardcore criminals such as members of organised crime groups. The ISA permits detention without trial for two years, but in reality many have been detained for far longer than that. In 2009, the ISA was repealed and replaced by two separate Acts: the Security Offences (Special Measures) Act 2012 which allows for detention without trial for 28 days, and the Prevention of Crime Act (Amendment and Extension) 2013, which came into force on 2 April 2014. The latter Act still permits detention without trial for two years, similar to the ISA.

⁵² The term *Reformasi* was borrowed from the Indonesian *Reformasi*, a widespread political agitation which brought about the 1998 downfall of Suharto, the President of Indonesia, who ruled for 31 years. The Indonesian call for an end to *korupsi, kolusi dan nepotisme* (in English, corruption, collusion and nepotism) was translated in Malaysia as corruption, cronyism and nepotism.

anathema to his nationalist pride and belief in the sovereignty of the nation state, especially in ideas of third world sovereignty after years of colonial domination. Mahathir favoured more conservative measures such as currency controls and tighter regulation of foreign investments. Prior to the 1997 financial crisis, Anwar had already angered Mahathir with criticisms of nepotism and cronyism within UMNO, as well as with attempts to change Mahathir's protectionist economic policies. After Anwar was fired, he was arrested under the ISA first before being charged in two separate trials in court for corruption and abuse of power, as well as for sodomy. Anwar was found guilty on all charges and spent six years in jail in solitary confinement. Supporters of Anwar took to the streets with calls of *Reformasi* and these coalesced with the actions of opposition political parties as well as other civil society groups who had been calling for change in regards to democracy, human rights, women's rights, justice, and national unity. While these issues were non-communal, others represented more communal interests such as the demand for the modernisation of NVs⁵³ and more egalitarian multiculturalism (Weiss, 2006, p. 135). Thus, two coalitions for reform, *Gagasan Demokrasi Rakyat* (*Gagasan*; in English, Coalition for People's Democracy) and *Majlis Gerakan Keadilan Rakyat Malaysia* (*Gerak*; in English, Malaysian People's Movement for Justice) were formed by opposition political parties, civil society organisations and Anwar's newly found opposition party called *Parti Keadilan Nasional*.⁵⁴ *Gagasan* was NGO-led whereas *Gerak* was led by PAS (*Parti Islam Se-Malaysia*)⁵⁵ and thus included more Islamist groups.

As the general elections drew near in 1999, attention shifted to electoral politics and so the opposition parties involved in *Gagasan* and *Gerak*, formed a coalition, *Barisan Alternatif* (BA; in English, Alternative Front) to contest in the elections. Attention and energies shifted to the activities of the BA, and so it became the pre-eminent *Reformasi* coalition while *Gagasan* and *Gerak* became largely defunct (Weiss, 2006, p. 140). However, civil society organisations and individuals who had been central to the

⁵³ As the general elections neared in 1999, a group who called itself the Malaysian Chinese Organisations Election Appeals Committee (in Chinese, *Suqiu*), made up of national-level Chinese guilds and associations drafted a wish list they presented to all political parties. One of the demands on this list was for the modernisation of NVs where many still experienced poor infrastructure.

⁵⁴ While Anwar was in jail, his wife, Dr Wan Azizah, led *Parti Keadilan Nasional* (*Keadilan*, in English, National Justice Party). This political party is now called *Parti Keadilan Rakyat* (PKR, in English, People's Justice Party) following a merger with *Parti Rakyat Malaysia* (PRM), a once-socialist party which now espouses progressive social change (Weiss, 2006, p. 103).

⁵⁵ PAS is an Islamic party and the main political rival of UMNO in competition for Malay votes.

formation of the *Reformasi* agenda and movement continued to play important roles as advisors, volunteers and supporters during election campaigning as they had done in the *Gagasan* and *Gerak* coalitions.⁵⁶ In fact, some long-time NGO activists joined different opposition political parties in BA to contest for office. A central contribution of NGOs has been in the formulation of alternatives to the racialised status quo.

The BA had hoped to deny the ruling coalition BN (*Barisan Nasional*)⁵⁷ the two-thirds majority it held in Parliament but this did not happen in 1999. Despite this, however, something had shifted as can be later witnessed in the results of the general elections of 2008. BA, now renamed *Pakatan Rakyat* (in English, People's Alliance), not only managed to deny BN its two-thirds majority in Parliament for the first time since the general elections of 1969, but also won the majority of seats in the states of Penang, Kedah, Perak, Selangor, Kelantan.⁵⁸ Between 1969 and the start of *Reformasi* in 1998, large demonstrations were a rare occurrence in Malaysia but is today, not uncommon (Weiss, 2003). Unusually too, there are now widespread public discussions of democracy, respect for the rule of law, good governance, freedom of the press, judicial independence and social justice. Discussions of such issues have mushroomed post-*Reformasi*, especially on internet-based sites such as online news portals, blogs and social media since the print media is tightly controlled by the government (Liw and Pasuni, 2010; Abbott, 2011).

The Broga campaign unfolded after *Reformasi* began. The campaign developed within a context of a new political consciousness and of widespread public discussions on issues of democracy, good governance and social justice. Therefore, this larger political development cannot be separated from the Broga campaign. Broga campaigners made demands using discourses of rights to information and participation, and not just discourses of distributive justice and environmentalism. However, Bukit Merah campaigners concentrated mainly on distributive justice, such as the right to health and safety. There was a difference in the kinds of discourses that were emphasised in each of the two campaigns. This will be analysed in detail in Chapter Eight. The Broga

⁵⁶ '... civil society agents retained enormous clout, gaining legitimacy from their moral authority, experience, diligence, and articulate, well-liked leaders' (Weiss, 2006, p. 141).

⁵⁷ As can be found in the Guinness World Records 2013, the BN is the longest ruling party in the world.

⁵⁸ The following year in 2009, PR lost the state of Perak when three of its state legislators defected over to BN, causing PR to lose its position as the majority holder of state assembly seats.

campaign also attracted more openly expressed public sympathy and was not isolated as a ‘Chinese issue’ – again, these cannot be separated from the political development of *Reformasi* (see Chapter Eight).

Furthermore, the background on *Reformasi* also aimed to highlight the close connections between agents of civil society and opposition political parties. Historically, opposition to the status quo would invariably involve both civil society and opposition political parties besides ordinary citizens because the state responds to dissent in an encompassing manner – that is, in the view along the lines of ‘you are either with us, or against us’. All dissenters are regarded as opponents of the status quo and treated similarly. Thus, opponents of the status quo have discovered that it makes sense for them to work together in solidarity against the status quo. As comparisons between the Broga and Bukit Merah campaigns are analysed in detail in Chapter Eight, the relevance of this discussion on *Reformasi* will be made all the more clear.

5.4 Conclusion

This chapter discussed the historical and political economic contexts of the marginalisation of the Chinese, the formation of NVs and issues of sustainable development that underpin the Broga and Bukit Merah campaigns. This was done so that a more thorough understanding of why and how the campaigns developed can be achieved. The chapter began by examining the colonial legacy of political divisions based on race and occupation. These divisions became further entrenched after independence in 1957. The period of the Communist Insurgency contributed to further marginalisation as the Chinese were regarded as a threat to national security, and rounded-up and interned in specially created and heavily fortified NVs. The historical maltreatment of the Chinese living in NVs by the colonial government and by the Malay-dominated government after independence, has contributed to the lack of trust that characterise the relationship between New Villagers and the state. Thus, the vulnerabilities of partial citizenship (reduced political, economic and social rights) underscored the historical and present, daily-lived experiences of New Villagers. Besides the issue of marginalisation of Chinese New Villagers, it is also important to understand how Malaysia’s almost single-minded pursuit of economic growth in the name of development, contributes to the emphasis on growth over environmental

protection. Even though Malaysia has a wide array of impressive sustainable development policy statements and instruments, environmental protection has remained problematic and secondary to economic growth. The framework for sustainable development also follows international trends of using neoliberal approaches to using technological advances to mitigate environmental problems. Therefore, technologies such as incineration of waste and nuclear power generation are regarded as cleaner and more environmentally-friendly than landfill and fossil fuel alternatives, respectively, to mitigate concerns of climate change due to production of greenhouse gases. Another development that was important in understanding the two case studies is *Reformasi*, the political movement that called for more democracy and respect for the rule of law, and an end to corruption, cronyism and nepotism. The way *Reformasi* unfolded highlights the connections between agents of civil society and opposition political parties. It helps shed light on how campaigns such as Broga and Bukit Merah involved not only grassroots citizens who lived in Broga and Bukit Merah, but also NGOs and opposition political parties. It also foregrounds the greater public support, the use of a wide range of discourses to demand for rights and justice, as well as the relatively more multi-racial mix of active grassroots protestors in the Broga campaign compared to that of Bukit Merah. In the next chapter, I proceed to analyse the primary interview data gathered. I begin with the interviews of the state and business interests.

CHAPTER SIX

UNDERSTANDING THE CAMPAIGNS FROM ABOVE

This chapter analyses the interviews with government and business interests in relation to research question (1), ‘How did the state and business interests respond to campaigners’ demands for justice and accountability, and why did they respond using a particular framework of science and technology?’ This chapter unpacks the perspectives or views of the government and business interests as to why the environmental campaigns of Broga and Bukit Merah took place, illuminating the centrality of the politics of (scientific) knowledge and issues of trust in environmental justice movements. In order to carry out the aims of research question (1), the materials analysed, besides the interviews⁵⁹ of participants representing the government and business interests are: campaign materials, newspaper articles, email communication and publications and websites of NGOs and government departments or agencies.

Both the government and the business interests used the words ‘ignorant’ and ‘emotional’ to describe the Broga and Bukit Merah campaigners because they chose to stage protest actions and launch campaigns. According to the government and business interests, such actions were undertaken by campaigners because they do not understand highly technical things, and scientific notions of acceptable risks: campaigners wanted no risks at all. Therefore, if campaigners were better educated in scientific knowledge, especially the scientific notions of acceptable risks, there would be less resistance to the proposed Broga incinerator project as well as the Asian Rare Earth (ARE) facility. Besides ignorance, the government and business interests expressed the view that campaigners were encouraged by external agitators (for example, NGOs) to take protest actions instead of looking for a scientific solution. Bureaucrats interviewed also expressed the view that any questions and doubts that campaigners held in regards to health and environmental risks should be discussed amicably (without protest actions and launching campaigns) because any potential problems could be solved by obtaining and implementing better technology or better health and safety standards, which would have the effect of reducing health and safety risks. Another view offered by bureaucrats

⁵⁹See Appendix One for interview questions.

was that campaigners should also not take direct protest actions because they should trust in the government to look after their wellbeing.

The views above, expressed by the government and business interests, as to why the Broga and Bukit Merah campaigns took place, are broken down and analysed below. First, I examine the kinds of labels placed on protestors and what these reveal about government and business attitudes towards the protestors. Second, I explore how the idea of risk is viewed within the government and business communities, and the use of expert opinions, solutions and technology as a means of overcoming resistance. Third, I evaluate the issues of improving environmental governance and using better, advanced technology as raised by the bureaucrats interviewed, and what this means for solving environmental justice conflicts. Fourth, I discuss how and in what way ‘external agitators’ were responsible for fuelling protests in both campaigns. Next, I delve further into the views expressed by the government and business interests, asking if these views in any way fit into ideas of democracy in recognising the validity of different wide-ranging views, and if trust (between the government/business interests and campaigners) is an issue which lacks recognition in the campaigns of Broga and Bukit Merah. After this, the chapter concludes.

6.1 Ignorant and emotional campaigners

The state and its bureaucrats who supported those business interests that were involved with the incinerator project and the ARE in Broga and Bukit Merah, respectively, responded to those organising protests against them in very similar ways. Protestors and those who supported them were consistently labelled as ‘ignorant’ and ‘emotional’. Below are some of the examples of comments and opinions offered in newspaper articles and in interviews conducted. Below is a description of an event as reported by Malaysiakini,⁶⁰ as well as told to me by Ms Lee (Interview, Ms Alice Lee, Kajang, 11-05-2009).

Mohamad Saib, the Director-General of the Local Government Department, Ministry of Housing and Local Government (in Malay, *Kementerian Perumahan dan Kerajaan*

⁶⁰ Malaysiakini is Malaysia’s first online news portal that provides alternative news (Steele, 2009).

Tempatan, KPKT) expressed exasperation that he had NIMBYs on his hands as he was having trouble finding a location for a much needed incinerator, first, in Puchong, then in Broga (Malaysiakini, 2003a). He regarded these sentiments as selfishness while not acknowledging that residents had been provided with little or no information before any protests took place. In a briefing held by his Ministry, residents of Broga were told they were not permitted to ask questions (Malaysiakini, 2003b). When residents insisted on asking questions, they were told by Mr M. Kayveas, Deputy Minister, KPKT to submit their identity cards before asking questions. In the meantime, the then Member of Parliament of Ulu Langat,⁶¹ Mr Badrul Hisham Abdul Aziz, charged wildly into the crowd shouting ‘shut up’ and ‘get lost’ to those who insisted on asking questions (Malaysiakini, 2003b). The situation was chaotic and also frightening to many of those present (Interview, Ms Alice Lee, Kajang, 11-05-2009).

In an interesting conversation with an environmental consultant tasked with the social-environmental assessment of the Broga incinerator project, he pointed out the ‘poor understanding’ of both villagers and middle class protesters of the project (Interview, Consultant, Petaling Jaya, Fieldnotes, 17-06-2009). He referred to a meeting in which he was booed at while trying to explain to campaigners how the proposed 50 metre funnel would disperse any smoke generated far off from the ground. He felt campaigners could not appreciate that the proposed 50 metre funnel (which would have been built at an estimated cost of RM 200 million) would mean the probability of dying from cancer due to exposure to dioxin was lower than that of death through being hit by a car when crossing a road.

I encountered a similar attitude towards protestors when requesting to interview Perunding Utama,⁶² the main consulting company contracted to carry out the Broga EIA by the KPKT. The reason given for turning down repeated requests for an interview was that the policy then and now was not to give interviews about the Broga incinerator. When asked why, I was informed that there was ‘too much emotions’ and that ‘. . . sentiments were fanned’. (Fieldnotes, 20-08-2010). These sentiments were echoed by a technical expert present when Broga protestors held a meeting with Mr

⁶¹ Broga is part of the parliamentary seat of Ulu Langat

⁶² This local consulting firm has been bought over by Worley Parsons, a multinational consulting organisation.

Ong Ka Ting, the then Minister of Housing and Local Government/KPKT. He said ‘everyone was showing their emotions’ (Interview, Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010).

Closer assessment also revealed that attitudes of quite a number of bureaucrats and politicians assigned qualities of ‘ignorance’ and ‘being emotional’ to campaigners in the Bukit Merah case (Chin, 1984; Gabriel, 1992). Campaigners against the ARE were treated as ignorant and therefore undeserving of access to a report that was written by the International Atomic Energy Authority (IAEA).⁶³ The Ministry of Science, Technology and Environment had invited the IAEA to inspect the safety of storage trenches that had been built adjacent to vegetable and fish farms, and campaigners were denied access to this report based on the fact that the ‘. . . layman. . . won’t be able to understand. . .’ (Chin, 1984). Later on, as the ARE appealed against the decision of the Ipoh High Court judge for the ARE to be closed down, the then Prime Minister Dr Mahathir had this to say: if ‘. . . fair minded and neutral experts . . . genuine experts. . . not those famous for opposing. . . found the operations of the ARE detrimental to people’s health and the environment, the ARE would be closed down’ (Gabriel, 1992). However, the Supreme Court overturned the Ipoh High Court judge’s decision, reinforcing Dr Mahathir’s position that those ‘neutral and genuine experts’ had found the ARE factory operations to be safe (Gabriel, 1992).

The examples above demonstrate that the state and business interest regard the protesting campaigners as ignorant and emotional when expressing their opposition to the proposed incinerator and the rare earth facility. These negative attitudes are seen as detracting from a more acceptable way of framing dissent, that is, through the concept of acceptable risks. Thus the next section unpacks the way the idea of acceptable risks is used to justify the two controversial facilities and how this is expressed in interview data.

⁶³ This is a United Nations body.

6.2 Acceptable risks and expert solutions

‘You have to follow the permissible levels. . . What is the reason for them to say no when there is this permissible level?’ (Interview, Dato’ Nadzri Yahaya, Kuala Lumpur, 25-08-2010). This was a statement from the Director-General of the Department of Solid Waste Management, Ministry of Housing and Local Government/KPKT questioning why protestors would not accept scientific information showing that dioxin levels from the Broga incinerator would be below that of permissible levels. His department was the proponent for the Broga incinerator project, and he argued that protestors had to look at scientific information and not take the precautionary principle without first looking at scientific facts.

He further argued that lay peoples’ fears of the link between cancer and dioxin was unreasonable given that all calculations of projected dioxin exposure from the incinerator pointed to less than the permitted 0.01ng/kg⁶⁴ body weight. Furthermore, Dato’ Nadzri pointed out that dioxin is also produced from other sources such as the manufacturing of chlorine-based products and open burning. Since the occurrence of open burning is common in Malaysia where solid or garden waste is often burnt together with plastic materials (such as plastic bags or other types of plastic-based packaging), protestors would have to prove that the release of dioxin from the proposed incinerator is above the permissible level. He concluded that campaigners’ fears are not rational and the fact that they are still fearful may be due to the fact that ‘. . . our [the KPKT] public awareness campaign is not so thorough’ (Interview, Dato’ Nadzri Yahaya, Kuala Lumpur, 25-08-2010). By framing the fears of the campaigners as irrational because these fears prevent the acceptance of permissible levels of dioxin, it is apparent the problem of dissent was squeezed into a technical frame (Jasanoff, 1986, 2007). In other words, the problem of dissent is essentially regarded as a technical problem. Such a frame suggests that as the Broga protest presented a technical problem, a technical solution was to be found (Jasanoff, 2007).

Due to the fact that dissent was defined as a technical problem, or as a glitch that could be fixed, the root causes of the dissent were regarded by the various government and

⁶⁴ Nanogramme per kilogramme

business interests, to be: a lack of public understanding of science; reluctance on the part of protesters in seeking a technical solution, preferring instead a ‘political route’ (Interview, Raja Dato’ Abdul Aziz Raja Adnan, Dengkil, 06-08-2010); poor environmental legislation and governance; and the interference of external agitators. Therefore, the corresponding solutions to dissent were: education of the public, getting the public to seek technical help, improving environmental governance and minimising or neutralising the influence of ‘external agitators’.

The solution to the problem of an ignorant public is to educate or ‘raise public awareness’ (as described by Dato’ Nadzri; Interview, Dato’ Nadzri Yahaya, Kuala Lumpur, 25-08-2010) amongst the public so they can understand how permissible dioxin levels would mean a very small risk of cancer and therefore, this would result in residents accepting the proposed incinerator project in their neighbourhood. Residents and other protestors should then also understand that risk from dioxin to their health and environment is also faced from other sources such as open burning and chlorine-based manufacturing processes. Therefore, there is no direct link to show that the dioxin from an incinerator in the neighbourhood is definitively the cause of cases of cancer that are found. The responses and actions of protestors have been taken as evidence of a connection between their rejection of technology with a lack of understanding of scientific knowledge (Jasanoff, 2005). This is also known as the ‘deficit model’ (Irwin, 1995) or the ‘Public Understanding of Science’ model (Wynne 1996; see Chapter Three).

This ‘deficit model’ as official policy is also at work in the case of the controversy surrounding the ARE facility. In an interview with the Director-General of the Atomic Energy Licensing Board (AELB), he urged those who are concerned with risks from radioactivity to first approach the AELB with their concerns and not resort to political protests (Interview, Raja Dato’ Abdul Aziz Raja Adnan, Dengkil, 06-08-2010). He further added that cancer fears of Bukit Merah residents were unsubstantiated given that Bukit Merah was geographically located in an area of high background radiation from the presence of slag residues from over 100 years of tin mining in the Kinta Valley. There is also a chemical factory (still in operation during the period of fieldwork 2009-2010) adjacent to the site of the ARE facility. His conclusion was that the experiences of ill health faced by Bukit Merah villagers could not be conclusively linked to the ARE

facility. Therefore, it is ignorance or a lack of understanding of science (or acceptable risks) that fuelled the resistance in Bukit Merah (Interview, Raja Dato' Abdul Aziz Raja Adnan, Dengkil, 06-08-2010).

In an analysis of newspaper reports during the Bukit Merah court case from 1987-1990, it was found that a similar assertion of the lack of conclusive evidence, linking radiation to experiences of ill health, was made in court by experts called by the ARE to testify in court. Dr Henry Wagner Jr, a US nuclear medicine and radiology expert, said there was no scientific evidence to show that the cases of brain tumour, brain infections and leukaemia presented by Bukit Merah residents could be linked to exposure to radiation from the ARE facility (Foong, 1989). He further added that though Bukit Merah residents bear the risks of one excess cancer death in 10,000 people per annum because of its proximity to the ARE, these risks are acceptable since all human activities involve risks (The Star, 1990b). He asserted that use of acceptable risk levels for radiation as recommended by authorities such the United States Environmental Protection Agency or the Malaysian Atomic Licensing Board (AELB) was beneficial to humanity (Foong, 1989). According to him, the 100 millirems per year exposure as faced by residents living close to the ARE, was the maximum permissible level as set by the AELB following the guidelines of the ICRP⁶⁵ (The Star, 1990b; Consumers' Association of Penang, 1993). Therefore, Bukit Merah residents should not worry. Dr Wagner concluded that the fears of Bukit Merah villagers were unfounded and caused by the mass media who published information from activist groups (Foong, 1989). He said:

Knowledge is the best cure for fear. Bukit Merah residents must be advised by experts that there was no evidence of mental retardation in anyone who has received less than 50,000 millirems of radiation. The average time before a tumour could develop is 25 years and it is unheard of that brain tumour was caused by radiation (Foong, 1989).

While expert opinions supporting the objectives of state and business interests were valued and seen as neutral, lay peoples' deployment of experts who held different opinions were treated as suspicious and considered biased. The ARE lead counsel, Dato' Gill, raised doubts as to whether the plaintiffs' Japanese expert witness, Professor Sadao Ichikawa, was appropriately qualified in the relevant areas to comment on the

⁶⁵ The International Commission for Radiological Protection (ICRP) is registered as an independent charity in the United Kingdom but it is funded by many international organisations and governments (www.icrp.org).

harms of radiation (Chan, 1988a). Datuk Gill also accused Professor Ichikawa of being biased because he held an anti-nuclear stance, and of being politically motivated because he was associated with the organisation, Japan Congress Against Atomic and Hydrogen Bombs. The latter accusation was drawn from the fact that when Professor Ichikawa took radioactive readings in and around Bukit Merah and the ARE in two separate studies, he was accompanied by a member of the said Congress, and a Japanese newspaper reporter (Chan, 1988b).

Dr Rosalie Bertell, an expert witness for the plaintiffs, testified that exposure to low-level radiation was harmful to human health, concluding that there was no safe level of radioactivity. This testimony was in relation to the matter of high incidences of cancer/leukaemia in the Bukit Merah community. She quoted the BEIR V report 1990 (The Biological Effects of Ionising Radiation V by the United States National Academy of Sciences) as the basis for her conclusion. This report investigated the health risks from exposure to low levels of ionising radiation.⁶⁶ While Dr. Wagner acknowledged the conclusion of the BEIR V report, he was highly sceptical, saying that no findings in science could be taken as the ultimate result because research was on-going and a later conclusion might be different from an earlier one. He also emphasised the fact that there were many other causes of leukaemia, and in fact the main causes were unknown (The Star, 1990a; New Straits Times, 1990).

Likewise, in the case of Broga, alternative expert opinions and information⁶⁷ offered by campaigners in support of their fears of pollution risks faced a similar brush-off. Evidence or scientific information put forth by campaigners in a meeting with the then Minister of Housing and Local Government/KPKT, Mr Ong Ka Ting, were considered as incorrect and as unreasonable fears of dioxins and other pollutants such as heavy

⁶⁶ BEIR VII-Phase 2 was published in 2006 and its findings have not significantly changed from previous BEIR reports (Royal 2008).

⁶⁷ These were derived from a wide range of governmental as well as nongovernmental organisations such as websites of the EU, the US Environmental Protection Agency, the United Nations' World Health Organisation (WHO) and international environmental NGOs. Some examples are: *Dioxins and their effects on human health*, a fact sheet produced by the WHO (www.who.int/inf-fs/en/fact225.html); information on byproducts of incineration such as dioxin, furans and heavy metals published by www.ejnet.org; *Resources up in flames: the economic pitfalls of incineration versus a zero waste approach in the Global South*, a report by Brenda Platt, Institute for Local Self-Reliance for GAIA (Global Alliance for Incinerator Alternatives/Global Anti-Incinerator Alliance), April 2004; *Japan Yen Aid: financing sustainable development or environmental destruction? A report on Japanese financing of dirty technologies in Thailand* by Greenpeace Southeast Asia, May 2001.

metals (Interview, Ms Alice Lee, Kajang, 11-05-2009). Information from organisations such as GAIA (Global Anti-Incinerator Alliance or Global Alliance for Incinerator Alternatives) were considered suspect as such organisations were regarded as having an anti-incineration agenda (Interview, Dato' Nadzri Yahaya, Kuala Lumpur, 25-08-2010). Campaigners themselves also engaged in deep electronic (email) conversations with experts they came into contact with through networks of international environmental NGOs; specifically with Ingo Gödeke, a German scientist, who had also been active in Germany on issues of contestation around the siting of incinerators (Interview, Ms Alice Lee, Kajang, 11-05-2009). Information obtained from these organisations and individual scientists bolstered the confidence and belief of campaigners in the cause they were championing.

The overwhelming position of those who supported the ARE operation and the proposed Broga incinerator was that protesting campaigners were ignorant or unable to understand complex technology or science. Therefore, according to this logic, protesters were seen as having rejected technology as a result of this ignorance. In the same vein then, alternative views put forward by campaigners, and their supporters (scientists included) were biased because they did not understand science. Evidence from news reports (Chin, 1984; Gabriel, 1992) and interviews conducted with government and business interests, suggests that the framing of campaigners as 'ignorant' was applied to all those who supported the campaigns (and not just the grassroots campaigners) regardless of their position or qualifications. Hence, in the eyes of those who supported the ARE and Broga incinerator, one of the ways to end dissent is to promote and ensure the public understanding of science, especially the concept of acceptable risks.

The second solution to the problem of dissent from the perspective of the government is for unhappy or worried villagers or protesters to approach the technical people or scientists of the relevant government departments (for example, this would be the Department of Solid Waste Management, Ministry of Housing and Local Government/KPKT in the case of Broga, and the AELB in the case of Bukit Merah), or the Department of Environment to resolve any concerns or issues they may have. Both Dato' Nadzri and Raja reiterated this in their interviews (Interviews, Dato' Nadzri Yahaya, Kuala Lumpur; 25-08-2010; Raja Dato' Abdul Aziz Raja Adnan, Dengkil, 06-08-2010). They said that the relevant government departments would take appropriate

action to protect the public if their health, environment or lives were seen to be in danger. In other words, the public should trust the government to look out for their best interest. In this regard, there were references to mitigating steps and the use of better technology that were to be undertaken. In the case of the Broga incinerator, the proposed thermal incinerator would use the latest incineration technology, and a new design element would be added after dioxin fears were expressed – a 50 metre chimney stack as mentioned above. In the case of the ARE facility, better and safer health and safety procedures in the manufacturing processes, and in the handling and storage of waste were recommended and implemented. The investment by Mitsubishi in a USD 100 million long-term waste storage facility for the ARE waste was mentioned as an example of good governance (Interview, Raja Dato' Abdul Aziz Raja Adnan, Dengkil, 06-08-2010).

As an example of acceptance of complex technology by the lay public, Dato' Nadzri points to the private corporation, Kualiti Alam, who operates four incinerators for hazardous waste, as a good example of where residents had accepted the projects in their backyard because residents have experienced that there is '... no risk..., no plant failure, no damage to the environment' (Interview, Dato' Nadzri Yahaya, Kuala Lumpur, 25-08-2010). In an interview, he said there were emergency plans in place such as a plant shut-down in the event of a dioxin leak, and this showed how the government would protect the public. Upon hearing this, I asked if there were any epidemiological studies or mapping of cancer incidences. He admitted that this type of data was not being gathered. He also omitted to mention other interesting details of the protests against the Kualiti Alam project. Resistance was successfully demobilised through concepts of economic progress and development (Khoo and Rau, 2009). Malay villagers living near the Kualiti Alam incinerators were encouraged to individually acquire shares in Kualiti Alam, and were told that living with incinerators in their backyards was about embracing progress and development. See Box 6.1 below for further details of the case of private waste management company, Kualiti Alam Sendirian Berhad.

Box 6.1 Kualiti Alam Sendirian Berhad

Kualiti Alam, part of the UEM Group, is a Danish-Malaysian private waste management company which operates four incinerators for the processing of hazardous waste materials in the district of Port Dickson, Negeri Sembilan (sometimes referred to as the Bukit Nenas incinerators as they are located adjacent to a quarry known as Bukit Nenas) (www.uem.com.my). The case of Kualiti Alam is an example of how the dumping of toxic waste from the 'North' to the 'South' is more complex than it has historically appeared. The case shows how it would be more appropriate to speak of transboundary movements of waste from the 'Global North' (centres of wealth and industrial production found in both developing and developed countries) to the 'Global South' (areas of poverty and deprivation found in both developing and developed countries).

The Malaysian government privatised waste management, and initiated legislation for the management of 'Scheduled Waste' (or hazardous waste) in consultation with business interests and with technical assistance from DANCED (Danish Cooperation for Environment and Development) (Khoo and Rau, 2009, p. 966). The result, modelled on Danish legislation, was the Scheduled Waste Act 1989, which favoured waste management by a private concessionaire (Khoo and Rau, 2009). The incinerators built were modelled on the Kommunekemi incinerator project in Nyborg, Denmark, which has been hailed as an example of 'good practice' in waste management and technology (Khoo and Rau, 2009).

The incinerators are located amidst oil palm and rubber plantations, near seven Chinese New Villages and five Malay villages, and away from any major urban areas. Consumers' Association of Penang estimates that 1879 families are directly affected and up to 50,000 people in the district could be affected (Khoo and Rau, 2009, p. 966). Kualiti Alam is increasingly processing waste that is produced through indigenous economic development. For example, although 15% of scheduled waste was imported from abroad for processing by Kualiti Alam in 2006, 40% originated from multinational operations within Malaysia (Khoo and Rau, 2009, p. 968). Khoo and Rau (2009, p. 968) notes that '[A]lthough transboundary movement is somewhat significant, the major issue is not that Malaysia is acting as a pollution haven for 'Northern' toxic dumping, but that it is generating ever larger quantities of hazardous waste through its own indigenous economic development'.

Dato' Nadzri also talked about the acceptance of incinerator technology in four small islands dotted around Malaysia. He says, in fact, the municipal council of Pulau Pangkor (in the state of Perak) had asked him to build a second incinerator and that

there were no public protests to these projects. He said this showed that in cases where protests had arisen, there were ‘instigators’ at work; he said:

In Penang, they refuse incinerators because they have CAP and SAM.⁶⁸ Where there are strong NGOs, I can’t build incinerators. If I want to build in Melaka, I definitely can. Also Johor. Because there is no strong opposition (Interview, Dato’ Nadzri Yahaya, Kuala Lumpur, 25-08-2010).

So in the mind of Dato’ Nadzri, resistance is due to the presence of ‘political instigators’ or ‘anti-incinerator NGOs’ (see next section below). In other words, the source of resistance is external.

By emphasising the role of appropriate technology to resolve the problem of popular protests, the role of the government in protecting people, and the role of NGOs as instigators of conflict, it is clear that the key issues at hand are not only politics but competing knowledges and values, as well as trust. The views expressed by the government officials interviewed demonstrate a key belief that if the public had a problem, the government would resolve it; and that the government would not knowingly put the public in harm’s way. This trust between the government and its citizens was actually wrongly assumed to exist in the cases of Broga and Bukit Merah. As discussed in Chapter Five, mistrust rather than trust has been historically and systematically experienced by New Villagers in their relations with first, the colonial state and then, second, with the post-independence Malaysian state. The perception of a corrupt government that abuses its powers further contributes to a lack of trust in the daily functions of the government. This will be further examined in the next chapter. Moreover, by placing the blame for conflict squarely in the direction of external instigators such as NGOs, the state does not recognise the agency of the campaigners in actively asserting their rights and claiming a role in environmental decision making-processes.

Jasanoff (2005, p. 270) on this:

The framework of “public understanding of science” diminishes civic agency, erases history, neglects culture, and privileges people’s knowledge of isolated facts (or their ignorance of such facts) over their mastery of more complex frames of meaning. It reduces human cognition to a one-dimensional scale. It makes no allowance for the multivalency of

⁶⁸ Sahabat Alam Malaysia (SAM) or Friends of the Earth Malaysia.

interpretation. . . . we should stop thinking in terms of a singular public understanding of science and acknowledge the possibility of multiple understandings.

6.3 Improving environmental governance

This section examines the view expressed by government officials that improving environmental governance and the use of better technology can lesson dissent, if not stop it all together. In this view, through the use of better technology and improved environmental governance (which includes appropriate legislation, the setting up of regulatory agencies and other institutional processes) controversial projects can be made safer (Interviews, Raja Dato' Abdul Aziz Raja Adnan, Dengkil, 06-08-2010; Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010). The same view was not held by campaigners of Broga and Bukit Merah who experienced the conflicts differently. However, both Raja and Dr Muhd Noor pointed out several times during our interviews, the efforts undertaken by the government to improve environmental governance and to use better technology to address the environmental, health and safety fears of campaigners in both Broga and Bukit Merah.

In the cases of both Broga and Bukit Merah, besides environmental risks, campaigners raised issues of low health and safety standards and practices. In the case of Broga, campaigners additionally raised doubts about the safety of the incineration technology being proposed. In order to address these concerns, several steps were undertaken. First, the Atomic Energy Licensing Act (Act 302) was passed in Parliament in 1984 to make way for the radiation monitoring agency, AELB, to be created so that the use and disposal of radioactive waste can be regulated (Interview, Raja Dato' Abdul Aziz Raja Adnan, Dengkil, 06-08-2010; see also www.aelb.gov.my/aelb/engv/text/profile/asp). Second, the Environmental Quality Act 1974 (Act 127) was amended to make EIAs mandatory for all public and private sector projects that have major impacts and this came into effect on 1 April 1988 (Interview, Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010; see also International Law Book Services, 2009). Third, since there is no legislation governing incineration emissions, research is being undertaken into how best to do so, and the appropriate legislation will be brought

into effect in the near future (Interview, Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010; see also Mohd Rozainee Taib, 2008).

The protests by Papan and Bukit Merah villagers brought to light the lack of a regulatory framework or institutions to govern the use of radioactive material. While there has been a research facility for nuclear technology (now known as Malaysian Nuclear Agency or Nuclear Malaysia) since September 1972, there were no regulations to monitor the management of radioactive waste outside a medical context. The Ministry of Health was the regulatory authority for the management of radioactive materials under the Radioactive Substances Act 1968 but all regulations arising from this Act only pertained to radioactive material used in a medical context. When the ARE began operations in 1982, it did so with a permit for pre-commissioning test runs for processing on its facilities from the Ministry of Health (The Star, 1988; New Straits Times, 1988; The Star, 1989b). Another permit for production processes was to be obtained before the permit for test runs expired. This did not occur and so the ARE had begun production after initial test runs without a proper permit.

Subsequently, the Malaysian government created new regulations for the management of radioactive materials. It repealed the Radioactive Substances Act 1968, and passed the Atomic Energy Licensing Act (Act 302) in Parliament in 1984 (www.aelb.com.my). Under this act, a new regulatory agency, the Atomic Energy Licensing Board of Malaysia (AELB), was formed to monitor the management of non-medical radioactive materials or atomic activities. The Ministry of Health remained the regulatory authority for radioactive materials used for medical purposes. The AELB came into force on 1 February 1985 (Francis, 1985). A few months later, in October 1985, the villagers of Bukit Merah went to court and were granted an interlocutory injunction to halt ARE operations (Chan, 1985). The injunction was accompanied by an order for 12 safety measures as recommended by the International Atomic Energy Agency (IAEA) to be implemented by the ARE. Subsequently, in February 1987, the ARE, over-riding the interlocutory injunction, resumed operations after implementing the 12 safety measures and after receiving a temporary license from the AELB (Teoh, 1987; The Star; 1987). While Bukit Merah villagers protested and their lawyers filed contempt proceedings against the ARE, the state and federal governments were silent.

The court, when questioned, said that since the AELB was not a party to the lawsuit, the AELB was not bound by its judgement, and so it was not an issue for the AELB to issue a permit for the ARE to resume operations. Bukit Merah villagers and their lawyers were amazed at this statement which was reported in national newspapers (Chan and Leong, 1987; Interview, Ms Meena Raman, Penang, 19-08-2010). This demonstrated an over-riding of the rule of law and was an example as to why the government ruling Malaysia had often been labelled authoritarian or semi-authoritarian/democracy (Crouch, 1996; Case, 2001; Thirkell-White, 2006) (see p. 228, **Chapter 8.5 Litigation**, for the limitations of legal mobilisation).

The Environmental Quality Act of 1974 was amended in 1987 to make EIAs mandatory for all public and private sector projects which could have major impacts (International Law Book Services, 2009). Therefore, while the development of the ARE facility did not require an EIA, by the time the Broga incinerator project was proposed it was clear that a detailed EIA (dEIA) was required. A dEIA was not carried out initially when the government made the decision to relocate the incinerator from Puchong to Broga. The government announced their decision by taking out advertisements in all major national newspapers announcing the new location of Broga for the proposed incinerator. The dEIA was only conducted later, after the Broga campaign was launched.

Furthermore, Broga campaigners were not happy with the way community participation was carried out in the dEIA because they felt they were not genuinely ‘participating’ (Chapter Eight). While campaigners view the EIA as setting limits on what is regarded as justifiable concern or priority, the government regards it as an efficient, technocratic tool (albeit benign) to control the consequences of industrial development (Scott, 1999). The inescapable linkages between power and values in the EIA process were glossed over by the state by ignoring challenges to the EIA thrown by the campaigners (Richardson, 2004) (see Chapter Seven on demands for participation).

The Broga controversy also revealed a gap in existing environmental regulations in monitoring emissions from incinerators. While there are provisions under the Environmental Quality Act 1974 that govern different types of pollution risks, there is none for the monitoring of emissions from incinerators. For example, the Environmental Quality Clean Air Regulations 1978 and the Environmental Quality

Dioxin and Furan Regulations 2004 provide monitoring standards for dioxin and furan individually. However, no single regulation or guideline exists to specifically address the emissions as a whole from waste incinerators (Mohd Rozainee Taib, 2008). The implication of such a situation is that the hazards posed by incinerators are monitored on a piecemeal basis. This is not an efficient or a sufficient way to monitor incinerator hazards (Mohd Rozainee Taib, 2008), and thus did nothing to allay campaigners' fears of pollution risks. In the interview with Dr Muhd Noor, he confirmed the fact that current legislation did not allow for the regulation of incinerator emissions. However, he emphasised that the government had responded to concerns about the lack of legislation because research was underway to regulate incinerator emissions, and that it was only a matter of time before the appropriate legislation was brought into effect (Interview, Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010).

In this section, an examination of the government's view that using better technology and improving environmental governance would have the effect of lessening or avoiding conflict, reveal that this view did not match up with campaigners' experiences on the same matter. Despite the setting up of the regulatory agency, the AELB, and the change in legislation requiring a dEIA to be submitted for large projects with major impacts, campaigners did not experience these legislative changes as having worked in their favour. Campaigners instead experienced the AELB as approving the continued operations of the ARE facility in Bukit Merah, and the announcement of the siting of the proposed incinerator in Broga village before a dEIA was conducted. In the case of Bukit Merah, campaigners experienced having to sustain a long court case and campaign in order to shut down the operations of the ARE; and for safe disposal of the low level radioactive waste produced by the ARE. In the case of Broga, campaigners resorted to protest actions and campaigning before a dEIA was eventually carried out. Furthermore, Broga campaigners did not feel their voices were being heard during the 'participating' process of the dEIA consultation (see Chapter Eight for further discussion).

6.4 Other vested interests

From the interview data gathered during fieldwork, another reason for dissent, according to the government was found in the influences on the campaigns of external

vested interests. Several organisations and parties were identified and blame attributed to them. These are namely Sahabat Alam Malaysia (SAM) and Consumers' Association of Penang (CAP), two well-known NGOs. In terms of the controversy over incineration, two interviewees, Dato' Nadzri and Dr Mohd Noor, considered the recycling industry and private landfill operators, as other vested interests who would prefer not to have incinerators as this directly affects the amount of recyclables and solid waste both industries are able to obtain (Interviews, Dato' Nadzri Yahaya, Kuala Lumpur, 25-08-2010; Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010). Thus, the recycling and solid waste management industries could also be the 'external agitators' who influenced the Broga campaign. For example, Dato' Nadzri said one possible instigator in protests against incinerators could be the plastics industry. He said the plastics industry would rather try to recover as much recycled plastic as possible, since raw materials from petro-chemicals are more expensive than recovered resin from recycled plastics (Interview, Dato' Nadzri Yahaya, Kuala Lumpur, 25-08-2010). On his part, Dr Muhd Noor said that landfill operators might also have a hand in lobbying the government to construct sanitary landfills over incinerators. If more waste was sent to incinerators, this would mean a substantial reduction in profits for landfill operators who are paid per tonne of solid waste received for the landfill (Interview, Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010).

The organisation CAP and its sister organisation SAM are important national and regional actors in global environmental, health, development and anti-toxics issues. These organisations had become professionalised and internationalised since the early 1980s, and have linked many local campaigns to international networks, thereby illustrating Keck and Sikkink's (1998) 'boomerang effect' where international leverage rebounds onto the national context (Khoo and Rau, 2009) (see p. 50, **Chapter 3.1 Social movement theories**, for an explanation of the 'boomerang effect'). The internationalisation of local campaigns has been driven by the passive or repressive actions of the Malaysian state. Through their international networks, CAP and SAM were able to mobilise information, funding and expertise to the Bukit Merah as well as other anti-incineration campaigns (not just Broga) in Malaysia to increase their credibility and strengthen their case. In terms of the Bukit Merah conflict, CAP was regarded by the state and business interests as largely responsible for sustaining

resistance due to its provision of legal assistance,⁶⁹ and its direct lobbying in Japan together with the help of Japanese NGOs and opposition parliamentarians (see Chapter Eight for a discussion on the impacts of transnational advocacy networks). CAP was also seen as responsible for triggering an international response to the Bukit Merah campaign through the same networks.

The initial campaign around the ARE facility had started in the village of Papan where a permanent waste facility was planned. The faulty construction of the permanent dump and its proximity to Papan became a huge national scandal which attracted support from many Malaysian NGOs as well as individual activists. This caused the then Prime Minister, Dr Mahathir Mohamad, to label these middle-class NGOs and activists as ‘professional opposition’ (*pembanggang profesional*) who were more interested in going against the government to show that the government was insensitive to the feelings of its citizens (Berita Harian, 1984). He further added that radiation had never been an issue as radiation had its positive uses and benefits such as x-ray radiation which had improved people’s lives. He added ‘. . . kerana ada orang lain datang untuk menjadikannya isu, ia menjadi isu’ (Berita Harian, 1984). This translates as ‘. . . because radiation has been made into an issue by others, radiation is then an issue’.

CAP and SAM were certainly among those *pembanggang profesional* as labelled by Dr Mahathir. This was not the first time. CAP had historically been critical of the government and had been previously considered anti-development or anti-progress because of its support for communities who protest against large projects (for example, infrastructure construction, golf courses, etc.) and the development of environmental technologies (Hilton, 2009; see pp. 246-248, **Box 9.1 Consumers’ Association of Penang**). Despite this negative labelling, CAP has managed to provide an alternative to the mainstream paradigm offered by the Malaysian developmental state who has embraced green modernisation through acquiring the latest technologies.⁷⁰ CAP offers

⁶⁹ The legal department of CAP coordinated the litigation filed by Bukit Merah villagers. While villagers fundraised to contribute to the legal expenses incurred, CAP’s financial support was not unsubstantial. While I am not privy to internal funding mechanisms, it is clear the Bukit Merah court case would not have been possible without CAP acting as the nodal NGO through which transnational NGO networks funnelled resources.

⁷⁰ As discussed in Chapter Five, the Malaysian government has embraced green modernisation. In the 1980s, a liberalised export-oriented industrial growth policy was accompanied by a liberalisation of finance and privatisation. As environmental pressures increase and sustainable development become seen as a necessary objective to achieve, a market-led version of green growth – such as the privatisation of

alternative thinking on health, environmental and development issues using basic needs and justice approaches (Khoo, 2012).

Since the 1970s, for example, CAP has advocated on waste reduction and the elimination of toxics, and has argued for taking a precautionary principle. In the case of Broga, CAP was concerned that even improved incineration technology would produce pollutants that were difficult to monitor. CAP's concerns with such pollutants have led it to become involved, since 2004, with the International POPs Elimination Network (IPEN) which monitors persistent organic pollutants (POPs) (Khoo and Rau, 2009). The documentary project 'Alice Lives Here' mentioned earlier in Chapter Five received a small amount of funding from the IPEN project through CAP (Interview, Ms Wong Yuen Mei, Kuala Lumpur, 12-08-2009; www.ipen.org/ipepweb1/projects/projectsindex_4.html#malaysia)

As such, these linkages between NGOs and those involved with the Broga and Bukit Merah campaigns were viewed by the state as evidence of external instigators who have contributed or caused public resistance to controversial projects. This, together with the expressed suspicions that the recycling industry and landfill operators may also be involved with resistance, is an important dimension of the views and understandings of the government and business interests.

6.5 The politics of risk assessment

The above analysis of interviews and textual sources suggests the government and business interests held four explanations for why the two environmental campaigns took place. First, there was a lack of lay peoples' understanding of scientific matters especially in relation to ideas of risk management. Second, campaigners were regarded as having taken the decision to act politically instead of looking for a technical solution to their problems. This technical approach was regarded by the government and business interests as being the appropriate response for campaigners; not protest and litigation. Third, there was poor environmental governance in terms of the inefficiency

environmental protection in conjunction with the promotion of corporate social responsibility and eco-efficiency - have been adopted (Khoo and Rau, 2009). This is the context that is critical for understanding the science debates between those for and against the incinerator project and the ARE facility.

or non-existence of appropriate environmental legislation and regulation. Development of this would have diluted any propensity for protest. Fourth, resistance was regarded to have been fuelled by the interference of external agitators, such as environmental NGOs or individual activists or private sector interests such as the recycling industry.

The first three reasons offered are representative of a particular type of approach to mitigating and ameliorating problems associated with human activity (Jasanoff, 1986). This approach is referred to as a risk discourse and is expressed through the use of risk management tools (for example, acceptable levels of pollution and environmental impact assessment) (Jasanoff, 1986). In this thinking, the use risk management tools in combination with good environmental governance, legislation and implementation is seen as the ideal way of controlling the negative impacts of human activity on human beings and the environment (Jasanoff, 1986, 2007). However, as the analyses below will illuminate, this method of risk assessment does not allow for dissenting perceptions of risk. Jasanoff (2007, p. 266) says this in reference to risk assessments: ‘ . . . it is a highly particular means of framing perceptions, narrowing analysis, erasing uncertainty, and defusing politics’.

6.6 Risk discourse: is it democratic?

As discussed in pp. 60-68, **Chapter 3.3 Questioning science**, the belief that scientific development and hence scientific knowledge is central to the future of human society is one that is rooted in the industrial revolution (Irwin, 1995). In this period, science brought economic and social advancement, and was thus seen as a liberator as it revealed ‘truth’ and came to gain the status of being value-free (Irwin, 1995, p. 12). Thus the accompanying concern was with the general level of science education or knowledge, a lack of which is seen as holding back industrial and technical development or the progress of civilisation (Irwin, 1995, p. 10). As such, when expert explanations or experts fail to placate protesting campaigners, it is attributed to an ignorant lay public or as a public misunderstanding of science (Irwin, 1995). However, in the past few decades, the view of the disinterested expert, or the idea that science knows ‘best’ has been eroded in many developed economies. There is now recognition that scientific knowledge is contingent and reflects the limits of not just expert

knowledge, training and imagination but also of institutional processes, obligations and culture (Irwin, 1995; Irwin and Wynne, 1996a, 1996b; Jasanoff, 2003, 2005).

As a result of this recognition that all knowledges are partial and contingent, dialogue between the public and experts/institutions/policymakers is regarded as very important or critical (Leach et al., 2005). It has driven an explosion of research and practice in public participation methodologies since the late 1990s and has resulted in many public participation elements in government programmes in many developed economies, or in programmes carried out by international multilateral organisations such as the World Bank (Wynne, 2005).

Unfortunately, as evidence from the interviews with government and business interests suggests, such recognition of the partiality of scientific knowledge has thus far little traction in Malaysia. As such, public participation provided by the government is not regarded as important and is limited, confined mainly to the requirements of a dEIA. The campaigners who protested against the proposed Broga incinerator and the operations of the ARE were regarded as lacking in scientific knowledge. They were labelled as an 'ignorant public' because they rejected ideas of acceptable risks. The experts/ARE/the government framed the two conflicts in terms of how to monitor and mitigate the consequences of pollution, reflecting the use of techniques of analysis called risk assessment (pp. 60-62, **Chapter 3.3 Questioning science**). By doing so the problems of conflict were reconfigured as technological problems that needed technological solutions (Jasanoff, 2007).

Furthermore, framing the 'problem' as a refusal to accept ideas of risks also means there is an underlying assumption that the authority to define issues are seen to be within the purview of experts or expert institutions. Wynne (2005, p. 67) on this:

...it reflects an assumption that the public meanings, or issue definitions, are naturally and properly the sovereign domain of authoritative expert institutions, and that citizens have no capability or proper role in autonomously creating and negotiating such collective, and potentially more diverse, public meanings. Thus, standardized and supposedly objective universal public meanings are imposed – 'risk issues' – which also imposes a normative, standardized model citizens.

A risk assessment exercise makes use of techniques of analysis found in risk discourses in order to mitigate the risks of any development. It is not unique to Malaysia; and is today a common standard practice internationally for mitigating against risks in development projects (Jasanoff, 1986, p. 25; Wynne, 2005).⁷¹ A risk approach is used together with public participation to solicit other views and to enable people affected by a particular development to feel a greater sense of ownership of outcomes. The idea underlying this approach is that the risks of any particular project can be mitigated by incorporating the ideas or views derived from public participation. However, institutionalised participation has failed in many programmes. Wynne (2005) argues that this is due to the imposition of an implicit idea, found within a risk discourse, of what citizens/lay public are and how they should behave.

By using a risk discourse to approach a problem, one projects a particular standardised model or idea of the citizen through the use of a supposedly objective universal public meaning (for example, what is the level of permissible risk?). This model excludes the democratic agency of the citizen, and assumes several things of what citizens should be or are. According to Wynne (2005), it is these assumptions, and not due to the mechanics of how to do participation better, that have caused institutionalised participation to fail in many programmes that attempt to empower citizens through public participation (such as in the United Kingdom, United States or in World Bank programmes carried out in developing countries). These assumptions are: citizens naturally agree to the core definition of risk discourses; citizens are incapable of dealing with uncertainty and thus expect experts to deal with it; citizens are either exposed to high or low risks without taking into consideration local or contextual conditions (a bivalent view); citizens are only concerned with consequences of innovations and not upstream issues such as processes of knowledge creation -who defines the research agenda or what drives it; and finally, citizens are not able to construct independent

⁷¹ Jasanoff (1986, 2007) traces the history of how risk assessment developed. It originated in the finance and insurance industries in the USA used to assess risk and estimate appropriate insurance premiums. It was first adapted for use during the expansion of nuclear power in the 1960s and 1970s in the US, and subsequently spread to other hazardous industries as a method for analysing biological hazards. Today, the use of risk assessment has spread to the rest of the world. Originally, US regulators were careful to consider this method of systematic analysis as a form of art rather than a science. However, with repeated court challenges to the health and safety standards enforced by federal regulators, the regulators started to take on some form of quantification methods and to harden their stance. Jasanoff on this: '[A]s risk assessments became the preferred method for making regulatory judgements appear objective, so too it gradually took on the mantle of science' (Jasanoff, 2007, p. 265).

public meanings outside of expert-led, institutionalised science and/or state authority (Wynne, 2005, p. 72) (see p. 67, **Chapter 3.3 Questioning science** where these assumptions are described in detail).

Such a projection of a normative model of the public is obvious in both the Broga and Bukit Merah campaigns. Campaigners were expected to agree with the core definition of risk discourses (this chapter), and campaigners' independently constructed knowledge is not regarded as valid by the state. For example, the state and the ARE considered experiences of ill health as coincidental and not linked to the ARE facility because no cause-and effect scientific evidence was available to link ill health to exposure to low-level radiation (Foong, 1989). However, the experiences of ill health together with knowledge about radiation gained from independent, local and international experts, helped Bukit Merah campaigners to construct their beliefs outside of expert-led, institutions or state authority. Bukit Merah campaigners chose to believe in the sources of information from those alternative experts but not that provided by the state or the ARE. These different understandings of risks, are not given room for consideration or debate. Instead, risk is made objective through various technologies (for example, the use of newer technology that is less polluting than older technology) and knowledge assemblages (for example, high health and safety standards and monitoring) that aim to quantify risk. In doing so, risk is given only one authoritative meaning (Wynne, 2005).

In the case of Broga, campaigners are viewed in a bivalent manner, outside of local or contextual conditions. The KPKT and the business interests involved in the construction of the incinerator regard the risks involved as acceptable and therefore, expectations were that Broga residents should accept the location of the incinerator in their neighbourhood. These definitions do not recognise the poverty among the poorer Broga residents, nor residents' lack of trust in the ability of the government or business interests in operating a large and highly technical incinerator. The KPKT also did not recognise the desire of the campaigners to participate in discussions impacting national waste management policy. It regarded Broga campaigners as only being concerned with the consequences of innovation (high-tech incinerator) and not with the formation of national policy on waste. This demonstrates Wynne's projection of a particular model

of the citizen as being only concerned about the consequences of innovations (Wynne, 2005).

The proposal by Broga campaigners for smaller incinerators spread-out in different locations containing different types of communities, demonstrates campaigners are able to be self-reflexive (Interviews, Mr O, Semenyih, 30-04-2009; Ms Alice Lee and members of the JKKK,⁷² Broga, 18-05-2009; Mr D, Kuala Lumpur, 24-06-2009; Mr Daniel Wong, Petaling Jaya, 29-06-2009). They reflected on their lack of scientific knowledge (for example, many Broga villagers knew very little or nothing at all about incinerators), and assessed the information they had obtained independently (be it from the internet or through social relationships with friends, relatives or other scientific experts) and arrived at a conclusion themselves (that they would accept small incinerators spread out in individual communities so risk is more equally shared) (see Michael, 1996). This epistemic agency of ordinary citizens, which reflects the processes of a self-reflexive lay public, does not fit the description of ‘an ignorant lay public’. Therefore, a risk discourse leaves little room to accommodate the epistemic agency of the lay campaigner. Nowhere is this more apparent than in many grassroots campaigners’ refusal to participate in a social impact assessment, carried out as part of the detailed impact assessment for the Broga incinerator project. They saw no reason to participate because they regarded their participation as a rubber-stamping exercise, or as giving approval for the proposed incinerator (Interviews, Ms Alice Lee and members of the JKKK, Broga; 18-05-2009, Mr Daniel Wong, Petaling Jaya, 29-06-2009). Hence, what accompanies the demand of campaigners for ‘real participation’ in decision-making processes is for the recognition of their views and knowledge. In other words, campaigners want what Farrell and Shalizi (2012) call ‘cognitive democracy’, where not only scientists’ and officials’ views are heard and respected, but also that of the lay public (see Leach et al., 2002). This is because campaigners regard risk discourses as one of several definitions of what the conflicts of Broga and Bukit Merah are all about (see Visvanathan, 2005 for the multiplicity of definitions in risk conflicts).

A bivalent approach to environmental conflicts such as Broga and Bukit Merah – resisting campaigners either agree to permissible levels of toxins/radioactivity or they

⁷² Jawatankuasa Kemajuan dan Keselamatan Kampung (in English, the village council).

do not – allows no room for negotiation, and assumes a purely instrumental model of human existence where the concerns of citizens are imagined to be about the control and security of the consequences of innovations. In doing so,

. . . innovation, and the human purposes, ends and visions that shape and inspire it, is seamlessly excluded from the proper realm of democratic agency of the citizen in the scientific, globalized [sic] knowledge-economy world. This omission actually flies in the face of expressed public concerns about the unaccountability and invisibility of just such driving human purposes in new sciences and technologies (Wynne, 2005, p. 72).

Despite the lack of democracy in a risk discourse, it is still used by the state and business interests to defend and justify their decisions for the Broga incinerator project and the ARE facility. Unfortunately, authoritative science and expertise are still conceived of as universally valid knowledge, and nowhere are these clearer than in legal and administrative processes (Jasanoff, 2003) (See Chapter Eight for further discussions).

6.7 Conclusion

This chapter analysed the responses of the interview participants from the state and business interests in order to understand their views on the Broga and Bukit Merah campaigns. I asked them why they thought campaigners in Broga and Bukit Merah protested against the proposed incinerator and the ARE facility. They offered four reasons: the lack of understanding of science and scientific information; the decision to choose political protest instead of looking for technical solutions; the lack of efficient environmental legislation and regulation; and the role of external agitators in fuelling resistance.

The idea that the general public is ignorant of highly technical or scientific matters is not something new (see pp. 60-68, **Chapter 3.3 Questioning science**). In fact, it is as old as the industrial revolution and is deeply embedded in ideas of science driving modernisation (Irwin, 1995). In the UK, the publication of a report titled *Public Understanding of Science* by the Royal Society in 1985 reflected the concerns of scientists and the government with the education of the public in the ways of science (the ‘deficit model’); revealing the belief that the more scientific understanding or education the lay public had, the less public conflict there would be especially in

environmental decision-making or risk issues (Irwin, 1995). As discussed in Chapter Five, Malaysia, as a developmental state, has embraced such similar notions of science and modernisation. Therefore, it is not surprising that there exists a strong belief amongst officials, bureaucrats and business interests that the lack of scientific knowledge amongst campaigners is a major factor in galvanising protests against the proposed incinerator project and the ARE facility.

The prevalence of the ‘deficit model’ means that the conflicts of Broga and Bukit Merah are redefined as technical problems that need technical solutions. According to the government, business interests and consultants, the technical solutions are to be found through the use of tools of risk assessment in combination with good environmental governance and use of better technology. Such a technocratic approach meant that there was no room to accommodate alternative or multiple perceptions of risk, such as those offered by campaigners in both Broga and Bukit Merah. A risk discourse that does not allow for multiple perceptions of risk is lacking in ‘knowledge/cognitive democracy’, and thus leads to calls for rights to (alternative) knowledges which raise prospects for new forms of more inclusive public engagement ‘. . . in setting agendas for, conducting or applying the results of science and technology development’ (Leach and Scoones, 2005, p. 21).

Furthermore, the acceptance of scientific information is tied to issues of trust in terms of the nature of the relationship between the Malaysian government and business interests with campaigners: why did campaigners not believe the scientific information that was given by the government/business interests and their representatives? In the next chapter, campaigners’ views of why they decided to stage protest actions, what constitutes risks as expressed by campaigners, and why trust is important, are examined and analysed.

CHAPTER SEVEN

UNDERSTANDING THE CAMPAIGNS FROM BELOW

This chapter examines the interviews with campaigners or supporters of campaigners from both the case studies of Broga and Bukit Merah, especially those grassroots campaigners directly affected by the proximity of their homes to the proposed incinerator and the ARE facility. This examination is carried out in relation to research question (2), ‘Why were campaigns launched in Broga and Bukit Merah, and how did campaigners demand their rights and challenge the responsibilities of the state and business interests? Furthermore, why did these demands and challenge take the form they did?’ In the previous chapter, the various responses of the state and business interests to the resistance were examined in detail. In this chapter, in order to elicit the views of campaigners as to why they protested, I investigated the arguments, reasons and narratives provided by campaigners for participation in campaigning. I also asked what campaigners did and why. For organisational purposes, the responses I obtained from interviewing campaigners and their supporters have been divided into two chapters: Chapters Seven and Eight. Chapter Seven specifically unpacks the reasons that were expressed by campaigners as to why they decided to protest against the proposed incinerator. Chapter Eight unpacks both the discourses and practices of campaigning, asking why campaigners used particular discourses to make their arguments for justice and accountability, and why particular types of campaigning strategies/tools were chosen.

In order to carry out the aims of research question (2), as in Chapter Six, the materials analysed in this chapter are both primary and secondary data comprising interviews, campaign materials, newspaper articles, email communication and publications and websites of NGOs and government departments or agencies.

The interview data obtained from interviewing campaigners was subjected to a thematic analysis. I grouped the wide-ranging responses received in three categories, and discussions follow in this order: unequal distribution of risk, experiential knowledges and alternative values and a sense of place. After that, I discuss a theme which emerged

from the interviews with campaigners which is that of the existing lack of trust in the relationship between the state and many campaigners. This lack of trust is a contributory factor to the formation of the Broga and Bukit Merah campaigns. I argue that this lack of trust is directly linked to historical processes, specifically, the experiences of being forcefully relocated into New Villages (NVs) and the consequences this had for people's relationship with the state and other sources of authority in Malaysia. Furthermore, people's perception of the contemporary Malaysian state as being corrupt and abusive of its powers (Weiss, 2006; Gomez, 2013) has contributed to this lack of trust. Lastly, I consider how, given the wide-range of understandings provided by campaigners, cognitive democracy - the recognition of other forms of understanding besides the official framing of both the conflicts in terms of a risk discourse – is something that is critical to resolving environmental risk conflicts.

7.1 Views from below

How then did campaigners view the conflicts? The campaigners I interviewed who were opposed to the ARE factory/incinerator came from a wide-range of backgrounds: some were poor working class villagers; some were middle-class professionals whose homes were located close to the ARE/proposed incinerator; some were employees or lawyers representing their environmental NGOs or consumer organisation; some were individual activists who were concerned citizens from urban areas; some were academics and some were journalists who were sympathetic to the causes. They all shared one thing in common, which was that they were all against the ARE factory or Broga incinerator. However, the reasons offered for being part of a campaign were varied. So for example, grassroots campaigners⁷³ focused not only on concerns for their own health and environment, they also talked about concerns with their livelihoods; while more middle-class professionals focused more on concerns for their health and environment. Non-grassroots campaigners, defined as those who do not live anywhere near the ARE factory or the proposed incinerator, view themselves as being concerned about the people directly affected in terms of threats to health, environment and

⁷³ Grassroots campaigners refer to those residents who lived near both the proposed Broga incinerator and ARE facility, are directly affected by pollutions risks, and who decided to join the campaigns to protest against those two projects. They include both low and middle income groups. See Chapter 1.5 for definition.

livelihood. Many also expressed general concerns with larger environmental issues, not just pollution problems posed by hazardous chemicals/toxic wastes. I group the range of responses into three categories.

First, every one of the campaigners I interviewed expressed the fact that there was an unequal distribution of risks from hazardous chemicals/waste and radiation. They felt that those who lived near Broga or Bukit Merah were asked to shoulder a disproportionate level of risk. Second, the experiential knowledge that campaigners had gained, such as personal experiences of ill health, and the poor maintenance, health and safety culture in Malaysian society, affirmed beliefs that radiation from waste caused the ill health experienced, and that a large high-tech incinerator would not be managed safely. These were factors that motivated people to build campaigns around a controversial issue. Third, grassroots campaigners valued good health, the right to clean air and a clean environment, and the state of their surroundings as they knew it. They reveal an alternative value (as opposed to arguments made by the government for embracing technological development which is equated to progress; see Chapter 9.5) for the appreciation of nature and a sense of attachment to one's home surroundings.

Underlying the overwhelming majority of responses from interview participants 'from below' was a deep sense of mistrust towards the state and powerful business interests. Analysis of interview responses suggests that this mistrust is linked to two issues. First, the sense of mistrust is linked to the daily lived experiences of rampant corruption and abuse of power by *Barisan Nasional* (BN), the party that has ruled Malaysia since independence in 1957. Many interview participants, especially those from the Broga campaign, spoke openly about their concerns with a corrupt state and how this directly impacts the 'poor maintenance culture' in Malaysia. Second, the sense of mistrust is also linked to New Villagers' historical experiences of political and socio-ethnic disenfranchisement caused by forced internment in New Villages (NVs) during the Communist Insurgency of 1948-1960 (Chapter Five). I reached this conclusion based on my analysis of the subtext of what interview participants expressed as well as an analysis of the particular historical processes that brought about the formation of NVs.

Those three categories of responses and the issue of lack of trust will be explored in detail in the remaining sections of this chapter.

7.2 Poverty and the unequal distribution of risk

While all campaigners interviewed expressed the view that the distribution of risk was unequal in the cases of Broga and Bukit Merah, not all talked about their concerns with poverty. Poverty was more likely to emerge as a theme when talking to poor grassroots villagers in Broga and Bukit Merah who, in several interviews, described their poverty and the feelings of vulnerability because of it. For example, many poorer Broga villagers felt much more vulnerable to the threat of the loss of value to their homes than middle class grassroots campaigners, whose homes were also close to the proposed incinerator. This is because their poverty (lack of financial reserves to tide through scarce periods), and their insecure tenure of the land on which their homes stood, which is an emblematic feature of NVs (as described in Chapter Five), meant that they might not be able to sell and move away from their homes if they wanted to. In this regard, Ms Lee said

. . . the residents of Taman Tasik Semenyih can sell their homes and buy another home somewhere else, but who will buy our houses [once devalued by the proximity of the incinerator] and where can we go? This [Broga] is our home (Interview, Ms Alice Lee, Kajang, 11-05-2009).⁷⁴

Poverty renders communities vulnerable to hosting polluting industries, something noted internationally in various environmental justice literatures. Very often, their locations demonstrate a distinct pattern, reflecting the political and economic poverty and marginalisation of these places (Bullard, 1993; Pellow, 2000; Szasz and Meuser, 2000; Sze, 2007). Polluting industries or hazardous industrial facilities in the USA are located disproportionately in poor communities whose residents have ‘moderate to low income and/or are more likely to be members of ethnic minority groups’ (Szasz and Meuser, 2000, p. 602). These USA environmental justice movements protesting against such inequalities have seen their discourses and practices travel around the globe, and have been interpreted and represented in ways that suit local conditions (Walker, 2012). The Broga and Bukit Merah campaigns are two examples of movements that inflect environmental justice through local lenses.

⁷⁴ Most homes in Broga New Village are constructed of wood or a combination of wood and bricks which are older, cheaper and of lower quality than the homes in Taman Tasik Semenyih which are largely new, modern homes made from bricks.

During interviews, many low-income grassroots campaigners in both conflicts referred to not just their low income, but also rural status as a way to explain why they thought polluting industries were being located in the vicinity of their homes. For example, in the Broga campaign, all campaigners interviewed believed the Broga incinerator was relocated from Puchong to Broga precisely because it was a more rural, and therefore, less densely populated area than Puchong - a booming suburb and town. Many regarded this as unjust. The KPKT, the proponent of the Broga incinerator project, did not offer a reason why they chose to locate the incinerator in Broga. Puchong is today, highly developed, and contains many middle-class communities even though it originally was a small village. This sense of unfairness was witnessed in interviews with many Broga campaigners who felt they were being asked to shoulder a disproportionate risk to health and the environment for the people of Kuala Lumpur who would have their rubbish incinerated in Broga. Campaigners demanded for a redistribution of the risks they faced in a similar manner to the environmental justice frame found in the US.

Likewise, in Bukit Merah, Consumers' Association of Penang (CAP), the NGO who was involved in the Bukit Merah campaign, and Bukit Merah villagers themselves, talked about how unjust it was that very poor people (Bukit Merah residents) were being taken advantage of by having to live at close proximity to sources of low-level radiation (Consumers' Association of Penang, 1993; Interviews, Mr Hew Yoon Tat and Madame Chen Kim Lean, Bukit Merah, 13-08-2009). Thus, the low-income groups of villagers of Broga and Bukit Merah especially viewed the threats to their health and environment as a reinforcement of existing patterns of inequality.

In a global context, many developing countries are party to a disproportionate range of environmental hazards and may act as convenient risk repositories for the West/more developed countries (Utusan Konsumer, 1993a; Utusan Konsumer, 1994b; Bryant, 1997; Smith and Goldblatt, 2000; Agyeman et al., 2003). Polluting industries relocate to less developed countries where production costs are lower and/or where health and safety regulations are lax; as is the case of the ARE factory which was a Japanese foreign direct investment in Malaysia (Utusan Konsumer, 1994b). Through the ARE court case, it was revealed that the production of rare earth elements ceased in Japan in the early 1970s due to associated health risks from both their production and toxic waste disposal processes (The Star, 1989a, 1989c). Hence, risk and vulnerability to

disaster is neither equally distributed nor shared locally or globally (Smith and Goldblatt, 2000; Hinchcliffe 2000).⁷⁵

The link between unequal treatment and poverty as observed in the Bukit Merah campaign brings to the foreground issues of recognition. The poverty of people living in NVs, a specific creation of the colonial administration in response to a political threat, has not been an issue that is much talked about publicly. This is because of the lack of government policy or plans for the development of NVs (for example, for improving public infrastructure, housing, education and employment opportunities) after the end of the Communist Insurgency (see p. 114, **Chapter 5.1 The marginalisation of the Chinese: from colonial Malaya to New Villages**). Furthermore, since communism is still regarded as a threat to national security in present day Malaysia, any public discussions (for example, this can include discussions of books, the public screening of films or documentaries) on the nature of NVs, whether fiction or non-fiction, is frowned upon or banned (see p. 114, **Chapter 5.1 The marginalisation of the Chinese: from colonial Malaya to New Villages**). As a result of this silence in government policy and suppression of public discussions in regard to the lack of development and the state of NVs, the impoverished conditions of many NVs and their surroundings are unrecognised. This is what makes NVs stigmatised places (see Walker, 2009 for the meaning of stigmatised places).

Schlosberg (2004, p. 519) describes the relationship between political voice and recognition (or identity) very aptly with the description that if ‘you are not recognised, you do not participate’. Similarly, Pulido (1996) says that subaltern peoples whose identities have been debased by cultural majorities need to develop an affirmative identity as a first step towards political action. In other words, in order to believe that one has the right to have rights or the right to resist, one first has to have a positive, reaffirming image of oneself. It is this imagining of a powerful self that is empowering. Being invisible means New Villagers cannot ‘. . . make claims on the broader human collectives in which their lives are embedded’ (Latta, 2008, p. 251). Hence, through claims-making for environmental justice and rights, and through emphasising the links

⁷⁵ The worldwide patterns of exports of hazardous waste/toxic dumping, or the relocating of polluting industries from the ‘North’ to the ‘South’ today are more complex. See Box 6.1.

between poverty and unequal treatment in siting decisions, New Villagers began to make themselves visible as political interlocutors who took possession of their own public identities (as poor and marginalised) and began to demand recognition. Such actions not only rendered environmental justice as a space of contention in a situation where inequality was embedded in communities, their history and characteristics, but also render campaigners as being political, and actively contesting and transforming the meanings of citizenship (Isin, 2002; MacGregor, 2006; Latta, 2007, 2008). This is further discussed in Chapter Nine.

Those feelings of vulnerability due to poverty, the view that that the distribution of risk was unequal and unfair, and the global redistribution of risk to Bukit Merah in terms of rare earth elements extraction, all feed into the motivations of why campaigners protested. However, in the context of a risk discourse, such as that deployed ‘from above,’ where the concerns of citizens are imagined to be about the control and security of the consequences of innovations, there is no room to consider those feelings of vulnerability, political marginalisation and broader structural concerns such as the unequal distribution of risks (see also Wynne, 2005).

7.3 Experiential knowledges

As mentioned in the case study of Bukit Merah, Chapter Two, there were multiple cases of stillborn births, miscarriages, congenital defects in babies, lead poisoning in children, abnormal white blood cell count in the majority of children tested, and higher than normal levels of leukaemia in the population of Bukit Merah. High lead levels were also found in water and soil samples from a river next to the ARE temporary waste dump site as well as in vegetables sold in the Bukit Merah market (Consumers’ Association of Penang, 1993, p. 46). Villagers who worked in ARE or who handled the waste matter produced by the ARE, as well as villagers near the ARE had reported difficulty breathing as well as persistent skin irritations and rashes. Another commonly reported experience was being ill frequently with coughs, colds and flus (Consumers’ Association of Penang, 1993, p. 36). For many villagers, these experiences provided bodily-felt evidence that low-level radiation is dangerous. The experiences also fell in line with the information villagers received from scientists from Malaysia, Japan and

Canada, which claimed that low-level radiation and lead found in the waste the ARE produced were a threat to their health, livelihoods and environment.

In the case of Broga, both the working- and middle-class campaigners interviewed expressed concern with the prevalence of a poor maintenance culture. This issue was raised with the Ministry of Housing and Local Government (KPKT) as a reason for protesting against the incinerator project. Most campaigners were concerned that the probability of a serious accident occurring would be high in an incinerator as large and complicated in technology as Broga, due to poor regulation by the relevant authorities (Interviews, Mr D, Kuala Lumpur, 24-06-2009; Mr Edward Lee, Petaling Jaya, 30-06-2009; Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010). Beliefs such as these were important to highlight because they formed the subjective perception of risk and influenced reasons for protest.

In a meeting with the then Minister of KPKT, Mr Ong Ka Ting, Dr Muhd Noor, then a technical advisor to the KPKT, tried to assure campaigners that the latest and safest technology as well as strict occupational health and safety rules would be implemented. When I interviewed Dr Muhd Noor, he said that campaigners' concerns with maintenance were valid even though he was at pains to point to other good examples of the existence of an internationally accepted maintenance culture in the Malaysian aviation industry (for example, Malaysian Airlines, the national carrier, as well as aviation in the armed forces and in the private sector) (Interview, Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010).

Experiential knowledges such as those described above are seen to help create 'experts by experience,' and in countries such as the United Kingdom, increasing attention has been paid to the validity of experientially generated knowledge both in the media and in research (Dawney, 2013). Unfortunately, this type of experiential knowledge has not gained credence in Malaysian society, but it does need to be taken into consideration in understanding the ways in which particular campaigns and counter knowledges are formed, not least because they are a reflection of relations of power.

Other types of personal experiences also influenced this subjective perception of risk and how counter knowledges were formed. In the case of Broga, one of the original

leading campaigners was motivated to organise protest because of personal experiences of pain. He was a middle-aged engineer, very busy with his career which took him overseas for long periods of time. Therefore, I was surprised at his interest, and the level of hard work and time he put into organising residents against the incinerator project. It turned out that his motivation was his wife's early death from cancer. He witnessed the pain she experienced before her death and would not wish anyone else to experience that sort of pain (Mr D, Interview, Kuala Lumpur, 24-06-2009). This was his motivation for becoming involved in an anti-incinerator campaign – the belief that exposure to dioxins and other toxic chemicals produced by an incinerator carried a risk of cancer, and thus justified resistance. For Mr D, the problem at hand was not so much of acceptable or unacceptable risks, but that death and pain from cancer in a relatively young adult was unacceptable. So for Mr D, the incinerator meant pain, death and cancer. These would be his independently constructed social meaning of the problem at hand, originating from his experiences of the pain suffered by his wife before her early death. Such social meanings were clearly not included in models of risk discourses which measures responses to risk in terms of permissible levels of exposure to toxins (see Fischer, 2005).

Understanding motivations of campaigners such as Mr D helps to shed light on why campaigners made demands for justice; for recognition of different understandings of the issues at hand, and for participation. It also sheds light on the undemocratic nature of authoritative risk discourse which gives risk only one meaning, when it is actually made up of many meanings and means different things to different people, such as the case of Mr D.

7.4 Values, place and identity

The government officials regarded projects such as the Broga incinerator as an inevitable part of development, and therefore, progress, because using incineration technology to get rid of solid waste was technologically advanced, and something done in developed countries in Europe as well as Japan (Interviews, Dato' Nadzri Yahaya, Kuala Lumpur, 25-08-2010; Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010; see p. 265, **Chapter 9.5 The limitations of environmental justice**). This view is very different from that of many Broga campaigners, especially grassroots campaigners.

During interviews, many grassroots campaigners expressed an appreciation of a clean environment and its association with good health. They did not want an increased risk of radiation, dioxin or other pollutants that would have threatened their livelihoods, health or the environment. In Broga, many villagers expressed an explicit identification with their village environment as they have always known it – quiet, clean and with little traffic (Interviews, Ms Alice Lee, Kajang, 11-05-2009; Ms Alice Lee and members of the JKKK, Broga, 18-05-2009).

In a campaign booklet, campaigners said this about Broga:

Tempat ini aman, sunyi dan cantik. Ia adalah kampung kesayangan kami – Broga. Tolong jangan rosakkan alam sekeliling and suasana kehidupan damai di sini!

(English translation: This place is peaceful, quiet and beautiful. It is our beloved village – Broga. Please do not spoil our environment and peaceful surroundings.)

(‘Broga Anti-incinerator Campaign’, 2003).

This place-bound relationship is important for issues of identity in terms of attachment to home and physical environment (Oliver-Smith, 1996, 2001). In other words, the sense of one’s identification with the meanings attached to the home is something that is place-bound to a particular locality. Indeed, this is particularly obvious in the context of indigenous peoples’ mobilisations where the defence of particular spaces such as traditional territories is constructed through the politics of recognition and social justice. Their environmental justice struggles are place-based identity projects (Pulido, 1996). The defence of particular places is conceived of as the

. . . spatial equivalent of the affirmative reconstruction of identity, wherein the uniform spatial projections of citizenship’s dominant universal (national territory, private property) are disarticulated and reconfigured according to local topographies of livelihood, collective identity, and social reproduction (Latta, 2008, p. 252).

While not an indigenous peoples’ mobilisation, the Broga and Bukit Merah campaigns share some similarities with such projects. Both the Broga and Bukit Merah campaigns were characterised by defence of homes and communities through a particular identity (where rural and poor people live), and in so doing, campaigners projected a link between identity, place, recognition and justice. Moreover, the poverty that was overtly referred to also subsumed a racially-based social condition that had not hitherto been recognised: the continued poverty of the Chinese living in stigmatised NVs. As

discussed in Chapter Five and also in Chapter Nine, any mention of race was dropped in public discourse due to the problematic perception of being Chinese in a climate of racialised politics. It would have been detrimental to the goals of the campaign if racial discrimination had been claimed, especially in the case of Bukit Merah where those protesting were overwhelmingly Chinese. So only the claims of poverty linked to unfair and unequal distribution of environmental harms became public discourse. Racial identities were thus buried. Nevertheless, in defending their homes and communities, campaigners linked identity (in terms of being rural and poor) and place with issues of justice and recognition, thereby becoming political.

The valuing of an environment free from pollution, and the strong sense of identity and place attached by grassroots campaigners to their homes and villages are not recognised as valid framings of the Broga and Bukit Merah conflicts by the state or by those with a vested interest in the ARE or the proposed incinerator. This demonstrates a lack of recognition of the values that campaigners place on their environment, and their place-bound sense of identity/attachment. The state and business interests instead place greater value on ideas of economic growth and development, and on using risk assessment tools such as environmental impact assessments to mitigate environmental impacts.

Given the wide-ranging understandings and perceptions expressed by campaigners, it would be short-sighted to reduce the environmental conflicts of Broga and Bukit Merah into a situation where lay publics were seen as ignorant in understanding the concept of new, technological risks faced from living in the modern world. Furthermore, as representatives of the state and business interests reduced the conflicts to a risk discourse, each was reframed as a technological problem (i.e. a lack of knowledge and understanding on the part of the public) that needed better awareness-raising. According to Jasanoff (2007, p. 266), this exposes the highly non-objective methods of risk assessment because the different understandings of conflicts and risk are not debated. The differing views of campaigners, be it experiences of poverty and the unequal distribution of risk, or personal experiences of ill health, or beliefs about the existence of a poor maintenance culture, or differing values for an unpolluted environment, or one's sense of attachment and identification to one's village, were irrelevant because these were not constitutive of technical problems nor of technical solutions.

7.5 The lack of trust

Underlying the different responses offered by campaigners during interviews, some of which have been described above, is a strong sense of distrust of the Malaysian state. In this section, I argue that there is an experiential and material basis for the lack of trust. Every day experiences of dealings with the Malaysian state presently as well as historically influence perceptions/understandings of the Broga and Bukit Merah conflicts. Therefore, the lack of trust influences the meaning of risk for campaigners because risk, as something that is subjectively formed, is reconfigured in different ways from the official definition (Douglas and Wildavsky, 1982).

Two factors stand out as important in the formation of distrust. The first is the everyday experiences of campaigners with the *modus operandi* of the Malaysian state. At the time of the campaigns, the ruling government was, and continues to be regarded as dictatorial, corrupt, not accountable and abusive of its powers (Case, 2001; Eldridge, 2002; Weiss, 2003; Gomez, 2005; Thirkell-White, 2006; Nur Barizah Abu Bakar et al., 2011). I argue that this directly contributed to the lack of trust that characterises the relationship between the Malaysian state and campaigners at Broga and Bukit Merah. Furthermore, campaigners also did not trust the private sector, especially big business interests, who have a history of working closely with the state. The nature of such public-private business relations have been characterised as typical of a developmental state, of which Malaysia is seen as one (Wade, 1988, 2005). No large business operations which involve large sums of investments are carried out without the approval or involvement of the government in power. Therefore, because large projects also have the support of the state, any claims of safety by the proponents of the projects in a situation of conflict, are viewed in a suspicious manner. The second factor is the history of the origins of Bukit Merah and Broga which were formed as NVs during the communist insurgency of Malaya (1948-1960). This historical process of forced relocation, based largely on Chinese ethnicity, has resulted in experiences of violence, poverty and all sorts of deprivation such as insecurity and uncertainty in livelihood and in housing (see Chapter Five). This historical process has also fed into the feelings of distrust that underpinned both campaigns.

In the next section, I discuss the views expressed by interview participants, placing them within larger contexts: of pre-existing (before the environmental conflicts erupted) perceptions of an authoritarian state who abuses its power, and the history of NVs and their management by the state. This background is important if any thorough understanding of the campaigns from the perspective of the campaigners is to be achieved.

Everyday experiences

The Malaysian state and government is often perceived to behave in a dictatorial manner. Though the state is indeed an abstract entity of which the existing government is a physical embodiment of, the same government, *Barisan Nasional* (BN), has ruled Malaysia since independence in 1957. Thus the state is often regarded as the government and vice versa in the case of Malaysia. Ordinary citizens who challenge repressive or exclusionary decisions or political norms are usually ignored, bullied or suppressed (Eldridge, 2002; Thirkell-White, 2006; Pepinsky, 2009). This type of dictatorial behaviour is something that all the different socio-economic groups that make up the Broga and Bukit Merah campaigns can identify with. The feelings of injustice that are evoked by such behaviour can be observed through the stories that surfaced in many interviews with those involved in both the Broga and Bukit Merah campaigns.

For example, at least two Broga interview participants talked about the ‘thuggish’ behaviour of the Member of Parliament of Ulu Langat, Badrul Hisham Abdul Aziz, who tried to evict a participant who insisted on asking questions. Participants had been told by the KPKT, the ministry who held the public information session in 2003, to listen and not ask questions (as described on p. 146, **Chapter 6.1 Ignorant and emotional campaigners**). The two interview participants who brought up this incident unprompted, expressed not just how shocking and aggressive this behaviour was, but that it was also unfair not to be able to ask questions when the proposed incinerator would have such a major impact on their lives (Interviews, Ms Alice Lee, Kajang, 11-05-2009; Mr Daniel Wong, Petaling Jaya, 29-06-2009). In the case of the Bukit Merah campaign, several campaigners were arrested under the Internal Security Act (ISA) during *Operation Lalang* 1987 where more than 100 people were arrested nationally. The ISA allows detention without trial and has been used historically in Malaysia to

arrest those considered to be a threat to the security of the country. In reality, the act has been conveniently used to arrest political opposition and activists, amongst others, for long periods of time. *Operation Lalang* was justified - by the Mahathir government - as an operation to arrest those who had contributed to rising racial tensions by 'taking advantage' of the government's 'tolerant' attitude. Participants I interviewed who were arrested under the ISA informed me that it was made clear to them that they were arrested because of their roles in the Bukit Merah campaign. They also clearly expressed the brutality, inequality and oppressiveness of being arrested (some were tortured) for demanding for their rights to a clean and healthy environment. Their lengths of incarceration ranged from a few months up to two years.

Therefore, it is clear that citizens are expected by the Malaysian state to demonstrate acquiescence with projects that are approved by the state. In the Bukit Merah campaign, protestors were accused of being ignorant and unreasonable because they would not accept claims by the state and the ARE, that the ARE operation and the proposed waste depository in Papan were safe and that there was nothing to worry about (Chin, 1984; New Straits Times, 1984; The Star, 1990b; Gabriel; 1992). Protestors of the proposed Broga incinerator project were regarded as being emotional because they were unduly concerned about the hazards of dioxin (Consultant B, personal communication, 20-08-2010; Interviews, Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010; Dato' Nadzri Yahaya, Kuala Lumpur, 25-08-2010).

Furthermore, repressive measures undertaken by the state (such as the arrests and torture under the ISA in the case of Bukit Merah campaigners), as well as patronising, defensive and sometimes aggressive behaviour demonstrated by the state and its agents (in both the cases of Broga and Bukit Merah) mean not only was there an expectation for acquiescence, both historically as well as in the present, but also that citizen campaigners were unable to easily access information about those projects they were concerned about. In both the court cases of Broga and Bukit Merah, the request for information was cited by campaigners as a reason for taking legal action. Patterns of dictatorial and oppressive behaviour on the part of the state had resulted in even more suspicion whenever claims of safety and a shrugging off of problems were made by the government.

Be it in electoral politics or in the daily social, economic or political management of the country, the ruling coalition, BN, has been accused of serious abuses of power. This situation has been illuminated through the labels given by researchers to the nature of political governance in Malaysia. Eldridge (2002) calls Malaysia a semi-democracy, Weiss (2006), an illiberal democracy, while Case (2010), Levitsky and Way (2010), and Liow and Pasuni (2010) have used Malaysia as an exemplar of electoral authoritarianism. Malaysia has also topped a 2012 thirty-country survey by Transparency International as the most corrupt country (Ng, 2012). Writing about public accountability in Malaysia, Siddiquee (2002, p. 105) says:

. . . public administration in Malaysia continues to suffer from such problems as a weak system of accountability, growing incidence of corruption and mismanagement, absence of decentralisation and community participation, and non-enforcement of rules and regulations.

This problem is very much alive in the current context of Malaysia. In a recent overview of government initiatives to address corruption, Siddiquee (2010, p. 153) says that ‘. . . corruption has remained acute, widespread and, in fact, worsened in recent years’.

In light of the context of corruption and mismanagement, one reason given by Broga campaigners for having misgivings about the incinerator project was the issue of shoddy construction work. They raised issues in regards to the way the government conducts business such as bribery, corruption, money politics, nepotism and their links to bad governance and the resultant shoddy construction work of many government-funded projects (Interviews, Mr O, Semenyih, 30-04-2009; Mr D, Kuala Lumpur, 24-06-2009). Mr D said: ‘. . . we told the Minister we had serious doubts about the safety of the incinerator because of the prevalence of shoddy construction work in government projects as well as the poor maintenance culture in Malaysia’ (Interview, Kuala Lumpur, 24-06-2009).

This problem of shoddy construction work is still evident today. Many new and unoccupied buildings, or buildings that have only been in use for a few years have experienced total or partial collapses of roofs or walls. For example, between 2009 and 2013, there has been five collapses of roofs of publicly financed, newly constructed or relatively new buildings in the state of Terengganu (Boo, 2013). The entire roof of the

Sultan Mizan Zainal Abidin Stadium, built in Terengganu for the Malaysian Games in 2009 at a cost of RM 300 million, collapsed before it was occupied and cost taxpayers RM 25 million to repair (Boo, 2013). Recently, Serdang Hospital experienced a third roof collapse in three years (The Malay Mail, 2013). No one was injured. Serdang is home to several public universities, and is a growing town near Kuala Lumpur and Putrajaya, Malaysia's administrative capital. This highlights the perennial problem of shoddy construction work in government projects which has contributed to the concerns of Broga campaigners about the safety of the proposed Broga incinerator.

Broga campaigners were concerned that the history of corruption and mismanagement in government projects might mean there would be shoddy construction of the proposed Broga incinerator. They felt this might bring about a high probability of an accident of a serious nature occurring in the operation of such a large incinerator that uses complex technology. Based on analysis of interviews relating to both campaigns, it is clear that everyday experiences of the way the state and its agents have behaved – being dictatorial and oppressive, expecting ordinary citizens to cooperate in every government decision, being corrupt – all contribute towards the way Broga and Bukit Merah campaigners thought of and felt towards the state. Campaigners did not trust the state, and this lack of trust informed the responses of campaigners when they launched their campaigns against the proposed Broga incinerator and the ARE facility.

In the case of Bukit Merah especially, there was an additional dimension to those everyday experiences, and this was found in the history of the formation of NVs (Chapter Five). The next section examines the connections between the lack of trust and the historical experiences of New Villagers.

Historical processes

I interviewed several older people in their 70s and 80s in Papan,⁷⁶ Bukit Merah and Broga. When I asked why they supported those campaigns; invariably, they stressed the need to help their fellow villagers. When I commented on how strong their feelings of solidarity were, they talked about how members of a close-knit community, such as those in a small village should lend each other a helping hand, and they also talked

⁷⁶ Papan is where the protests against the storing of waste from the ARE facility first started.

about suffering together during the Emergency years. They stressed that there was no one they could turn to for help except to each other because of the ‘pressure from the communists and the government’ (Ms X, Interview, Kuala Lumpur, 08-05-2009). A 76-year old woman participant, talked about the human blockade formed by Papan villagers to prevent construction workers and bulldozers from completing the construction of a radioactive waste storage facility. The human blockade lasted for more than a week, and this elderly woman was the ‘head cook’ who supplied food to those who made up the blockade (Interviews, Madame S and Ms X, Kuala Lumpur, 08-05-2009).

I probed further and asked them how Papan villagers first suspected that the low-level radioactive waste may actually be toxic and Madame S has this to say: ‘. . . we saw workers constructing long, deep trenches very close to our village and we asked them what they were doing. They explained that this was to store waste from the nearby ARE facility. . . we asked further questions and found out that this waste was possibly toxic’ (Interview, Madame S, Kuala Lumpur, 08-05-2009). The human blockade was subsequently formed based on the suspicions that the livelihoods, health and environment of Papan villagers were being threatened. The Papan protests lasted several months before the plan to store waste in Papan was abandoned. Villagers’ vegetable farms, fruit orchards, fish ponds and homes were a short distance away – less than one kilometre (Nair, 1984). However, the state government said to Papan villagers that they had nothing to worry about unless ‘. . . they were bent on creating mischief. The experts have given the assurance that there will be no hazardous contamination and regular inspection and monitoring will be carried out to ensure this’ (Perak State Secretary Mohamed Nurzid bin Mohamed Wali, quoted in Nair, 1984). Despite assurances from the state government, the deputy prime minister as well as various federal ministries that the storage facility was safe, villagers were not convinced.

After the plan for the storage facility at Papan was abandoned by the government, the campaigning against the ARE facility moved from Papan to Bukit Merah since Bukit Merah was the closest village to the site of the ARE. In my interviews with both Papan and Bukit Merah villagers, I asked why they chose to believe those experts who spoke to them about the negative risks of exposure to low level radioactive waste instead of the state and federal government officials, politicians as well as the ARE management.

Their answers were interestingly very similar: they saw no reason why those experts who spoke to them about the risks of radioactivity would lie to them. Those experts included local as well as international scientists from Japan and Canada. Very crucially, one of the first few local experts who became involved was an engineering professor, although, then working near Kuala Lumpur, originated from a village near Papan (Interview, Professor Tan Kah Kheng, Petaling Jaya, 09-08-2008). When he heard what was going on in Papan, he went to investigate and subsequently became one of the first in a series of experts who explained to the villagers what radiation meant. The villagers had no previous understanding of radiation as they had never heard of it.

What I understood from interviews with campaigners was that it mattered who the information came from. For many villagers in Papan as well as in Bukit Merah, they saw no reason as to why someone whom they regarded as ‘one of them’ (because Professor Tan originated from a village nearby) would lie to them. When I asked the villagers why they decided to believe a certain group of experts who were saying to them that low-level radioactivity was harmful as opposed to another group of experts supported by the state and ARE who were saying that the low-level radioactivity was not harmful, the reply I received was another question: ‘Why would all these experts, including those who came from all over the world be telling us something that was not true?’ (Interview, Mr Hew Yoon Tat, Bukit Merah, 13-08-2009).

Therefore, trust was the ingredient that was missing in the relationship between the state and the campaigners in Papan and Bukit Merah. Both Professor Tan and outsiders (such as foreign scientific experts) were regarded as trustworthy whilst the state and business interests were regarded as not trustworthy. In the case of Professor Tan, he was to be trusted because he was originally from a village nearby, and thus considered ‘one of us’ by villagers of Bukit Merah. In the case of experts from overseas who were connected to both local and international NGOs, they did not appear to Bukit Merah villagers to be motivated by anything else except altruism. However, the villagers regarded the state as biased because it supported the continued operations of the ARE facility (through granting permission and the issuing of a license to operate despite the fact that a temporary injunction was issued by a court of law), and denied that there was a problem in terms of risks to villagers livelihoods, health and the environment. Furthermore, historically, many residents in NVs such as Papan and Bukit Merah never had reason to

trust the government due to the negative experiences from the Communist Insurgency years from 1948-1960 (see p. 114, **Chapter 5.1 The marginalisation of the Chinese: from colonial Malaya to New Villages**).

Bukit Merah villagers chose to believe in those experts whose opinions gave credence to their views because they were able to think and reflect on the information they received, and their status of ignorance (having no understanding of the meaning of radioactivity or its possible effects), and then arrived at a conclusion as to which source of information they chose to believe. Michael (1996, p. 107) in his study of discourses of ignorance in the public understanding of science says:

... people do not simply possess knowledge about scientific ‘facts’ and scientific procedures and processes, they can also reflect upon the epistemological status of that knowledge. In addition, I argue that this active reflection can directly affect their responses to science and scientific experts. In feeling uncertainty about their understanding of science, or in identifying a ‘lack’ in their knowledge, people are making tacit judgements in relation to the authoritative source or sources of that knowledge. Thus people can review the standing of their scientific and technological knowledge in relations to some more or less expert source such as scientists, the media, friends and relatives, and so on. As such, identity cannot but be implicated. Conversely, the ways in which people regard themselves and the value they place upon their scientific knowledge, affects the ways in which they understand science.

In other words, people make judgements in relations to their sources of knowledge, asking whether or not they trusted these sources. Furthermore, since social identities are involved in people’s understandings of science, the social and cultural backdrop within which these identities operate would have to be studied (Michael, 1996). In other words, lay people’s understandings of science, or in this case, radiation, must be located within a wider context. In order to capture such understandings, ethnographic study is necessary to ‘...locate such situated accounts, articulations, and formulations in the broader cultural landscape and to detail how these interact with the multiplicity of other social relations in which people are involved’ (Michael, 1996, p. 115). Likewise, this study aims to understand the campaigners’ discourses not just as embedded within broader cultural identities but also their links to other social relations. In this regard, the role identity - as poor Chinese people of NVs – formed as a result of the historical experiences of being treated abusively and unequally (in the historical formation of

NVs and subsequent development into places of stigmatisation) was important. In analysing the Bukit Merah campaign, for example, many villagers of Papan and Bukit Merah were convinced that Papan was chosen as the location for a waste depository because it was occupied by poor, rural and disenfranchised Chinese people. This opinion was widely reported in the newspapers when the original site of the depository in Parit (in the subdistrict of Belanja), an area mainly populated by Malays, was shifted to Papan nine kilometres away (Berthelsen, 1984; Nair, 1984). UMNO (the dominant Malay party in the ruling coalition, BN) had interceded to move the identified waste storage facility away from Parit after Malay villagers threatened partisan electoral advocacy (Berthelsen, 1984). The next most suitable site, Papan, was found thereby feeding into the beliefs of the residents of Papan, Bukit Merah and other villagers in these areas that being poor and politically disenfranchised Chinese were the deciding factors in the siting of the waste storage facility (Nair, 1984). The relevant point here is that the public was able to judge the behaviour of the state using more complex criteria such as memories of past state failure and abuses of power.

This is also similarly argued by Wynne (1996) in his research with Cumbrian sheep farmers whose farms were located close to the Sellafield nuclear repository in northern England. After the explosion at the Chernobyl nuclear power plant in the former Soviet Union in 1986, the UK government sent scientists to work closely with these farmers to control the movement of sheep affected by the radiation fallout. The farmers were highly suspicious of those scientists based on historical experiences with the government. The farmers felt that they and their sheep were not only contaminated from the Chernobyl radiation, but also from radiation originating in a fire which burnt for days before being put out in the Sellafield nuclear fuels reprocessing complex in 1957. In this 1957 period, the then Ministry of Agriculture, Fisheries and Food (MAFF) had told the farmers that all movement of sheep would only be banned for three weeks but this ban became indefinite causing huge losses to the farmers. After the Chernobyl fallout, farmers closely observed experiments being carried out by scientists on their farms. In their observations, farmers saw scientists making less controlled assumptions, judgements and negations about their research, and yet scientists reported their research conclusions with exaggerated certainty. The farmers also observed that scientists were not willing to admit mistakes when they made wrong predictions. These observations led the farmers to view the scientists with less credibility. In one situation, farmers

predicted that a proposed experiment would fail, but scientists ignored them, only for scientists to quietly abandon the experiment two years later for precisely the reason the farmers predicted. In another situation, scientists chose not to reveal the fact that only about 50% of their soil samples contained more caesium 134 from the Chernobyl explosion than caesium 137 from the Sellafield fire in 1957. This meant that half of the samples taken showed that the farmers' fields were still contaminated from caesium 137 from the fire in Sellafield in 1957, confirming what farmers had believed all this time. These two situations contributed to the feelings of distrust the Cumbrian sheep farmers already had towards the government and their scientists, and resulted in the formation of the view that there was a government conspiracy against them. They felt that their ' . . . social identity as a specialist community with distinct traditions, skills and social relations was under fundamental threat' (Wynne, 1996, p. 27).

Chapter Five discussed the implications of being herded into NVs thus solidifying the sense of unity of the Chinese who found themselves incarcerated. In this chapter, the interview responses from villagers provide additional illumination of the existence of this strong sense of solidarity. The socio-cultural identity as Chinese (which provided the basis for incarceration in a NV), the experiences of living in NVs during and immediately after the Communist Insurgency, and the unequal access to housing and socio-economic opportunities in the postcolonial Malaysian state, all played a role in the processes through which the Chinese New Villagers reflected on their ignorance of scientific knowledge and arrived at a conclusion of whom to believe. A historical lack of trust characterised the pre-existing perceptions of the Chinese New Villagers in terms of their relationship with the state.

Therefore, given the historical lack of trust in the state and its various agents, it is not surprising that villagers chose to believe those experts not endorsed by the state or the ARE. Those experts were perceived to be independent because they were not associated with the ARE or the government in any way. Other experts such as Professor Tan (although he worked for a public university at that time) was believed because he was one of them (another Chinese New Villager who grew up nearby), was seen by villagers as highly educated in matters of science, and could be trusted.

Class, ethnicity and generational differences

There were some differences in the sense of mistrust that I observed in the interviews, and that was influenced by the socio-economic status, socio-ethnic history and age of the participants. Villagers from Bukit Merah and Papan who took part in the campaign against the ARE appear to be more closely linked to their historical past as a New Village – remembering the sense of solidarity forged during the Malayan Emergency years. This would make sense as the campaign took place from the early to mid-1980s to 1994. Many grassroots campaigners would have grown up in a period of history when the development of NVs was neglected by the state and federal governments (Loh, 1988) (Chapter Five). Almost all grassroots campaigners were also very poor, working-class and Chinese (Case Study Two, Chapter Five). The non-Chinese campaigners were largely non-grassroots campaigners - representatives of NGOs, lawyers and middle-class individual activists.

On the other hand, the Broga campaign took place in the early 21st century and many Broga village protestors were younger and more distanced from the past history of neglect of NVs by the Malaysian state. As Broga is close to the conurbation of towns and urban areas extending south from Kuala Lumpur, it also experienced some of the economic prosperity of Kuala Lumpur from Malaysia's rapid economic growth over the last three to four decades. Although the majority of Broga village protestors were Chinese, poor and working class, not all were so. There were some who were fairly well-off financially, and there were also Broga villagers of Malay and Indian ethnicity who took part in the campaign. Furthermore, the grassroots campaigners also included many middle class professionals from all three dominant ethnic backgrounds (Malay, Chinese and Indian) who lived in Taman Tasik Semenyih, a middle class housing area, which was the closest residential enclave to the proposed incinerator. The sense of mistrust for all classes and all races of Broga grassroots campaigners appears to be more strongly linked to their everyday experiences of a dictatorial, abusive and corrupt state. This was demonstrated through the emphasis on shoddy construction work and a lack of a healthy maintenance culture in interviews.

Both the rural poor and middle classes from Broga as well as Bukit Merah and Papan reflected on their status of ignorance of scientific information vis-à-vis their experiences and arrived at a conclusion as to whom to believe. As a result of

experiences or observations of historical processes of poverty and repression during the Insurgency, and of corruption and mismanagement on the part of the state, assurances by the state and its experts were treated with scepticism and disbelief. In other words, the conclusions or perceptions of risk the campaigners came to believe in were influenced by the social relationships they experienced historically. Trust and credibility are issues that are now accepted to be ‘. . . major contextual factors influencing the uptake and understanding of scientific messages, and the perception of risks’ (Wynne, 1996, p. 20; see also Fischer 2005; Jasanoff, 2007). However, these issues have not been discussed in the ‘views from above’ of the Broga and Bukit Merah conflicts, which have instead portrayed the campaigns as risk conflicts between a lay public who is ignorant of science versus those who represent ‘correct’ or authoritative science.

7.6 Conclusion

The understandings or perceptions from below were very different from the ones from above. In interviews with campaign participants, the issues expressed focused on vulnerability due to poverty, unequal distribution of risk, and a lack of recognition of experiential knowledges, of alternative values and of attachments to a sense of place. Underlying many of these responses was a deep sense of mistrust of the state and business interests which have influenced the formation of campaigners’ perceptions in both the conflicts. This sense of mistrust has its roots in everyday experiences of how the state and the business interests it supports operate, and also in historical processes governing the formation of NVs. None of these issues is recognised by the state and business interests as valid or relevant to the conflicts in Broga and Bukit Merah.

The risks (to livelihood, health and the environment) faced by campaigners, and lack of trust in state institutions are neither novel nor new because they have their origins in previous historical experiences of poverty and unequal treatment (see also Leach et al., 2002, p. 42). When rejecting the proposed incinerator project and the ARE factory, the campaigners were doing so not just out of concerns for their livelihoods, health and the environment, but also rejecting further treatment of inequality and the status of subjugation. The conflicts were not just about campaigners’ insistence on rigidly taking

a precautionary principle position, as is often juxtaposed against the validity of embracing risk management.

The understandings from below contrast sharply with the understandings of the state and business interests which viewed the conflicts as technical problems needing technical solutions. They were of the opinion that lay peoples or ordinary citizens lacked understanding of scientific matters and were more interested in taking a political course of action instead of seeking for a technical solution. In line with a framework of risk management, and as discussed in the previous chapter, the state acknowledged weaknesses in environmental governance in terms of lack of implementation or non-existence of appropriate environmental legislation and regulations. The state also viewed resistance as having been fuelled by external agitators such as environmental NGOs or individual activists, or perhaps private sector interests such as the recycling industry.

The contrasting views from above and below have also revealed other critical issues at hand. They have demonstrated that the view of the disinterested expert or that science knows ‘best’ was truly well and alive in the context of Malaysia. Hence, the frequent use of the labels of an ‘emotional’ and ‘ignorant’ campaigner or lay public by both the state and business interests. By using such labels, a particular model or idea of citizens was being projected. Such a model of citizens assumes that: citizens naturally agree to the core definition of risk discourses; citizens are either exposed to high or low risks without taking into consideration local or contextual conditions (a bivalent view); citizens are only concerned with consequences of innovations and not upstream issues such as processes of knowledge creation -who defines the research agenda or what drives it; and finally, citizens are not able to construct independent public meanings outside of expert-led, institutionalised science and/or state authority (Wynne, 2005, p. 72; see also Fischer, 2005; Visvanathan, 2005).

By insisting that there is only one core definition (a technical problem needing a technical solution), and not recognising different or opposing understandings of both the conflicts, the state and business interests have demonstrated that there is a lack of cognitive justice or cognitive democracy (Farrell and Shalizi, 2012). The formation of

democracy within knowledge is also just as important as political, social or economic rights, and may be included within ideas of citizenship rights (Visvanathan, 2005) (Chapter Nine). The demand for cognitive justice is the demand for different forms of knowledge to be recognised and ‘. . . to carry weight in the decisions that affects people’s lives’ (Leach et al., 2002, p. 47). The recognition and acceptance of different understandings in environmental conflicts such as Broga and Bukit Merah would go a long way in finding a solution as a way forward beyond the gridlock of opposing views.

CHAPTER EIGHT

METHODS OF CAMPAIGNING: DISCOURSES AND PRACTICES

This chapter analyses how campaigning was carried out in the Broga and Bukit Merah campaigns and in so doing, reveals the details of how environmental justice campaigning has been carried out in two different time periods in Malaysia, as 19 years separated the start of each of the campaigns. In particular, it also provides a picture of how environmental justice concepts and discourses, while originating in the US, have been adapted to fit the particular political, economic and social contexts of each period.

In this chapter, I examined the discourses (in terms of language) that were used by campaigners to argue for justice, accountability, rights-to-information and - participation, and recognition. How did they deploy these discourses and what were their effects? Furthermore, what actions (or campaigning strategies) did they take in order to achieve campaign objectives? I refer to these actions as practices since they include a diverse range of strategies, from direct action (protests) to going to court to demand justice and accountability.

Through the analysis of campaign discourses and practices, this chapter explores parts of both research questions (2) and (3). The first part of research question (2), ‘Why were campaigns launched in Broga and Bukit Merah, and how did campaigners demand their rights and challenge the responsibilities of the state and business interests?’ was explored in Chapter Seven. The second part of research question (2), ‘Furthermore, why did these demands and challenge take the form they did?’ is explored here, in Chapter Eight. Research question (3), ‘Why were environmental justice concepts and discourses adapted in particular ways in Broga and Bukit Merah campaigns, and how can we understand this adaptation with reference to how environmental justice travels globally?’ is explored both here, in Chapter Eight, as well as in Chapter Nine. The second part of research question (3), ‘How can we understand this adaptation with reference to how environmental justice travels globally?’ addresses the implications of the use of the wide-range of campaign discourses and practices. The analysis of these

implications will be further consolidated in Chapter Nine. This is done for organisational purposes.

The materials examined in this chapter, similar to Chapters Six and Seven, are both primary and secondary data comprising interviews, campaign materials, e-mail communication, newspaper articles, and publications and websites of NGOs and government departments or agencies. In addition, there is also a brief analysis of the documentary film ‘Alice Lives Here’ (see a detailed description of ‘Alice Lives Here’ on pp. 30-32, **Chapter 2.1 Case study one: the Broga Anti-Incinerator Campaign**).

I begin in the next section with an examination of a new discourse which was used to frame demands for justice and accountability in the Broga campaign, but which was absent in the Bukit Merah. This discourse is a discourse of environmentalism and was expressed frequently and explicitly in Broga campaign materials (leaflets, documentary film, letters and media statements) (see Appendix Four for A4-sized booklet used for campaigning). By environmentalism, I refer to concerns for the health of the planet, not just to that of human health and safety. This is followed by an examination of a rights approach used in both Broga and Bukit Merah and I compare how, and also ask why, they are used differently in the two campaigns. After that, I discuss campaigners’ active engagement with scientific experts, tools and processes. Lastly, I examine the practices or course of action taken by both the campaigns in order to achieve campaign objectives. These are: engagement with transnational advocacy networks for international campaigning and pursuing action in legal courts.

The table below summarises campaign discourses and practices of both campaigns.

	Mobilisation Strategies/Practices	Discourses
Broga Campaign	<ul style="list-style-type: none"> • Public protests • Signature petition • Media campaign and information disclosure • Publicity through documentary ‘Alice Lives Here’ • Online publicity 	<ul style="list-style-type: none"> • Distributive justice and recognition as poor people • Environmental protection/ environmentalism • Right to health and safety

	<ul style="list-style-type: none"> • Linked to transnational advocacy networks • Citizen science • Partisan electoral advocacy • Litigation 	<ul style="list-style-type: none"> • Right to information • Right to participation • Citizen science
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	Mobilisation Strategies/Practices	Discourses
Bukit Merah Campaign	<ul style="list-style-type: none"> • Public protests • Signature petition • Media campaign and information disclosure • Linked to transnational advocacy networks • Citizen science • Partisan electoral advocacy • Litigation dominated the campaign through an eight-year court case 	<ul style="list-style-type: none"> • Distributive justice and recognition as poor people • Environmental Protection/ environmentalism • Right to health and safety • Right to information • Citizen science

Table 8.1 Campaign discourses and practices

8.1 The power of a new discourse: environmentalism

Environmentalism as is popularly felt and expressed, is a relatively new phenomenon in Malaysia. By environmentalism I mean an adoption of concerns with the health of the planet (forests, plants, animals, climate change) similar to a ‘Western’ type of environmentalism. Debates on environmentalism have drawn a distinction between ‘Western’ and ‘developing country’ environmentalism (Guha, 1997; Martinez-Alier, 2002). The distinction is drawn from the fact that many environmental conflicts in developing countries involve protection of natural resources that are crucial to livelihoods and human survival, labelling this type of environmentalism as ‘environmentalism of the poor’ (Guha, 1997; Martinez-Alier, 2002). Both Guha and Martinez-Alier further argue that these developing country conflicts involve deep questions of equity and economic and political redistribution, unlike environmental

concerns in the 'West' where environmentalism is largely about enhancing the quality of life.

However, the environmental conflicts such as Broga and Bukit Merah demonstrate that such a division is not so clear-cut. While the prime concern amongst those involved in each of the campaigns was the threats to health, there were also concerns with threats to their living environment and livelihoods. Concerns with the health of the planet were intertwined with concerns of 'environmentalism of the poor'. This is especially true in the case of Broga. In order to understand this intertwining, I now turn my attention to how the language/discourse of environmentalism was used in the Broga campaign.

Ms Lee, one of the lead campaigners in the Broga campaign, was represented in the documentary film 'Alice Lives Here' as a simple-minded villager, with little knowledge of the outside world, preferring a quiet life in a peaceful and green village with a strong desire to keep her family and her home safe from dangerous pollutants.⁷⁷ In my interviews (Interviews, Ms Alice Lee, Kajang, 17-06-2006 and 11-05-2009) with her, and through the documentary, 'Alice Lives Here,' Ms. Lee was further portrayed by others and herself as quiet and not brave, scared of public speaking but due to her desire to protect Broga's environment, she evolved into a fiery public speaker and spokesperson who held meetings with ministers and members of parliament. The image of such a transformation as framed by the documentary was a powerful appeal for public sympathy to the Broga campaign. It goes hand in hand with environmentalist ideals of rural peoples/forest dwellers attempting to protect their 'wild' environment (Tsing, 2005).

How Ms Lee is represented by herself, by other campaigners as well as in the documentary film is something very important because of the powerful impact it can have in influencing public opinion or eliciting sympathy for the Broga campaign. Representation is a powerful process for engagement in environmentalism because it involves processes with which members of a culture/society use language to produce meaning (Hall, 1997, p. 61). Things and people in themselves do not have meaning; it is only people who give things meaning. Meanings are understood through codes and

⁷⁷ See pp. 30-32 for a detailed description of the documentary film 'Alice Lives Here'.

signs specific to particular cultures. Language and discourse produce meaning, and therefore, knowledge (Foucault, 1980; Hall, 1997). For knowledge to gain meaning, the people must themselves personify the knowledge. In other words, discourse produces subject positions that only gain meaning when the people/subjects themselves take on the meaning. Thus, Alice Lee subjected herself to the process of transformation through taking on the qualities of her representation, and became something akin to the easily recognisable role played by Lois Gibbs in the Love Canal⁷⁸ – a woman persistently and passionately campaigning out of concern for her family, community and environment.⁷⁹

The transformation of Ms Lee came not just through engagement with activists from environmental non-governmental organisations (ENGOS), it also came through the use of the internet and electronic mail. Through the internet, Alice accessed a wide range of environmentalist ideas and ideals and through the electronic mail, she communicated with local and foreign journalists, activists and ENGOS. The lessons in environmentalism are clearly expressed in a campaign booklet which, though collectively produced, was largely Ms Lee's work. It was titled '*Insinerator Mengganggu Kehidupan Kami/The incinerator interferes with our lives,*' and attempted to show, through pictures and brief captions, how and in what ways the various segments of society would be affected by the incinerator project (See Appendix Four for a copy of the campaign booklet).

The message contained in the campaign booklet was very similar to that of the documentary film, 'Alice Lives Here'. The campaign booklet was nine pages long and A4-sized, and contained colour pictures of rubber plantations, fruit orchards and green hills surrounding Broga. It also featured the University of Nottingham, the Saringgit River, and Taman Tasik Semenyih all located nearby the incinerator project. The captions explained that Broga livelihoods would be compromised because plantations and orchards would be annexed under the Land Acquisition Act, that the quality of

⁷⁸ See p. 66, footnote 19, **Chapter 3.3 Questioning science** for an explanation about Lois Gibbs.

⁷⁹ The urban Malaysian middle-classes concerned about environmental issues are familiar with well-known Western environmental campaigns, not just because of the new media technologies (e.g. the internet) but also because of the presence and role of long-established Malaysian environmental NGOs (e.g. established from the 1970s) who are networked to many international groups. Within these groups, there is frequent exchange of information and services. See Chapter Four, Environmental Advocacy Networks, in Keck and Sikkink (1998); and also Ramakrishna (2004) and Khoo (2012) for information about Malaysian NGOs who are networked to international groups.

water sourced from the Saringgit River and supplied to two million urban residents would be compromised because the incinerator lay adjacent to the river, and that the health of residents of Taman Tasik Semenyih and the UK's University of Nottingham, Malaysian campus, would be compromised because of exposure to incinerator outputs.

The only difference between the campaign booklet and the documentary film was the focus on Ms Lee. The objectives of the Broga campaign and why campaigners were protesting was told through the evolution of Ms Lee from a simple rural woman to brave activist in the processes of campaigning. Mr Ong, the director of the film, when asked why Ms Lee was chosen as the subject through whom the Broga story was narrated, said that such a story was not only 'interesting' but also 'powerful' and would have the effect of captivating the audience who watched the film (Interview, Mr Jules Ong, Petaling Jaya, 19-08-2009). As discussed on pp. 31-32, **Chapter 2.1 Case study one: the Broga Anti-Incinerator Campaign**, the condensation and representation of an environmental campaign through the subject position of a particular individual, especially a woman, is not something new or novel (see Mehta, 2005; Mies and Shiva, 1993).

While the campaign booklet was produced to appeal to a wide audience, it also clearly had a strong strand of environmental protection discourse throughout. The pictures, with the exception of those of Nottingham University and Taman Tasik Semenyih, were framed entirely by lush greenery and if human beings were present they were in the background or positioned to the sides of the pictures. Ms Lee, in handing me the booklet, reiterated that she would like to keep her village, quiet, peaceful and beautiful, the way it was at the moment, and to keep noise and toxic pollutants out of Broga (Interview, Ms Alice Lee, Broga, 17-06-2006).

The representations of Ms Lee and of the environment in both the booklet and film provided images and messages that appealed to a wide range of people; from the Malaysian middle classes and also 'Western' environmentalists interested in the protection of a 'pristine' nature, and to the poor whose livelihoods might be affected by the construction of the incinerator. By engaging with the discourse of environmental protection through expressing concern for the environment, the campaign had been placed into an all-encompassing space/discourse that all environmentalists could relate

to. Herein lies the power of environmentalism – that all environmentalists (locally as well as globally) can plant their own meaning into an overarching campaign discourse (a discourse in terms of demonstrated concern for pollution/contamination of the environment).

In Foucault's analysis of relations of power, systems of knowledge are not abstract and all-encompassing but are grounded and evolving (Foucault, 1980). They are discursive processes whereby power is solidified through the production, circulation and functioning of a discourse. This means that while discourse can be a tool for transmitting and producing power, it can also be the site for power to be thwarted. Environmentalism is one such example. There are many documentation and analyses of community-based resource management programmes and rural development projects that have revealed how these programmes and projects carried out in the name of environmental protection are instead tools for extending state power and control (Ferguson 1994; Scott, 1999; Hughes, 2006)

However, in the Broga campaign, environmentalism provided opportunities around which campaign organisers made themselves heard. By using discourses of environmentalism to represent the Broga campaign, and the use of Ms Lee as a symbol of environmental struggle (similar to, for example, the Chipko movement made up largely of women in North-west India),⁸⁰ an overarching space that is internationally familiar to environmental activists is created. This enabled the possibility of bringing the Broga campaign to an international audience as this audience would be able to relate to such international discourses. Broga campaigners made their demands and represented their dissent in terms of environmental protection, saving livelihoods, as well as health and safety issues as seen in the booklet and documentary. According to Tsing (1993), such representations are processes of engaging in interpretations and embellishments in the name of environmentalism in order to hold powerful state actors, business interests and civil society to account.

By contrast, in Bukit Merah, discourses of environmentalism were not articulated in the same way. Bukit Merah campaigners concentrated on the effects of low-level radiation

⁸⁰ See pp. 31-32, **Chapter 2.1 Case study one: the Broga Anti-Incinerator Campaign** for a discussion of the Chipko movement.

on health and safety, and although environmental protection was also highlighted it was secondary to human health and safety concerns. I argue that this is because when the campaign against the Asia Rare Earth first began in 1984, environmentalism as a popular public discourse had not taken off in Malaysia. This only started to become popular after the Malaysian government responded aggressively to the international tropical timber campaign against deforestation in Malaysia in the 1980s and 1990s (see pp. 133-136 for an elaboration of the Sarawak campaign, **Chapter 5.2 Sustainable development**). By the late 1990s, environmental issues had become part of popular public discourse (Harding, 1996) (see p. 136, **Chapter 5.2 Sustainable development**). The campaigns against the operation of the ARE and against the proposed Broga incinerator reflected this change through their discourses. There was largely an absence of environmentalism in the Bukit Merah campaign, with emphasis placed on claiming rights, while the Broga campaign reflected the new trend of environmentalism in its discourses.

However, this reception of environmental concerns by the Malaysian government was limited because only concerns of environmental protection which fitted within the paradigms of sustainable development and green modernisation were welcomed. As discussed in **Chapter 5.2 Sustainable development**, environmental campaigners who campaigned for indigenous rights and against deforestation in Sarawak were regarded by the then Malaysian Prime Minister Dr Mahathir as 'anti-development'. Dr Mahathir regarded the Western environmentalists who supported the tropical timber ban as eco-imperialists who were bent on preventing Malaysia from developing and growing. Thus, Broga campaigners, who especially adopted discourses of environmentalism, opened themselves to being labelled 'anti-development' or 'anti-modernisation'. Narratives that focused on technocratic solutions were regarded as the only acceptable means to resolve the Broga conflict (pp. 163-168, **Chapter 6.6 Risk discourse: is it democratic?**), falling in line with the belief that technological advances must be used to ensure sustainable development. Corporate interests were equated with development interests which were to be achieved through sustainable development and green modernisation.

Broga campaigners became very frustrated at the way their questions about ownership and financing of the incinerator were left unanswered, further contributing to the belief

that the government supported corporate interests and not the interests of the people (Interviews, Mr O, Semenyih, 30-04-2009; Ms Alice Lee, Kajang, 11-05-2009; Mr D, Kuala Lumpur, 24-06-2009; Mr Daniel Wong, Petaling Jaya, 29-06-2009; Ms Claudia Theophilus, Petaling Jaya, 09-07-2009). The KPKT and other government officials and politicians also refused to reveal the details of the incinerator contract with Ebara Corporation (Theophilus, 2003a, 2004). Until today, these questions have been left unanswered (Greenaction and GAIA, 2006). All campaigners are aware of is that Ebara Corporation is a Japanese engineering company that was awarded the contract to build the Broga incinerator, and that Ebara had a dismal record of being fined for pollution and price rigging in order to win water treatment facility contracts from local governments in Japan (Greenaction and GAIA, 2006).

Therefore, in an environment where development is equated with growth through the private sector and technological advance, an environmentalism that is defined solely through concerns for the environment or non-human nature is not received well by the Malaysian government. Despite this, however, NGOs such as Consumers' Organisation of Penang (CAP), who have consistently taken an anti-incinerator position, have continued to highlight problems with incineration. CAP not only has made the argument that incineration spreads toxic materials (heavy metals and persistent organic pollutants such as dioxins) into the air, land and waterways far from its source of pollution, but that incineration is not economically viable as it is very expensive (Consumers' Association of Penang, 2001). CAP has continued to marry environmental concerns with social justice. I argue that this is precisely why environmental justice discourses gained a foothold in Malaysia. By intertwining environmental discourses with rights discourses, arguments for both environmental and human protection have been strengthened. Although the Malaysian government regards environmentalism as 'anti-development,' by opening public discourse to notions of sustainable development, those ideas of justice and environmental protection, however limited, but still found within notions of sustainable development, have managed to gain a far greater foothold in public discourse than would have been preferred by the Malaysian government.

8.2 A rights approach

With discourses of environmentalism less common in the mid-1980s, campaigners against the ARE in Bukit Merah focused on the unequal distribution of environmental burdens, arguing that poor villagers were further treated unfairly because their health and safety were compromised by exposure to long term low-level radiation (Interview, Mr Hew Yoon Tat, Bukit Merah, 13-08-2009). Campaign demands were largely framed in terms of the lack of distributive justice. Furthermore, poverty was clearly an existing issue, and many felt they were doubly burdened not just with poverty but also with ill health or potential threats to their long-term health (Interviews, Madame S, Kuala Lumpur, 08-05-2009; Madame Chen, Bukit Merah, 13-08-2009; Mr A., Bukit Merah, 14-8-2010). Environmental concerns were mentioned, but they were secondary to the main focus which was the issue of human health and safety. In a speech given to a Japanese fact-finding mission comprising human rights and environmental NGOs, church groups as well as Japanese Members of Parliament, Mr Hew, a lead campaigner, said:

The ground [*sic*] given by the Supreme Court in allowing the application to suspend the injunction was their concern for the financial interests of ARE and its workers. The Supreme Court does not care about the safety and health of the people of Bukit Merah. That was absolutely unfair because we have thus far been abiding by the law and going through legal means to fight for our cause (Mr Hew Yoon Tat, 1993).

A Japanese Member of the House of Councillors⁸¹ when interviewed about the impact of Japanese transnational companies, expressed the situation in terms of the health of local people as well as the environment. Ms Yasuko Takemura (Utusan Konsumer, 1993) said:

‘The SDP’s [Socialist Democratic Party] proposal is to ask for environmental impact assessment reports for all companies operating abroad to monitor the effect of these industries on the environment and the health of the people’. Her colleague, Ms Masako Owaki, talked about the protection of health and human rights of people who faced ill health from the pollution of the environment by industries (Utusan Konsumer, 1993).

⁸¹ In Japan, the equivalent of a Member of Parliament is referred to as a Member of the House of Councillors.

Thus, while there was a concern for the environment, the main emphasis was in the rights to good health of the people affected by polluting industries. Such a rights-based approach to pollution problems gained popularity in the 1990s and its importance is demonstrated in the Final Report of the United Nations Sub-Commission on Human Rights and the Environment, authored by Special Rapporteur Mrs Fatma Zohra Ksentini. This document explores the relationship between human rights and the environment, and also proposed the adoption of Principles on Human Rights and the Environment (Ksentini, 1994; Boyle, 1996, 2009). The period of the Bukit Merah campaign, 1984-1994, took place at a time when concerns for a human rights approach to environmental protection was being heavily debated in international inter-governmental fora such as the United Nations. Thus, the Bukit Merah campaign and the court case that followed reflected this trend.

In court, the main argument made by the legal representative of Bukit Merah residents was based on equality of rights under the Malaysian constitution (Harding, 1996). While the Malaysian constitution does not provide for the constitutional right to a clean, safe and healthy environment, lawyers for Bukit Merah residents nevertheless argued that residents did have such a right under the constitutional provision for ‘the right to equality before the law and to the equal protection of the law’ (Harding, 1996, p. 231; see also Raman, 1999). Details of the court case will be examined later in the chapter **(8.5 Litigation)**. The campaign demands inside law courts were framed largely in terms of the lack of rights to a healthy and safe environment; mirroring the way demands were framed outside of court in campaign rhetoric. This demonstrates the prevalence of the use of a rights-based approach by campaigners during the Bukit Merah campaign.

The Ksentini (1994) report also included rights to procedural justice, such as rights to participate in environmental planning and decision-making, as well as rights to information concerning the environment. However, such rights were not emphasised in the Bukit Merah campaign, which focused on rights to health and safety. It was only later on, during the Broga campaign, which took place between 2003 and 2006, when a rights-based approach was extended to also include right to participation. The Broga campaign also placed more emphasis on the right to information than the Bukit Merah campaign. This is not surprising given that rights to participation and information discourses gained increasing popularity on an international scale much later than ideas

of claiming rights to health and safety – demands that have been around at least since European labour unrest in the late 19th century (Silver, 2003).

Participatory rights

The rights-based approach found in the Bukit Merah campaign differed from that of the Broga campaign. While the Bukit Merah campaign emphasised primarily the rights to health and safety, and to information, the Broga campaign further extended these rights to include the right to participation. Furthermore, a lot more emphasis was placed by the Broga campaign on issues of right to participation and information. This is unsurprising given the international trends in a good governance agenda, with concerns focusing on access to information and participation in order to improve transparency and accountability.

While the theory of community participation has its roots in several historical processes in the West, its implementation as a coherent approach to social development is a consequence of the popular participation programme of the United Nations (UN) (Midgley, 2011, p. 177). Midgley (2011, p. 178) discusses the various fields in which the UN has been known to implement participation programmes widely from the 1970s; such as in the health field and in housing and urban development. Thus the idea of right to participation has caught on and is not only popular in official UN or government programmes around the world, but has also provided a focal point for campaigns for accountability. For example, the *Mazdoor Kisan Shakti Sangathan* (MKSS)⁸² waged a campaign in Rajasthan, India, to seek accountability and transparency of government welfare and development programmes that serve the poor through demands for right to know (Jenkins and Goetz, 1999). The basis of the campaign was around participation of the masses in audit processes such as a public hearing organised by the people. In these public hearings, detailed official expenditure records are read aloud to assembled villagers who then compare these to their experiences as beneficiaries of the programmes shown as being paid for by the expenditure records. In the 1990s, there was no statutory entitlement to such information in India and the MKSS undertook ‘...a radical interpretation of the notion that citizens have right to know how they are

⁸² MKSS translates as Workers’ and Farmers’ Power Organisation (Jenkins and Goetz, 1999).

governed and to participate actively in the process of auditing their representatives' (Jenkins and Goetz, 1999, p. 603).

The work of the MKSS, amongst others in India, has had important implications for efforts to combat corruption and to make government more accountable, locally as well as globally. It has helped to lead to the passing of a right-to-information legislation in the Indian parliament in 2005 (Burke, 2010). The importance of the MKSS is that it successfully linked the idea of right to information with debates on governance and transparency (Jenkins and Goetz, 1999, p. 620). Legislation on the right to information (or freedom of information) is a growing trend across the world. The United Kingdom too has enacted similar legislation in the form of the Freedom of Information Act in 2000.⁸³

Given the development in the late 20th century of international trends linking the rights to know and to participation with the agenda of good governance (transparency and accountability), it is hardly surprising that the Broga campaign also framed its demands in similar ways. Furthermore, the Broga campaign unfolded after *Reformasi* (which took place in 1998), which had amongst its central demands, an agenda for good governance (p. 138, **Chapter 5.3 Reformasi**). Public discourses online and in the print media contained widespread discussions of government transparency and accountability. So, the agenda of good governance gained public currency in the period of the development of the Broga campaign. This is unlike the political context of the development of the Bukit Merah campaign in the 1980s and 1990s. The period within which the Bukit Merah campaign occurred did not coincide with either international or national trends in discourses of rights to know and to participation and hence, there was not much emphasis on such discourses.

In the Broga campaign, for example, campaign discourses were peppered with ideas of rights to know and to participation. When Broga villagers went to court to seek a stay order of the commencement of the Broga incinerator project, they demanded that the KPKT divulge details of the project, saying that affected residents had the right to know (Liu and Mahesan, 2003; The Star, 2005; Interviews, Ms Claudia Theophilus, Kuala

⁸³The very same idea is also growing in popularity in Malaysia, with the Opposition-held states of Selangor and Penang each passing a state-level freedom of information enactment in 2011 (www.ucl.ac.uk/constitution-unit/research/foi/countries/malaysia).

Lumpur, 09-07-2009; Mr Jayapalan T.S. Mahesan, Petaling Jaya, 12-07-2009). In a letter written to the then Japanese Prime Minister, Junichiro Koizumi, Broga campaigners said:

We appeal to you, Mr. Prime Minister, to ensure that any Japan-assisted projects overseas observe the fundamental principle of the ‘community right to know.’ As the world’s top donor of ODA, we urge you to guarantee that affected communities and population groups are fully informed and consulted. We particularly would like to see national governments entering into a free and open dialogue with the civil society and giving stakeholders full access to information on projects that will affect their health, livelihood and future. As to the proposed Broga incinerator, we urge you to ensure that the voices of concerned communities are duly listened to and respected by decision makers in both Japan and Malaysia (signed by Mr Jules Ong, on behalf of the Broga Anti-incinerator Campaign, January 30, 2004: letter to the Prime Minister of Japan).

In addition to this, in another communication, campaigners asked for public meetings that allow for proper interaction between the ‘vendor and the public’ so as to allow for ‘. . . transparency, accountability and responsibility towards the public and the environment’ (Halil bin Hussain, 2004).

In the same communication, Halil (2004) also made several references to the Malaysian government’s commitments to Agenda 21; pointing out that Malaysia’s action plan to implement Agenda 21 was not being adhered to.⁸⁴ In particular, he referred to the Malaysian 10 year development plan for environmental conservation and management which described the Semenyih/Beranang and Bangi areas as unsuitable for any development except for recreation, research and education.⁸⁵ These areas had been declared as the Hulu Langat Permanent Forest Reserve, and classed as ecologically sensitive. The Permanent Forest Reserve is an ecologically sensitive area because it sits within a geological fault zone; is a water catchment zone from where rivers provide

⁸⁴ Agenda 21 is a United Nations policy document and action plan for sustainable developed unveiled during the Earth Summit in June 1992. Although not legally binding, Agenda 21 aims to get countries to commit to sustainable development practices locally, nationally as well as globally. The document addresses issues of social and economic development, and the conservation and management of resources in a sustainable manner. It also discusses the ways to achieve these goals through building capacity of various stakeholders, and the implementation and funding mechanisms. Capacity building in particular involves the participation of all major groups in a community such as children, youth, women, workers, scientists, trade unions, NGOs, local authorities as well as the private sector (<http://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>).

⁸⁵ Broga is in the sub-district of Semenyih and district of Hulu Langat. The Malaysian action plan for Agenda 21 is found in five-year Development Plans as well as in the long-term (10-year) Outline Perspective Plans (Kamarudin Ngah, 2011; Maisarah Makmor, 2012).

water to residents in the Kuala Lumpur conurbation area; and is in a hilly zone whose average slopes are more than 25 degrees (Halil bin Hussain, 2004).

Whilst attention was drawn to the contradictions of the siting of the Broga incinerator given Malaysia's commitments to environmental protection vis-à-vis Agenda 21, mention was not made of the lack of community participation in the decision.

Internationally, community participation is viewed as a key component to achieving sustainable development objectives as outlined by Agenda 21 because it is regarded as the best way to help communities relate to future sustainability at the local, national and global levels (<http://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>). It is through community participation that the social, cultural, economic and environmental needs of the present and future diverse residents of communities can be met. However, the decision-making processes to find a location for the proposed Broga incinerator did not involve any community participation; there was no mention of the relevance or importance of Agenda 21. Hence, despite the Malaysian government's declared commitments to Agenda 21, there appears to be a lack of political will to implement community participation in siting decisions of large development projects.

In Malaysia, Agenda 21 at the local level is interpreted by the government in a narrow manner. For example, in a leaflet published by the KPKT (*Kementerian Perumahan dan Kerajaan Tempatan*), it presented examples of its commitments to Local Agenda 21 in the form of tuition classes targeting poor students in order to raise their performance in school examinations; and community programmes for communal recycling, waste reduction and rubbish collection (*Kementerian Perumahan dan Kerajaan Tempatan*, no date). The practice of community participation as set out by the Local Agenda 21 appears to have not found its way into the planning and implementation of development projects. According to Harding and Azmi Sharom (2007), any provisions for community participation in development projects is only made available through an Environmental Impact Assessment (EIA) process and at the discretion of the Director-General of the Department of Environment (DOE). In other words, the Director-General of the DOE may decide that an EIA need not include any community participation.

In the Broga campaign, the lack of an EIA became a contentious issue because for a project as large as the proposed Broga incinerator, a detailed Environmental Impact Assessment (dEIA) was a statutory requirement (Harding and Azmi Sharom, 2007). The KPKT had announced in all major newspapers that the proposed Puchong incinerator was to be relocated to Broga before any dEIA was conducted (Masilamy, 2003; Interview, Ms Alice Lee, Kajang, 11-05-2009). The dEIA was eventually conducted and approved (with conditions for further mitigation) only after demonstrations by Broga campaigners. The problematic issues with processes governing the requirements and implementation of EIAs are thus examined in the next section.

Discourses using a rights approach such as right to information, transparency, accountability and community participation (as encapsulated within Agenda 21) were used by campaigners in Broga to demand their rights and challenge the responsibilities of the state and business interests (besides rights to health and safety). Bukit Merah campaigners also used a rights approach, but concentrated mainly on rights to health and safety. These differences between the two campaigns are a reflection of international trends of discourses of rights. During the period that the Broga campaign developed, discourses of rights to information and to community participation were popular discourses used for claims-making for transparency and accountability on an international scale. Thus, Broga campaigners also used these discourses of rights. However, in the period the Bukit Merah campaign developed, such discourses had not been internationalised, and so were not in popular usage.

Environmental impact assessment and participation

Community participation was made available to Broga campaigners largely through the EIA⁸⁶ process, but not to Bukit Merah campaigners. According to the DOE, the requirement for environmental assessments was implemented from the late 1970s, but at that time, it was the responsibility of the licensing or permitting authority (in the case of the ARE, the permitting authority was the Health Ministry) to assess the

⁸⁶ The EIA is a procedure that ensures that all environmental implications of projects are taken into account before decisions are made. In essence, it is to mitigate the negative environmental impacts of projects. The EIA process has suffered much criticism over the years. Some of the criticisms are: poor public consultation, self-assessment; poorly written reports; limited scope; costly and inefficient practices; understate information or omitted information; and the EIA not integrated into a project cycle as it is treated as a separate process.

environmental consequences in a preliminary screening (Boyle, 1993; Interview, Raja Dato' Abdul Aziz Raja Adnan, Dengkil, 06-08-2010). Based on the screening, the permitting authority would decide if the scope of environmental impacts would require a submission to the DOE, who may then decide that a dEIA is required. In the case of the ARE factory, no EIA was deemed required by the Health Ministry because the ARE was classed as a chemical factory; and DOE guidelines at that time did not then require a chemical plant to carry out an EIA. Thus, there was no mechanism for community participation through environmental assessment processes, nor through any other processes. Furthermore, no information was disseminated to those who lived near the ARE about the release and production of radioactive gas and waste.

The fact that an EIA was not carried out for the ARE operations highlights the weakness in both the regulatory framework and monitoring processes in Malaysia at that time. EIAs were not mandatory for all projects with major impacts; it was the discretion of the permitting authority to carry out the initial preliminary screenings. This weakness in the regulatory framework may be exploited by powerful politicians linked to business interests to enable development projects to take place without having to be subjected to environmental assessments. In order to address this weakness, the Environmental Quality Act 1974 was amended in 1987. The Environmental Quality Order 1987 [Prescribed Activities (Environmental Impact Assessment)] sets out in detail 19 categories of activities which require an EIA report before development can commence (Meena Raman, 1999; Harding and Azmi Sharom, 2007). The amendment of the 1974 Environmental Quality Act meant that after 1987, there were now two types of EIA: a preliminary EIA and a dEIA. If significant impacts were expected, the review panel of the DOE would require a dEIA. This meant that by the time the Broga incinerator project was proposed, it was clear that a dEIA was required. This change in requirements as to when a dEIA is needed, opened up possibilities for community participation and for voices of ordinary citizens to be heard. Thus, when Broga campaigners pointed out that a dEIA was not carried out when the Puchong incinerator project was relocated to Broga, the DOE had to ensure that a dEIA was carried out first before the DOE could approve the proposed Broga incinerator project. This had the effect of delaying the KPKT with starting the construction of the incinerator. Furthermore, by launching campaign activities such as signature petitions and

demonstrations, Broga campaigners managed to put pressure on the DOE to include community participation in the Broga incinerator dEIA processes.

Community participation, defined as seeking public opinion, is actually not required in a preliminary EIA; but in the case of a dEIA, it is only implemented at the discretion of the Director-General of the DOE (Harding and Azmi Sharom, 2007, p. 151). This meant that despite the fact that the 1987 amendment to the Environmental Quality Act 1974 was regarded as a step in the right direction to improve the regulation of development activities; in reality, any form of community participation that was made available was usually just regarded by the government as part of an informal, administrative process (i.e. not that important). Thus, Harding and Azmi Sharom (2007) concluded that the influence of community voices on proposed development projects still remained to be seen in the case of Malaysia.

Given the low regard for community participation on the part of the government, it is not surprising that in Broga, the dEIA processes were regarded as unsatisfactory by campaigners. No information regarding the incinerator project was disseminated to Broga residents or to those living in nearby areas. Community participation, in the form of information sessions and consultation in a social impact assessment occurred later, after many protest actions and much campaigning, and was tokenistic in nature and limited to minimum requirements. For example, after the Broga campaign was launched, the KPKT held a public forum for local residents where local residents were informed that the incinerator was 'safe' and therefore, residents were not allowed to ask questions ('Alice Lives Here,' 2005). In the process of conducting the dEIA, consultants assessed the socio-economic impact of the proposed incinerator through public information sessions and a household questionnaire survey. In their interaction with these consultants, Broga residents felt very 'talked down' to. In one instance, Broga residents decided to walk out of a community consultation session, held as part of the socio-economic assessment of the dEIA (Interviews, Ms F, Kajang, 18-05-2009; Mr Daniel Wong, Kuala Lumpur, 29-06-2009; Ms Alice Lee, Kajang, 06-07-2009). A consultant I spoke with who was involved in the assessment, talked about campaigners' responses in terms of their inability to understand technological risks and to weigh benefits against risks (Interview, Mr Z, Petaling Jaya, 17-06-2009). This sort of 'expert

speak' was what alienated Broga campaigners who offered alternative understandings, values and non-scientific reasons for dissent (Chapter Seven).

In the Broga campaign, the community participation element of the environmental assessment process was defined and implemented in the strictest sense of the term possible. Any sort of participation that had taken place involved: informing affected residents how a particular project might benefit them and would cause no harm, and when a project would commence. In other words, participation existed largely as a rubber-stamping exercise. Thus, it is clear from the Broga case that the government regarded the EIA as an efficient technocratic tool to pursue traditional top-down development agendas (see Scott, 1999). What campaigners wanted in terms of participation was something more than was being offered by the EIA process. They wanted to be empowered and for the KPKT and the business interests behind the proposed incinerator to be accountable for their actions. Community participation was being viewed by affected residents as both a means and an ends; in other words, they saw participation as a process in its own right rather than as a tool for achieving certain goals (see Parfitt, 2004).

The way EIAs have been used by the government in Malaysia also sheds light on the problems of power and value conflicts within the EIA process (Boyle, 1993; Richardson, 2004). So while Broga campaigners were directly engaged in EIA processes, they were limited by the lack of political will on the part of the government to treat an EIA as anything more than a means to carry out traditional top-down development agendas. At the time, there was no EIA required for the ARE facility. However, even though a dEIA was required and conducted for the Broga incinerator, campaigners in both Broga and Bukit Merah experienced a lack of or poor participation in project planning and implementation; with Broga residents experiencing a tokenistic level of participation while Bukit Merah residents experienced none at all. It is not surprising then that the participation processes of EIAs have been subjected to criticism for being a way to gain acquiescence or cooperation from campaigners - sometimes labelled as an 'anti-politics machinery' in critical development studies (Ferguson 1994; see also Kothari, 2001; Williams, 2004). While the process of an EIA is often regarded as offering an opportunity to express dissent and influence planning decisions, in practice, the technocratic principles by which an EIA operated effectively closed down

discourses around rights and accountability (see Lidskog and Soneryd, 2000; Jay et al., 2007).

The experiences of Broga campaigners with EIA processes are not unique to Malaysia. There are many papers in the environmental assessment and planning literature on the weak degree of influence on planning decisions exerted by EIA processes (Lidskog and Soneryd, 2000; Connelly and Richardson, 2005; Devlin, et al., 2005; Richardson, 2005; Jay et al., 2007). This has been attributed to the rationalist or technocratic origins of the EIA which ignores multiple rationalities, value and power conflicts (Connelly and Richardson, 2005; Jay, et al., 2007; Ramana and Rao, 2010), and therefore, has resulted in either public exclusion despite public participation allocation in the EIA process (Lidskog and Soneryd, 2000), or in an inability to address the distributional consequences (in terms of the distribution of environmental goods and bads) of policies, plans or programmes (Connelly and Richardson, 2005). In the case of Malaysia, under conditions set by a strong developmental state where resources are steered towards private firms to achieve development objectives, and where there are widespread abuses of power, the state and business interests merge and the weaknesses of an EIA process are exploited as much as possible. Hence, the less-than-satisfactory participation processes experienced by the Broga campaigners.

Summary of 8.2 A rights approach

This section (**8.2 A rights approach**) of the chapter has examined in detail the different rights-based approaches taken by Broga and Bukit Merah campaigns in different time frames. In the Bukit Merah campaign, demands were framed both inside and outside of law courts largely in terms of the lack of distributive justice. A rights approach was used, reflecting contemporary (1980s) concerns with a human rights approach to environmental issues, and which focused primarily on the right to health and safety, and secondarily, on the right to a healthy environment. On the other hand, the Broga campaign framed its demands with emphasis on the right to participation and the right to know, in line with the international spread of campaigns for the right to information where the link is made between having access to information and good governance (early 21st century). In the case of Bukit Merah, at the time of the construction of the ARE facility, an EIA was not required by law; hence no EIA was carried out. In the case of Broga, even though there was a provision within the EIA process for

community participation, this was filled with problems. The proposed incinerator project's dEIA was conducted only after protesting residents pointed out its absence, and many campaigners felt unsatisfied with the participatory process offered by the dEIA procedures. Commitments to principles of Agenda 21, to which Malaysia proudly proclaimed to adhere to, was not regarded as relevant to participatory processes in the Broga incinerator project. According to the government, if Broga campaigners had 'participated' in the manner expected of them, they would not have held demonstrations, started petition drives nor engaged in partisan electoral advocacy. They would not have asked any questions, and instead quietly listened to the KPKT as instructed during a public information session; and accepted information provided by the KPKT that the incinerator was 'safe'. Hence, the expected behaviour of participants in the participatory process in the Broga dEIA was more akin to Cooke and Kothari's (2001) critique of the negative effects of community participation (the 'tyranny of participation'). Cooke and Kothari (2001) regard participation as mainstreamed into the development process and as having tightly bound marginalised individuals and groups to a power structure (for example, the government) which cannot then be questioned. Dissenting groups or individuals who participated were then de-politicised because their views were considered to have been taken into consideration even if the outcome of the participation was detrimental to their interests (Cooke and Kothari, 2001). This type of participation that would have a de-politicised effect was exactly what the government had envisioned would take place in the dEIA participatory process in Broga. This was not how Broga campaigners envisioned participatory processes. What campaigners wanted was to have their interests matter in decision-making processes, greater access to information, more transparency and accountability – all beyond what the government or Broga incinerator project business interests were prepared to give. In other words, Broga campaigners wanted to achieve a positive transformation of power relations.

8.3 Citizen science

Straddling both discourse and practice is the use of citizen science in order to express and to achieve the demands of the Broga and Bukit Merah campaigns. Citizen science refers to the use of scientific tools, experts and processes through which risk issues are similarly derived (Irwin, 1995), as well as the use of situated knowledge of local

experience in order to generate research results or evidence that more accurately reflect the experiences of those living close to a source of pollution/risk (Walker, 2012). The notion of citizen science shares some similarities with definitions of two other concepts of ecopopulism (Szasz, 1994)⁸⁷ and ecological enlightenment (Beck, 1995).⁸⁸ The lay public's attempt to influence policy processes is thus not just through campaigning for information and for participation in decision-making processes, but also through actively taking part in collecting data, in educating themselves in matters of science and in working with experts and expert institutions. The lay public remove technical expertise from their normative jurisdictions and use them for popular protest (Couch and Kroll-Smith, 1997). Campaigners join in a language of expertise as a way to appeal for change, to shift patterns of participation, and to try to influence the methodology of science. They argue for the inclusion of experiential knowledges. In short, they actually engage in two very different approaches to scientific research. First, campaigners want to be able to participate in the more traditional processes of scientific knowledge generation whereby the scientific agenda and research is decided upon and conducted, respectively, by institutionally trained experts. Second, campaigners also want their daily lived experiences/alternative knowledges to be equally as relevant to the processes of scientific knowledge generation, and not just remain the domain of experts and expert institutions (See pp. 163-168, **6.6 Risk discourse: is it democratic?** for ideas of cognitive democracy; see also Leach and Fairhead, 2002). Campaigners hope that by their participation in two different approaches to research, the results gathered can provide evidence to support their campaign demands.

The lead campaigners of Broga educated themselves on issues such as incineration technology, the toxic chemicals and waste associated with incineration (for example, dioxin), and communicated with experts and scientists internationally as well as locally. They used the internet to access information, and they obtained information from national as well as international NGOs both through the internet and through attending conferences and inviting international experts to give talks in Malaysia. Armed with

⁸⁷ Szasz's (1994) ecopopulism refers to community-based anti-toxics movements whose concerns are not just local but also national, regional and international, and who utilise a wide array of scientific tools, experts and the media in order to change practices, laws and policies.

⁸⁸ Beck's (1995) ecological enlightenment refers to a change in social paradigm where modern society becomes concerned with the environmental risks created by the advancement of science and technology, and attempts to change lifestyles (for example, green consumerism), institutional processes, laws and policies in order to reverse or mitigate these risks.

scientific information, in campaign demands and in meetings with ministers, bureaucrats, technical experts and in press conferences, campaigners questioned the validity of the dEIA. They questioned the decision to locate the incinerator in an environmentally sensitive area and on a slope with more than a 25% gradient⁸⁹ because these conditions are not permitted under Malaysian environmental regulations. They questioned the design of the incinerator and the technology chosen; and they questioned the effects of exposure to dioxin and other toxins produced by an incinerator.

Many villagers in Bukit Merah experienced ill health (pp. 33-38, **Chapter 2.2 Case study two: The Perak Anti-Radioactive Action Committee (PARC)**). Campaigners were then able to link personal and communal experiences of ill health to claims of knowing what the impacts of radioactivity were about, thereby ‘. . . creating a new more populist structure within which expert knowledge is being created, organized [sic] and transmitted’ (Crouch and Kroll-Smith, 1997, p. 188). Scientists, public health epidemiologists, medical doctors and other experts linked to NGOs in Malaysia, North America and Japan were invited to educate, give talks, measure radioactivity in and around the ARE facility and Bukit Merah, and to conduct tests for lead poisoning in children of Bukit Merah (see pp. 34-36, **Chapter 2.2 Case study two: The Perak Anti-Radioactive Action Committee (PARC)** for details of tests). Those forms of expertise, usually located within traditional institutions are now transplanted into local, communal fields of actions. The results of such research were used to strengthen demands for the ARE facility to shut down as it was endangering the health and safety of villagers, as well demands for the waste to be properly disposed of. In so doing, campaigners were attempting to change patterns of participation, institutional decision making and the methodology of science to one that is more democratic.

In many ways, such attempts to claim greater participation through citizen science were brought about by the practical reality that legal and administrative processes work on the basis that scientific expertise and institutions are creators and providers of universally valid knowledge (Jasanoff, 2003 and Leach et al., 2005). There was a

⁸⁹ The fact that the proposed Broga incinerator would be located in an environmentally sensitive area and on a slope with more than a 25% gradient can be found in the *Detailed Environmental Impact Assessment Report for Proposed Thermal Treatment Plant for Solid Waste Management, at Broga, Mukim Semenyih, Daerah Hulu Langat, Selangor Darul Ehsan*. Prepared by Perunding Utama Sendirian Berhad for the Ministry of Housing and Local Government, Malaysia, March 2005.

practical need to engage with such science discourse despite campaigners' criticisms of its reductionist nature. As discussed in Chapters Three and Seven, expert deliberation was closed to public participation and therefore, unaccountable to the lay public who were assumed to fit into a particular standardised model of citizens.⁹⁰

Those who questioned scientific interpretations were able to find errors, subjective arguments and hidden biases of their opponents' claims to truth. This is because, as has been argued in Chapters Three and Seven, scientific research is not apolitical or neutral because it is dictated by those who have '... the power to set research agendas and may incorporate the biases of gender, culture and nationality' (Jasanoff, 2003a, p. 160). Furthermore, the process of carrying out experiments, a tool of scientific-knowledge generation, is based on negotiated, pre-existing parameters deemed valid in a particular scientific field (Collins, 1985, cited in Jasonoff, 2003a, p. 160). As such, it is not surprising that scientific truths or objectivity unravel when they are challenged by well-organised and well-informed citizen scientists and also experts with opposing views.

While campaigners engaged with experts and found institutions and expertise whose opinions agreed with their version of 'truths' or 'objectivity,' authoritative experts from the state and business interests furnished 'evidence' to the contrary. Bukit Merah campaigners found experts (for example, Dr Rosalie Bertall⁹¹) and expert institutions (for example, the United States National Academy of Science Committee's fifth report on the Biological Effects of Ionising Radiation (BEIR V), 1990) who said that there was no such thing as a safe level of radiation. This strengthened their campaign demands for the ARE to cease operations, and for the waste produced to be stored properly. Broga campaigners engaged with Greenpeace in Japan, the Philippines and Greenpeace International, USA, and GAIA (Global Alliance for Incinerator Alternatives or Global Anti-Incinerator Alliance) and their scientists, who all said that dioxin was not only carcinogenic but accumulates in the food chain and is persistent in

⁹⁰ The standardised model excludes the democratic agency of the citizen, and assumes: citizens naturally agree to the core definition of risk discourses; citizens are either exposed to high or low risks without taking into consideration local or contextual conditions (a bivalent view); citizens are incapable of dealing with uncertainty and thus expect experts to deal with it; citizens are only concerned with consequences of innovations and not upstream issues such as processes of knowledge creation -who defines the research agenda or what drives it; and finally, citizens are not able to construct independent public meanings outside of expert-led, institutionalised science and/or state authority (Wynne, 2005, p. 72) (see p. 67, **Chapter 3.3 Questioning science** where these assumptions are discussed).

⁹¹ She was the President of the International Institute of Concern for Public Health, Toronto, Canada.

the environment (the half-life in the human body is estimated to be seven to eleven years).⁹² Likewise, this information strengthened the campaigners' demands for a smaller incinerator to be built and/or for the relocation of the incinerator to a less populated site.

Citizen science, though seen as an alternative science by many, still reproduces the authority of the expert when it treats the creation of scientific knowledge as the domain of institutionally trained experts. If the solutions for the problems created by science are still regarded as being found within the terms of modern, expert science; then scientific knowledge produced by expert-led, institutionalised science will still continue to be viewed as universally valid knowledge (see Jasanoff, 2007). In this context, alternative knowledges, or experientially-led knowledges are not regarded with high-esteem (see Jasanoff, 2007). That is to say, legal courts work with the assumption that scientific expertise and institutions are creators and providers of universally valid knowledge. Therefore, very often in a court case, the view of one group of scientists is pitted against the polar opposite view provided by another group of scientists. As was found in the Bukit Merah court case, the views provided by scientists supporting campaigners were in opposition to the views provided by scientists supporting the state and business interests. The court room debate became focused on whether or not low-level radiation was harmful; with one group of experts claiming that it was and with another, that it was not. Such a situation reveals the contingent nature of scientific truths/objectivity (not just alternative knowledges) which is why scientific evidence provided by parties from both sides of a debate can be found lacking and can be unravelled.

Thus, in the practice of citizen science, campaigners must go beyond treating the creation of scientific knowledge as the domain of institutionally trained experts so that experientially-led or alternative knowledge are regarded with the same esteem, or hold the same value as expert-led knowledge. One way to do so is to democratise the processes of the creation of scientific knowledge and public policy formation around issues of risk and safety. Many researchers in science and technology studies call for such a democratisation (Jasanoff, 1986, 2003a, 2007; see also Wynne, 2002; Christoforou, 2003; Liberatore and Functowicz, 2003; Mayer, 2003; Bickerstaff et al.,

⁹² World Health Organisation Fact Sheet Number 225: *Dioxins and their effects on human health*, <http://www.who.int/mediacentre/factsheets/fs225/en/>.

2010). Jasanoff (2003a, p. 160) on what democratic theory and science and technology studies suggest for the accountability of expertise:

. . . expertise has legitimacy only when it is exercised in ways that make clear its contingent, negotiated character and leave the door open to critical discussion. In other words, expertise, like other forms of democratically delegated power, is entitled to respect only when it conforms to norms of transparency and deliberative adequacy. Furthermore, calls for community participation should apply to both downstream decision-making process, as well as upstream issue definition processes, and . . . experts should be seen as authorized to act only on behalf of their public constituencies and only within parameters that are continually open to review.

Democratising downstream refers to opening up processes that attempts to control the consequences of sciences and technology (for example, in public policy making processes), while democritising upstream refers to scrutinising processes of expert deliberation and opening these so they are transparent and accountable (for example, research agenda setting processes in scientific/research institutions) (see Jasanoff, 2003a; Liberatore and Functowicz, 2003; Mayer, 2003).

Furthermore, according to Jasanoff (2003b), citizen participation or engagement is important because it should be the standard mode of practice in a democratic society and not just as an additional contributory view to decision-making processes. Citizen participation or engagement is especially important because it is necessary to: subject institutional interests and biases to public scrutiny; test and contest expert-led decision-making processes; establish culturally appropriate bases on which knowledge are assessed; and enhance lay capacity to reflect on and respond to modern dilemmas (Jasanoff, 2003b; see also Leach and Scoones, 2005, p. 38).

Thus, campaigners' engagement with authoritative science should not be regarded as just for the practical reason that such authoritative knowledge is considered universally valid in legal and administrative processes. It is also because such engagement encapsulates the ideas of right to community participation, and that local and experientially-based alternative knowledges are equally as important in generating evidence. These links between justice, participation and alternative knowledges make the environmental justice frame an important site for the democratisation of knowledge. They thus expand ' . . . the role of citizens in generating shared understandings of

human-nature relationships in places where they live, work and play' (Latta, 2008, p. 252). Governmental and private sector experts in Malaysia, '... should act on the behalf of the common good rather than as spokespersons of some transcendental scientific authority' (Jasanoff 2003a, p. 162). Campaigners of Broga and Bukit Merah should have the right to question and participate in expert deliberations (or knowledge claims-making) in the process of assessing risk, as well as in administrative and policy processes when siting decisions are made.

8.4 Transnational advocacy networks and the role of NGOs

As discussed with regard to new social movements in Chapter Three, both Broga and Bukit Merah joined large international networks of organisations as part of their campaigning strategy in order to put pressure on the Malaysian state to respond to their campaign demands. This type of international campaigning through cooperation between organisations and activists internationally by dense sharing of information and resources transnationally, has become the *modus operandi* of many present day international campaigning and lobbying, giving rise to global networks of dissent (Keck and Sikkink, 1998). Keck and Sikkink (1998) aptly labelled these structures as transnational advocacy networks (TANs) whereby the desired change in behaviour of the state is brought about by pressures from both external and internal sources. Facilitated by cheap air travel, email communication and the rise of the internet (also, now, in the early 21st century, other new media technologies such as online news websites and social media), the exchange of information and resources in transnational activist networks has intensified (Keck and Sikkink, 1998; Morris and Langman, no date; Kahn and Kellner, 2004; Della Porta and Tarrow, 2005; Romero, 2014). In fact, the internet has become an indispensable tool for social change through cyberactivism – political activism on the internet (McCaughey and Ayers, 2003; Liow and Pasuni, 2010; Abbott, 2011). The utilisation of TANs can have far-reaching effects, as can be exemplified by the Broga and Bukit Merah campaigns despite being constrained by the degree or availability of domestic democratic structures (Keck and Sikkink, 1998).

The Consumers' Association of Penang (CAP) is a Malaysian NGO that played a key role in the transnational advocacy activities of the Broga and Bukit Merah campaigns, especially so in the case of Bukit Merah (see pp. 246-248, **Box 9.1 Consumers'**

Association of Penang). They provided access to resources such as information and funding for campaign-related activities, capacity-building, legal advice; and in the case of Bukit Merah, took on the Bukit Merah campaign as part of their organisational agenda. However, since the Broga campaign had more internal capacity⁹³ to organise themselves, CAP did not play as large a role as it did in the Bukit Merah campaign. CAP's role was also larger in the case of Bukit Merah because CAP lawyers formed part of the legal team which represented the Bukit Merah campaigners in court. The court case also lasted a long time - eight years, from 1985 to 1993 – and so the involvement of CAP was for the long term. Broga campaigners had decided to choose their legal representative from a private source that was not part of an NGO organisation.

Broga campaigners took part in activities organised by NGOs and the TANs that the NGOs were linked to. Campaigners were invited to speak about their campaign as well as attend conferences related to waste and incineration locally as well as internationally. These activities were carried out besides the standard campaigning practices such as signature petitions, held online and offline; public awareness drives through leafleting; demonstrations and dialogue sessions with politicians and bureaucrats. Through CAP, who is a member of the International POPs Elimination Network (IPEN),⁹⁴ funding was found to produce a documentary to raise awareness of the Broga campaign. A group of middle class activists who lived in Kuala Lumpur, proposed the idea of making a documentary film for public education and awareness of incinerator issues ('Alice Lives Here', 2005). CAP assisted in the making of the documentary through finding financial support from the International POPs Elimination Project (IPEP) (Interview, Ms Wong Yuen Mei, Kuala Lumpur, 12-08-2009). This funding covered some costs

⁹³ As discussed in Chapter Seven as well as in this chapter, there were more middle-class grassroots campaigners in the Broga campaign compared to the Bukit Merah campaign where the majority of grassroots campaigners were from low-income groups.

⁹⁴ POPs is short for 'persistent organic pollutants'. Dioxin, one of the pollutants produced by thermal treatment or incineration of solid waste, is a persistent organic pollutant. The International POPs Elimination Network (IPEN) began a global NGO project called the International POPs Elimination Project (IPEP) in partnership with the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Program (UNEP). The Global Environment Facility (GEF) provided core funding for the project. Other IPEP funding also came from the Swiss Agency for Development and Cooperation, Swiss Agency for the Environment Forests and Landscape, the Canada POPs Fund, the Dutch Ministry of Housing, Spatial Planning and Environment (VROM), Mitchell Kapor Foundation, Sigrid Rausing Trust, New York Community Trust and others (www.ipen.org/documents/pops-awareness-and-film-malaysia).

incurred during the process of filming; such as the procurement of a computer to help film production and editing. However, none of the activists involved in the making of the documentary were compensated for their time (Interview, Mr Jules Ong, Petaling Jaya, 19-08-2009). It is also through the many TANs that CAP is linked to that helped Broga lead campaigners to establish close communication with a scientist in Germany with many years of experience in incineration technology. Ingo Gödeke, a German scientist, commented on the dEIA, wrote to the Malaysian press, the KPKT, the DOE, and gave advice to campaigners on the pros and cons of the science and technology of thermal treatment plants. Communication was done through e-mail, with the possibility of Mr Gödeke making a trip to Malaysia if the need arose. However, eventually, the proposed Broga incinerator project was cancelled and thus the trip was unnecessary (Interview, Ms Alice Lee, Kajang, 11-05-2009).

In the Bukit Merah campaign, the effects of the ‘boomerang pattern’ (Keck and Sikkink, 1998) of exerting pressure on a domestic conflict situation can be observed (see p. 50, **Chapter 3.1 Social movement theories**, for a discussion of the ‘boomerang pattern’). Political entrepreneurs from CAP hoped to change the behaviour of ARE by lobbying its parent company, Mitsubishi Kasei, as well as the Japanese Parliament in Tokyo. Pressure to change was placed on the Malaysian government and the ARE from an external source. The Japanese government and the Mitsubishi Kasei headquarters in Japan were lobbied hard through the help of Japanese NGOs, Japanese human rights groups, Japanese opposition parliamentarians, as well as other international NGOs (Consumers’ Association of Penang, 1993; Interview, Ms Meena Raman, 19-08-2010). CAP and activists associated with it, took on an intermediary role, travelling overseas to speak about the campaign in international conferences. CAP also brought three Bukit Merah grassroots campaigners along with them to Tokyo on a lobbying and exposure trip where meetings were held with Mitsubishi Kasei and members of the Japanese Parliament; as well as with environmental NGOs and human rights activists (Consumers’ Association Penang, 1993; Interviews, Mr Phang Kooi Yau, Bukit Merah, 18-07-2009; Mr Hew Yoon Tat, Bukit Merah, 13-08-2009). These actions took place alongside the ‘normal’ range of campaigning such as petitions, public awareness drives through leafleting, demonstrations and dialogue sessions with politicians and bureaucrats. Such intensive lobbying in Japan resulted in the Japanese Ministry of International Trade and Industry (MITI) investigating the practices of pollution-control

of Japanese multinational companies operating abroad. Asking Mitsubishi to report on the Ipoh High Court decision to close the ARE, MITI's Vice-Minister, Yuji Tanahashi, said it would be 'highly regrettable' if the court's findings on the dangers of the ARE facility were accurate (cited in Consumers' Association of Penang, 1993, p. 106).

The success of leverage politics where external pressure is brought to bear on the state is dependent on how open state institutions are to leverage (see Keck and Sikkink, 1998, p. 201). After the Ipoh High Court judge ruled in favour of Bukit Merah plaintiffs, the ARE sought an appeal in the Supreme Court. In the period before the appeal hearing, three Bukit Merah residents flew to Japan to meet with Mitsubishi to urge them to drop the appeal (Interviews, Mr Phang Kooi Yau, Bukit Merah, 18-07-2009; Mr Hew Yoon Tat, Bukit Merah, 13-08-2009). This visit was reciprocated with a visit made to Bukit Merah by a group of Japanese opposition parliamentarians (of the Socialist Democratic Party), church groups and other human rights NGOs ('Dinner at Bukit Merah,' 1993; Utusan Konsumer, 1993b; Interview, Mr Hew Yoon Tat, Bukit Merah, 13-08-2009). The pressure generated also resulted in the Japanese government issuing a warning to all its multinational companies operating outside of Japan to ensure sound occupational health and safety practices (Consumers' Association of Penang, 1993, p. 106). These actions were collectively seen as having a positive impact on the campaign.

However, despite these achievements, eventually, the Supreme Court ruled in favour of ARE. At the hearing for permission to appeal the Ipoh High Court decision (for the ARE to stop operations) on 5 August 1992, Supreme Court judges cited the legality of ARE operations since it had obtained a license to operate from both the Ministry of Trade and Industry and the AELB, and therefore, the onus is on the plaintiffs to prove the illegality of the operation. The Supreme Court also alluded to the Special Relief Act 1950 where preventive relief is at the discretion of the court. Interestingly, in an interview with Mr Phang (one of three Bukit Merah residents who visited Japan to campaign), he reported that Bukit Merah residents were rebuked by Supreme Court judges in 1992 during the hearing for permission to appeal filed by the ARE (Interview, Mr Phang Kooi Yau, Bukit Merah, 18-07-2009). The Supreme Court judges devoted more than half of their three-page typed judgement to the fact that Mr Lau Fong Fatt

(one of the eight plaintiffs in the court case) had visited Mitsubishi in Japan. The Supreme Court judges said that Mr Lau had

. . . gone beyond the process of the court to approach Mitsubishi Corporation which is one of the major shareholders of the appellant company, in order not to proceed with this application or to appeal against the [Ipoh] High Court decision. We don't know what has gone behind the scene that enabled Mr Lau to obtain the assurance from Mitsubishi Corporation that regardless of this court ruling it will not operate the factory without the consent of the community i.e. the respondents (Justice Mohamed Yusuf Mohamed, Datuk Eusoff Chin and Datuk Anuar Zainal Abidin, cited in *Utusan Konsumer*, 1992, p. 5).

Permission was thus granted to the ARE to appeal against the Ipoh High Court decision to close the ARE operations. Here, we see an example of when the boomerang effect did not result in the desired change in terms of the legal outcome. While it did result in putting pressure on the target (ARE and the Malaysian government) for change, it did not result in the ARE factory being legally required to cease operations. Hence, while leverage politics can and do have an impact, whether or not it results in the desired outcome depends on particular domestic structures: legal, political or institutional (see Keck and Sikkink, 1998).

New media technologies

As typical in all TANs today, new media technologies⁹⁵ played a key role in transnational campaigning. However, at the time of the Bukit Merah campaign, Malaysia did not have widespread infrastructure supporting internet access as it had begun to during the Broga campaign, and as it does today. Only NGOs, such as CAP, who were involved in supporting the Bukit Merah campaign, had access to email communication. Furthermore, the World Wide Web had not come into public use internationally. However, by the time the Broga campaign was launched, the availability of internet technology (specifically, email communication and the World Wide Web) was critical in motivating Broga campaigners. They were encouraged and educated by the information they obtained on the internet. Specifically, information from various websites, that explained the dangers of dioxin and on how many communities all over the world have formed campaigns against the construction of

⁹⁵ Electronic platforms for information dissemination are commonly referred to as new media such as the internet and digital media. Examples of internet-based platforms are news websites, forums, blogs and social networking websites (Liow and Pasuni, 2010).

incinerators, served to motivate and empower campaigners. For example, Ms Lee, talked to me about how she relied on scientific facts and figures obtained from the internet for her arguments against the incinerator project, and how it alarmed her to know what dioxin was and how it was dangerous to people and to the environment (Interview, Ms Alice Lee, Kajang, 11-05-2009). These types of information also helped to provide the confidence and self-belief to villagers that they were right in opposing the incinerator project. Furthermore, the Broga campaign was closely reported by Malaysiakini, Malaysia's first alternative online news portal, thereby serving to raise awareness of the Broga campaign. Therefore, Broga campaigners felt morally encouraged as they garnered more widespread sympathy from the public than would have been otherwise possible, as the campaign was downplayed in national newspapers.

The role that the internet has played in democratic processes and in campaign organising has been widely researched, with researchers warning of colonisation of the internet by companies and government, and of the fact that it is the guiding norms and values of users, rather than the technology of the internet per se that enables the creation of democratic spaces (Abbott, 2001, 2011; Salter, 2003; Steele, 2009). The Malaysian government has pledged itself not to censor materials on the internet in order to promote a competitive edge in attracting foreign multimedia investments in Malaysia.⁹⁶ Historically, the Malaysian television and print media are closely monitored and controlled by the government (Weiss, 2006, p. 155-159; Steele, 2009). Information deemed unsuitable is rarely published or given voice. Or, information might be selectively suppressed in certain segments of the population. An example was the absence of reports of the on-going Bukit Merah trial in the Malay-language newspapers. While the Chinese and English newspapers followed the issues closely, the Malay papers rarely reported on the trial or published information on the pollution risks of low level radioactive waste. Thus, with the expansion of the largely uncensored electronic media and the availability of email communication, not only opposition groups, but

⁹⁶ This commitment to non-censorship of the internet is linked to the Multimedia Super Corridor – an Internet Communications Technology initiative in Malaysia which is a special economic zone with residential and commercial areas. These areas have in-built infrastructure of high speed internet connections in order to attract local and foreign investments in developing multimedia technology. However, on 10 November 2013, the former Prime Minister, Dr Mahathir Mohamad, called for a censorship of the internet for pornographic material and questionable news and slander, which he considered as both responsible for sexual crimes and threats to national security (www.themalaysianinsider.com/malaysia/article/mahathir-calls-for-internet-to-be-censored-bernama).

individuals also have turned to the internet for information, for independent sources of news and for international networking (Weiss, 2006).

While it is still true that there is inequality in access to the internet,⁹⁷ in the case of the Broga anti-incinerator campaign, the internet was very widely used by Ms Lee to access information, and to communicate with the media, and national and international environmental NGOs. The internet also enabled campaigners to launch an online signature petition. Email communication enabled lead campaigners to remain in close contact with sources of technical expertise (for example, the German scientist, Ingo Gödeke, as mentioned above) and other supporters. The information and social capital campaigners obtained through the internet, as attested in the examples given above, contributed to giving them the confidence to challenge bureaucrats, technical experts and politicians on many issues (see Elin, 2003).

New media technologies are thus an important element in the campaigning tools used in the Broga campaign, but not in the Bukit Merah campaign as these tools were not yet available. These new tools served to empower the Broga campaigners in ways which were not seen in the Bukit Merah campaign. These tools provided access to international information about other campaigns, scientific information on incinerators and its pollutants, alternative views of the safety of dioxin, and allowed campaigners to communicate to an international audience about their campaign against the Broga incinerator. All these served to empower campaigners as they could gain greater support for their cause beyond the locality, and resulted in campaigners feeling more confident about their own campaign. This demonstrates the role of new media technologies not just in local campaigning (see Abbott, 2001 for the role of new media technologies in protest actions in Malaysia), but also in linking local activism to transnational activism (see Romero, 2014), thereby, contributing to strengthening civil society and consolidating democracy both locally and globally.

⁹⁷ There are more men and overall, the educated middle-classes who are the main users of the internet (Abbott, 2001).

8.5 Litigation

One strategy which is sometimes pursued at the domestic level of a campaign is to go to court to seek justice and accountability. Campaigners or social movements mobilize the law to assert a lawful claim or right; and the literature and theorising that have arisen out of such mobilisation have come to be known as legal mobilisation theory (McCann, 2006). Legal mobilisation analysis 'is aimed at the constitutive role of legal rights both as a strategic resource and as a constraint, as a source of empowerment and disempowerment, for struggles to transform, or to reconstitute, the terms of social relations and power' (McCann, 2006, p. 22). This legal strategy is pursued as a supplementary or secondary political strategy besides other tactics such as public protests, signature petitions, media campaigns, information disclosure, legislative lobbying and partisan electoral advocacy. It is one way in which pressure can be placed on those responsible parties to affect change. Both the Broga and Bukit Merah campaigners took this path; with the Bukit Merah court case becoming the longest environmental trial in Asia; first going to court in Ipoh in February 1985 and ending with a Supreme Court ruling in favour of ARE in Kuala Lumpur in December 1993 (Utusan Konsumer, 1992; Raman, 1999). Broga campaigners also pursued public interest litigation but this ended abruptly after the KPKT decided to cancel the incinerator project.

Eight members of the Perak Anti-Radioactive Action Committee (PARC) (or the Bukit Merah campaign) went to court to seek a permanent closure of the ARE factory. They were also residents of Bukit Merah New Village. While the constitution does not guarantee a right to a healthy environment, lawyers for Bukit Merah residents nevertheless took a rights approach, arguing that residents did have such a right. Since the constitution of Malaysia guaranteed all citizens equal treatment before the law, and since other citizens of Malaysia were not exposed to radiation in the manner Bukit Merah residents were, lawyers argued that Bukit Merah residents were denied this access to equality. Thus, the demand for justice and accountability was premised on having equal rights to health and safety. As expected, as in any legal and administrative process, the court case evolved around technical arguments about what consists of safe and permissible levels of radioactivity and the definitions of safe manufacturing and waste management.

On 1 February 1985, the eight Bukit Merah residents filed an application in the Ipoh High Court to stop the ARE from producing, keeping and storing radioactive waste in the vicinity of the Bukit Merah Industrial Estate. In October of the same year, a temporary interlocutory injunction was obtained. The ARE had to cease operations until adequate safety measures were taken to prevent radioactive rays from escaping its factory. In February 1987, the Atomic Energy Licensing Board (AELB), granted the ARE factory a license to operate despite the temporary interlocutory injunction issued by the Ipoh High Court. The reason given by the AELB for issuing a license was that the factory had fulfilled all criteria for operating a rare earth element extraction facility according to Malaysian health and safety regulations. The ARE resumed operations; and later, in September 1987, the full trial hearing of the Bukit Merah residents' lawsuit against the ARE began. The full trial was heard over a period of 29 months between September 1987 and February 1990. Another 29 months later, in July 1992, the Ipoh High Court judge, Peh Swee Chin, announced his decision in favour of Bukit Merah residents; requiring that the ARE cease operations immediately and to remove all waste to its permanent storage facility. Judge Peh cited the court case *Rylands v. Fletcher* and negligence under Tort Law ('Woon Tan Kim and Ors,' 1992). He decided there was damage and negligence committed to give rise to the actions of Bukit Merah residents. The emission of radiation was deemed a nuisance and costs were awarded⁹⁸ to Bukit Merah residents, but not damages as the judge decided there was no proof of any actual damage, physical, financial or personal injury ('Woon Tan Kim and Ors,' 1992; Foong, 1992). The trial provided extensive opportunities for engagement with the management of ARE who were forced to account for lax health and safety practices in their factory, and for pollution consequences of inappropriate disposal and storage of low level radioactive waste. It involved lengthy arguments and counter-arguments by experts from both sides of the dispute. The court case, together with the campaigning work of a network of Malaysian NGOS, international ENGOs, and most importantly, Japanese environmental and human rights NGOs, put ARE (and Mitsubishi Kasei) under intense, negative international scrutiny.

⁹⁸ This did not happen.

The victory at the Ipoh High Court was short-lived when the Supreme Court temporarily lifted the High Court order a few weeks later in August 1992 when it gave ARE permission to appeal. The full appeal hearing was only heard more than a year later on 16 December 1993 (Utusan Konsumer, 1994a). The reason provided by the Supreme Court for ruling in favour of the ARE was that the Bukit Merah plaintiffs had not managed to show that the operations of the ARE were not in the public interest. Since the ARE had been granted a licence (albeit retrospectively) by the AELB, and the licence would not have been granted unless the ARE complied with statutory requirements, the plaintiffs had the alternative remedy to convince the AELB that the ARE operation would not be in the public interest because of the danger of radiation to their health. The Supreme Court judges (Lord President Tun Abdul Hamid Omar, Mr Justice Gunn Chit Tuan, Mr Justice Eusoff Chin) further added:

It is also our view where the statute provides, in any particular matter, a remedy equally effective as an injunction, the aggrieved party must exhaust that statutory remedy provided by the special statute before applying to the Court for a perpetual injunction (Utusan Konsumer, 1994a, p. 3; see also 'Penghakiman dengan alasan ringkas,' 1993).⁹⁹

According to Harding (1996), this was an extraordinary conclusion because it meant that '...no action for an injunction could be maintained against any defendant whose activities are supervised by a public agency under statute law' (Harding, 1996, p. 241). It also meant that the ARE court case rendered '...tort law practically useless in the context of the development of environmental law and human rights in Malaysia' (Harding, 1996, p. 241).

Harding's collection of studies of environmental human rights in Malaysia and of the use of legal mechanisms to obtain environmental justice in 11 countries, lead him to conclude that litigation only provides limited gains for environmental justice demands (Harding, 2007). In Malaysia's case, he concludes that an overt demand for the development of environmental human rights (that is to say, formal statutory rights) will have an opposite effect (Harding, 1996). It will cause more restrictions to be introduced to existing rights guaranteed under the Malaysian constitution. Thus, Harding is of the

⁹⁹ This document is a three-page summary of the Supreme Court decision. The title of the document says it is a brief summary and will be followed by a longer document (the judgement) providing detailed reasoning. According to Mr Gurdial, the lead counsel for the Bukit Merah residents, the longer document has not been produced (Interview, Mr G. S. Nijar, Kuala Lumpur, 02-07-2009).

opinion that a more indirect route would have to be taken to develop environmentally friendly rights in a developing country context (such as Malaysia); through processes he calls ‘osmosis’ and ‘interstitial’ (Harding, 1996, p. 243). By ‘osmosis’ he means that environmentally friendly principles can be absorbed silently into the legal system by encouraging such principles generally, in various areas of law, such as judicial reviews, public interest, tort and property laws, and in procedural relaxations and innovations (Harding, 1996, p. 243). By ‘interstitial’ he refers to practices which become permissible through the exercise of non-environmental human rights such as democratic freedoms of speech, assembly and association (Harding, 1996, p. 243).

So it would appear that taking the legal route as a mobilising strategy did not work for the Bukit Merah campaign because the Supreme Court eventually ruled in favour of the ARE. Rosenberg (1991) and Scheingold (1974) are critical of the effectiveness of using litigation to achieve broad social change; because according to them, even if law courts rule in favour of the litigants seeking environmental justice, courts do not have the institutional capacity to develop and administer effective policy reform. In their view, victims are subjected to an illusion of having justice (‘myth of rights’) because they have been given their day in court. They further argue that litigation actually sustains the hierarchical order, and divert resources from other tactical options that might have been more effective at achieving campaign objectives. However, concluding that the legal tactics in the Bukit Merah campaign did not work because it lost its court case is not an accurate analysis.

ARE stopped operations in 1992 after the Ipoh High Court ruling, and despite being able to continue operating after the Supreme Court gave it temporary permission to do so before the appeal was heard in Kuala Lumpur, the factory remained closed, with its staff on full pay (Consumers’ Association of Penang, 1993, p. 107). After meeting with Bukit Merah campaigners in July 1992 in Tokyo, the managing director of Mitsubishi Kasei, Takashi Seito said: ‘We believe that the company in Malaysia should not continue to operate its facilities without reaching an understanding with the local residents’ (Consumers’ Association of Penang, 1993, p. 107). In a letter handed to Bukit Merah residents in Tokyo, Mitsubishi Kasei said the Malaysian partners of the ARE project had filed for an appeal at the Supreme Court without their consent and they expressed ‘strong regret on their [Malaysian] partners’ actions’. They further

added: ‘Lastly, ARE’s plant will definitely terminate all operations by July 24 [1992] in accordance with the decision of the High Court of Malaya at Ipoh’ (Mitsubishi Kasei Corporation, 1992). So despite being allowed to continue operations, the ARE did not. Bukit Merah campaigners argued this was because their campaign had achieved the desired effect despite the legal defeat. Mitsubishi Kasei was ‘shamed’ by the negative publicity and international pressure generated by the court case. This publicity together with an on-going international campaign, not only attracted a Japanese fact-finding mission by elected representatives of the Japanese Diet (parliament), environmental NGOs, human right lawyers, church groups and other individual activists, but also caused the Japanese Ministry of International Trade and Industry to investigate the practices of Japanese multinational companies operating abroad. The ARE remained closed permanently; and after the Supreme Court made its decision in December 1993, Mitsubishi Kasei announced it was pulling out of the ARE investment in Malaysia (Business Times, New Straits Times, 1993; Chong, 1994).

The negative publicity generated through the court case and through transnational campaigning was not the only factor that contributed to Mitsubishi Kasei’s decision to pull out. Another factor was the increasing costs of operations. The Japanese newspaper, Asahi Shimbun, had reported Mitsubishi Kasei saying they imported rare earth elements from China at a lower price, and that Mitsubishi would rely on this source of supply in the future (Utusan Konsumer, 1994a, p. 3). During the full trial hearing of the Bukit Merah court case in 1990, the general manager of ARE, Tamio Shigenobu, said the company had sustained losses of RM 10 million since starting operations in 1982 (The Star, 1988a; The Star, 1990). One of the reasons Mr. Shigenobu provided was that the ARE had to stop operations for some time due to problems procuring caustic soda, a raw ingredient needed in the rare earth element extraction process.¹⁰⁰ A combination of factors – negative publicity, transnational campaigning, increasing operational costs and other financial losses – all contributed to the decision of Mitsubishi Kasei to pull out of the ARE joint venture.

¹⁰⁰ No mention is made as to whether or not the financial losses were also partly due to when the ARE closed in October 1985 after Bukit Merah residents successfully obtained an interlocutory injunction. The ARE was closed for 16 months before resuming operations after it was issued a license by the AELB (Utusan Konsumer, 1992).

A more accurate analysis of the implications of the use of the law by social movement activists or campaigners to seek justice would be that successful use of the law is contingent on the internal structures – legal and political – of the country in which the court case is pursued. McCann (2004, cited by McCann, 2006, p. 19) on this type of analysis on the use of law by activists:

Legal mobilization does not inherently disempower or empower citizens. How law matters depends on the complex, often changing dynamics of the context in which struggles occur. Legal relations, institutions, and norms tend to be double-edged, at once upholding the larger infrastructure of the status quo while providing limited opportunities for episodic challenges and transformations in that ruling order.

In the case of Bukit Merah, litigation as a tool for seeking environmental justice did not result in legal success precisely because large projects such as the ARE operations are backed by both powerful business interests and the state which welcomed such foreign direct investment. Such stakeholder vested interests are evident in the court case of Bukit Merah. In the same letter to Bukit Merah campaigners where Mitsubishi Kasei (headquartered in Tokyo) expressed that it will cease operations of the ARE, Mitsubishi Kasei also said this in reference to their local partners in ARE:

...the shareholders, board members and employees on the Malaysian side as well as the Malaysian National Union of Petroleum and Petrochemical Industry Workers took a position of never to accept the ruling immediately after the High Court issued its ruling. Out of concerns about the broader effects of the ruling which would not only affect ARE but the Malaysian industrial sector and the regional economy, they have stated the extremely strong position that they would, as soon as possible, appeal and start a motion for a stay of execution of the court injunctions including the one to terminate the operation of the factory (Mitsubishi Kasei, 1992).

Despite losing their court case, Bukit Merah residents did achieve their campaign objectives which were to stop the ARE operating near their village, and for the waste to be disposed of properly. A combination of factors - negative publicity generated internationally through the court case and international lobbying via transnational advocacy networks, the emergence of cheap rare earth element supplies from China, procurement issues of a necessary raw ingredient (caustic soda) and possible financial losses from the initial temporary injunction – all helped to bring about the desired results. As McCann (2006) has pointed out, a legal strategy is only one of many strategies use by social movements to achieve their objectives, and in the hands of

defiant citizens, legal tactics can gain activists substantial power (for example, through the impacts of widespread media and public attention).

8.6 Conclusion

The purpose of this chapter was to understand how two environmental justice campaigns were conducted and became locally grounded in different social and political contexts spanning a period of 20 years in Malaysia. In order to do so, this chapter examined and analysed campaigning discourses and practices. The discourses used to frame or make demands for justice made use of the concepts of environmental protection (environmentalism), a rights-based approach to health and safety, information and participation. Campaigners also used both the language and methods of citizen science to educate themselves about environmental pollutants; question scientific information and environmental impact assessment methods, analysis and interpretation; and to engage in debate with scientific experts about the dangers of environmental pollutants such as dioxin and radiation. The strategies for campaigning involved campaigning both locally and internationally, as well as taking legal action. The internationalisation of both campaigns was achieved through the use of new media technologies and through linking up with transnational advocacy organisations already connected to Consumers' Association of Penang. Engagement with transnational advocacy organisations brought external pressure to bear on the Malaysian government and business interests (Keck and Sikkink's 'boomerang effect').

While the Bukit Merah campaign was confined to claiming formal political rights for accountability through litigation, and its campaign discourse centred primarily round the right to health and safety, the Broga campaign had at its disposal new discourses to frame their campaign demands. Similarly, while both campaigns were engaged in debates and actions of citizen science, the Broga campaigners had access to a wider range of tools to do so. They had the internet which greatly facilitated access to scientific information, ideas and information from other anti-incinerator campaigns in other parts of the world, as well as direct access to scientific experts. The discourse of environmentalism strengthened the position of Broga campaigners through enabling them to speak to the increasingly urban population of Malaysia through ideas of environmental protection and through the representation of Ms Lee as protector of the

environment. Discourses of informal rights, such as participation and right to information figured prominently in the Broga campaign but not in the Bukit Merah campaign. Community participation as a formal requirement of an environmental assessment was not available at the time the ARE was constructed since Malaysian regulations then did not require an EIA to be carried out. However, by the time of the Broga incinerator project, statutory changes in environmental regulations mean that a dEIA was required. However, the community participation element within the dEIA process as well as whatever consultation that was made available, were experienced by Broga campaigners as inadequate and unsatisfactory.

Both the Broga and Bukit Merah campaigns also took legal action in order to seek justice and accountability. The legal action abruptly ended in the case of Broga as the KPKT decided to cancel the incinerator project. However, in the case of Bukit Merah, the legal action against the ARE lasted more than eight years, from 1985 to 1993. Despite the Bukit Merah residents eventually losing their battle, their long and drawn out court case benefitted greatly from international media attention and networks of transnational lobbying. As negative media attention and international lobbying increased, Japanese civil society groups as well as opposition MPs organised a fact-finding mission to Bukit Merah. Pressure was built-up and placed upon Mitsubishi Kasei, the Japanese multinational, who was one of the major shareholders of the ARE operations. This factor, together with large financial losses sustained by the ARE, eventually led to the closing of the ARE facility.

What do these losses and gains from the various methods of campaigning mean for existing ideas and practices of environmental justice? What are the conclusions that can be drawn from this examination? The following chapter will thus examine the wider implications of those losses and gains, and contextualise them within a locally grounded environmental justice framework as well as making connections to issues of environmental citizenship.

CHAPTER NINE

CONTEXTUALISING ENVIRONMENTAL JUSTICE AND ENVIRONMENTAL CITIZENSHIP

The purpose of this chapter is to understand the wider significance of concepts of environmental justice and of methods of campaigning as utilised by Broga and Bukit Merah campaigners, asking how these are relevant to environmental justice concepts becoming locally grounded in the context of Malaysia. Campaigners framed their demands for justice and accountability in terms of: rights to health and safety, information and participation; environmental protection; recognition of the poverty of many grassroots campaigners; recognition of their values for a clean and quite environment and attachment to their homes; and recognition of their daily lived experiential knowledges. In order to achieve campaign objectives of preventing the proposed Broga incinerator from being built and of closing down the Asian Rare Earth facility (ARE), campaigners campaigned locally as well as internationally through transnational advocacy networks (TANs), initiated public interest litigation, used new media technologies as a campaigning tool (in the case of Broga), and engaged with the language and practices of citizen science. In engaging with the language and practices of citizen science, the campaigners questioned both the scientific knowledge presented to them and the idea of acceptable risks, while simultaneously engaging with scientific experts who supported their campaigns.

This chapter also explores how environmental justice concerns are linked to debates within citizenship concerns, especially environmental citizenship. This linking is done because of overlapping concerns of democratic politics in both environmental justice and environmental citizenship. The key issues of rights to equality, distributive justice, information, participation and for recognition as found in environmental justice concepts are also increasingly concerns found within the debates of environmental citizenship. In other words, the expanding debates of environmental citizenship increasingly draw in concepts of environmental justice.

Therefore, this chapter explores both research questions (3), ‘Why were environmental justice concepts and discourses adapted in particular ways in the Broga and Bukit Merah campaigns, and how can we understand this adaptation with reference to how environmental justice travels globally?’ and (4), ‘How are concepts of environmental justice linked to that of environmental citizenship in the context of the Broga and Bukit Merah campaigns?’

I begin in the next section by examining the issue of environmental racism. Examining how the environmental justice frame was adapted in Malaysia is important for understanding how it travelled internationally from its origins in the USA. From Chapters Six, Seven and Eight, where views, discourses and practices from both below and above were examined in detail, there was an absence in public rhetoric of environmental racism. Although in private, some Bukit Merah campaigners feel that ethnic identity was an issue (that is to say, the Chinese as politically marginalised) in the siting of the long term low-level radioactive waste storage facility, it did not appear in public discourse or public claims of discrimination. Poverty (or the lack of recognition of poverty) was instead the issue that was signified, and expressed publicly as what was unequal and unjust in both the Broga and Bukit Merah campaigns. Race was thus formally absent from the environmental justice in the Malaysian context. Given how important the idea of environmental racism is to the origins of concepts of environmental justice, in the next section, I shall examine why race was taken out of the environmental justice frame in the Malaysian context.

After this, in the following section, I will trace how environmental justice concepts entered and then developed in Malaysia. Although the use of the discourses of environmentalism and rights are not unique to the Broga and Bukit Merah campaigns, the way they have been used is particular to the political realities of Malaysia. Environmental concerns are regarded as being in opposition to economic interests; and therefore, campaigners and NGOs have been accused of being anti-development and against the progress of Malaysians more generally (Chapter Eight). The Malaysian government subscribes to a belief that green modernisation leads to improved ecosystems because it integrates sustainable practices. Thus, environmental protection is narrowly viewed by the government in terms of its connections to sustainable development. This makes it hard for campaigners’ arguments for environmental

protection/environmentalism to gain traction with the government who regards projects such as the ARE facility and the proposed Broga incinerator as part of progress and development. How then did campaigners successfully use environmental discourses to make their demands for justice and accountability? Such dynamics will be further evaluated below.

In addition, in order to assess how the environmental justice frame has travelled, I have summarised the evidence, process and justice claims of the Broga and Bukit Merah campaigns in Table 9.1 below.

	Bukit Merah	Broga
<i>Evidence of inequality (how things are)</i>	Bias toward polluting industries and waste storage sites being hosted in poorer communities.	Bias towards waste incinerators being hosted in poorer communities.
<i>Justice (how things ought to be)</i>	Sites should be distributed more equally, without bias towards poorer communities.	Sites should be distributed more equally, without bias towards poorer communities.
<i>Process (why things are how they are)</i>	<p><u>Formal explanation:</u> ‘Race to the bottom’ where multinational companies relocate to countries with cheaper labour costs and weaker regulatory standards.</p> <p><u>Informal explanation:</u> Poor ethnic Chinese in New Villages who are socially, politically and economically marginalised are deliberately targeted in siting decisions for the storage of low-level radioactive waste.</p>	<p>Poor rural villagers in Broga are deliberately targeted in siting decisions because they are less politically and economically powerful than more middle-class Puchong residents.</p> <p>Puchong is the original site of the proposed Broga incinerator.</p>

Table 9.1 Evidence, justice and process components in the Bukit Merah and Broga campaigns¹⁰¹

¹⁰¹ This is based on a similar table produced by Walker, 2012, p. 91.

The table lays out the claims made by campaigners in regards to why they launched their campaigns. First, campaigners explain how things are, which is that there is a bias towards poorer communities in the hosting of polluting industries. Second, campaigners go on to make the claim that those biases are because the residents of Broga and Bukit Merah are socially, politically and economically more marginalised. In particular, in the case of Bukit Merah, the ARE was seen to have chosen Malaysia as the site for extracting rare earth elements because of cheaper production costs. Then thirdly, due to this marginalisation which is both unequal and unjust, the siting of polluting industries should therefore, be distributed more equally.

Finally, I will end this chapter by drawing attention to the links between the concerns of environmental justice with that of environmental citizenship, thereby extending and deepening the meanings of environmental justice.

9.1 Race and environmental justice

Environmental justice concerns have to be reconfigured in a postcolonial and developing country context, such as Malaysia, especially in terms of ideas of environmental racism. According to environmental justice scholars, environmental justice concepts have become internationalised and are used in many campaigns and movements all over the world, and therefore, it is important to understand why and how environmental justice has become globalised (Debbane and Keil, 2004; Schlosberg, 2007; Schroeder et al., 2008; Walker, 2012). Concepts of environmental justice are not imported wholesale from the West or from the USA but rather, tweaked and changed in a process of adaptation so as to gain salience or traction with the local political and social realities of a particular campaign (Walker, 2012).

In the case of Bukit Merah especially, the idea of environmental racism was taken out of public campaigning rhetoric and language, but in private, many felt that discrimination due to race was a key factor in causing conflict. Thus, this section examines the processes of locally grounding environmental justice concepts in terms of omitting arguments of environmental racism.

As discussed in Chapter Five, ethnic Chinese identification in Malaysia is viewed as politically, economically and socially problematic by the state. Historically, the Chinese have been viewed in dominant political discourses not only as immigrants, but also as unsavoury characters for stealing the economic wealth of Malaysia from its rightful owners, the indigenous Malays. This dominant discourse still exists today¹⁰² despite evidence to the contrary, in particular, in terms of the historical forced relocation and internment of rural Chinese peasants and labourers in the New Villages (NVs). While rural residents of other races (such as Malaysian of Indian origin or the Orang Asli) were resettled during the Emergency rule of 1948-1960, the overwhelming majority thus affected were Chinese. By the early 1980s, many NVs became associated with poverty, unemployment, low educational achievements, juvenile delinquency, poor housing and infrastructure (Loh, 1988, 2009). These conditions of poverty and deprivation are not recognised by the state, and thus make NVs become what Walker calls ‘spaces of misrecognition’ and ‘places of stigmatisation’ (Walker, 2012, p. 625-626).

A good example of NVs as stigmatised can be observed from the popular usage of the label ‘Jinjang Joe’ which has survived into the 21st century, despite the village of Jinjang being considered now part of greater Kuala Lumpur. In the period of Emergency rule, this area was considered rural and on the outskirts of Kuala Lumpur. Jinjang was the largest NV created by the forced relocation of more than 27,000, largely Chinese, rural squatters (Loh, 2009, p. 293). After the Emergency, Jinjang became known as an area rife with Chinese criminal gangs. The label ‘Jinjang Joe’ was used in a derogatory manner to refer to a Chinese young man who had little education, spoke mainly Cantonese and some broken English, enjoyed Canto-pop music (from Hong Kong), had no known source of employment, loafed around and in all probability was involved in criminal activities. It was and still is not a compliment to be labelled a ‘Jinjang Joe,’ a usage which surprised me when I first heard it while working in Kuala

¹⁰² See online news articles published on 6 May, 2014 and 21 October, 2014, respectively: ‘ISMA: Chinese migration into Tanah Melayu “a mistake” which must be rectified’, retrieved from <http://www.themalaymailonline.com/malaysia/article/isma-chinese-migration-into-tanah-melayu-a-mistake-which-must-be-rectified>; ‘Zaid: you can call Chinese greedy, but not extremists’, retrieved from <http://www.themalaymailonline.com/malaysia/article/zaid-you-can-call-chinese-greedy-but-not-extremists>. ISMA is the Malay acronym for *Ikatan Muslimin Malaysia*, a right wing Islamist NGO funded by the Malaysian government. See also article by Khairie Hisyam Aliman, published on October 22, 2014, ‘Let’s stop this pendatang nonsense’ (<http://www.mmail.com.my/opinion/khairie-hisyam-aliman/article/lets-stop-this-pendatang-nonsense>). The word *pendatang* means immigrant in Malay.

Lumpur as a young 20-something year old. The term ‘Jinjang Joe’ is associated with ignorance, lack of education and possible criminality, and is often used in contemporary urban Kuala Lumpur to demean a person (usually a young Chinese man who is unable to speak fluent English and acts like a country bumpkin). The continued usage of this term is ironic given that Jinjang NV is now part of greater Kuala Lumpur.

Places of stigmatisation are spaces that need investigation because the processes of becoming stigmatised have a history of vulnerability (Sze, 2007; Walker, 2009). Many low-income campaigners in both Broga and Bukit Merah referred to their low income and rural status as a way to explain why they thought polluting industries were being located in the vicinity of their homes. This needs to be linked to a recognition of the history of why the Chinese were forcefully relocated into NVs because it is this history that has made NVs and the people who live in them vulnerable to place stigmatisation. As discussed in Chapter Five, the Chinese were regarded as communist sympathisers by the British colonial administration and thus, this became the reason for Chinese internment in NVs. On the other hand, Malays, though largely rural, were considered not to be communist sympathisers and were not forcefully relocated en masse. Thus, it is not just existing distrust of New Villagers towards the state as argued in Chapter Seven (p. 181, **Chapter 7.5 The lack of trust**), but also place stigmatisation that cannot be decoupled from the political and historical context of the Communist Insurgency and its implications for race relations in Malaysia.

In both case studies, I asked lead campaigners if they thought race was an issue in siting decisions. The issue of race figured very differently in the responses I obtained in two interviews in the Bukit Merah case study. One was with a Bukit Merah campaigner and the other was with the Director-General (DG) of the Atomic Licensing Board (AELB). A Bukit Merah campaigner explicitly said he felt there was racial discrimination in the siting decision for the long-term waste facility; that Papan was specifically chosen because it was a Chinese village (Interview, Mr A, Bukit Merah, 13-08-2009). The fact that racial tension was a factor in the Bukit Merah conflict was also raised, unsolicited, in an interview with the DG of the AELB. The DG, Raja Abdul Aziz, viewed the conflict over the ARE facilities and the safe management and disposal of its waste, as a disagreement between unhappy village protestors and the state and federal

governments. I then asked him what the unhappy protesting villagers could have done differently in campaigning against the ARE. This was part of his answer:

Come to us. We will give you the right perspective. . . . However, they [protesting villagers] chose the political way. . . to a certain extent there were racial nuances. . . . In the 1970s, it was different then . . . now there were racial nuances. . . . You know the tin miners and the tin industry were historically Chinese. . . but that was the problem, that was the conflict . . . everybody [in reference to political parties] tried to capitalise on it . . . they forgot to ask for the technical input. They took the political path (Interview, Raja Dato' Abdul Aziz Raja Adnan, Dengkil, 06-08-2010).

In other words, it was not so much about concerns for health and safety that motivated such campaigning, but rather, a political game between the Chinese-led opposition political party (the DAP) versus the Malay government/UMNO-led ruling coalition. Furthermore, the DG clearly viewed the conflict in terms of a technical problem requiring a technical solution, taking us back to the debates as examined in Chapters Six and Seven.

So while one of the campaigners felt that it was plainly a matter of racial discrimination, the DG of the AELB felt that it was just a political replay of existing ethnic tensions. What this informs us is that race was clearly an issue, but this was not discussed openly in public, nor was it found in the environmental justice discourse that was used by the Bukit Merah campaigners. However, when I asked the same question about race to Broga campaigners in 2009, no one expressed a belief that race was the basis for the decision to site the incinerator in Broga.

The absence of the public use of racial discrimination reflects the different political periods in Malaysian history. The public discourses used in the Bukit Merah campaign reflect the depth and breadth of what is considered acceptable public discourse in Malaysia at that point in time (the mid-1980s to the mid-1990s). It was then not acceptable for Chinese people to talk about being discriminated against. In the case of the Broga campaign (2003 to 2006), not only was the proposed incinerator located in an area that had a more racially mixed demographic, there were also both Malay and Chinese leadership amongst the lead campaigners. Mr Zulkefly was the Chairman of

PAS (*Parti Islam SeMalaysia*)¹⁰³ in the state of Negeri Sembilan, and lived in the neighbouring village of Lenggeng. He co-led the Broga campaign with Alice Lee a year into the campaigning, thus bringing in the involvement of PAS party members to support the Broga campaign. He said ‘. . . the authorities sat up and took notice’, whereas before, Broga was seen as a Chinese issue and campaign and thus ‘. . . did not get as much attention or response from the state and federal governments’ (Interview, Mr Zulkefly Mohamad bin Omar, Lenggeng, 10-05-2009). The working together of different races in a campaign has to be contextualised within the political background of Malaysia of that period because it was mirroring *Reformasi* politics, which advocated and attempted to go beyond racialist politics (Chapter Five). During this period, many more ethnic minorities felt they could publicly express their dissatisfaction arising from the state’s racialised policies.

What the examples from Malaysia teach us is that direct transplantation from the original US environmental justice frame does not happen because of the different political, economic and cultural contexts. So while there are some core issues (distributive justice, participation and recognition) and processes (e.g. going to court to seek justice) that remain the same in the environmental justice frame as it travels, others will change and adapt to local conditions (Schlosberg, 2007; Walker, 2012) - as observed in the lack of public use of claims of racial discrimination in the case of Bukit Merah. Race is not the only axis of social distinction in determining places of stigmatisation (Walker, 2009); but also ‘. . . racial dynamics typically articulate with other forms of identity related to ethnicity, indigeneity, gender, and class in the adjudication of environmental injustices’ (Schroeder et al., 2008, p. 552, discussing the work of David Carruthers). Other cases of the siting of incinerators in Malaysia do sometimes occur in or near NVs but not always. While on the one hand, the Broga incinerator project which was cancelled is now being resurrected with the new proposed location adjacent to Jinjang NV (Qishin Tariq, 2013),¹⁰⁴ on the other hand, four Kualiti

¹⁰³ PAS is an Islamic political party and the main political rival of UMNO in competition for Malay votes.

¹⁰⁴ When I interviewed the Dato’ Nadzri Yahaya, Director-General, Department of National Solid Waste Management, Ministry of Housing and Local Government/KPKT, he informed me that although the proposed Broga incinerator project was cancelled, an incinerator would still have to be built, and that it was a matter of finding the right location. A location has now been identified at Taman Beringin, Kepong (Qishin Tariq, 2013). A waste dump (not a proper landfill) and waste transfer station already exist in Taman Beringin. Kepong is a town adjacent to Jinjang New Village. Jinjang came into existence because it was created by the British colonial administration as the largest New Village just outside of Kuala

Alam incinerators of hazardous waste material were built in the midst of seven Chinese NVs and five Malay villages (see p. 154, **Box 6.1 Kualiti Alam Sendirian Berhad**).

Beliefs of racial discrimination held by campaigners remained as underlying hidden transcripts or off-stage remarks (see Scott, 1985), while the more acceptable discourse of discrimination due to class/poverty was made more obvious and publicly used in campaign discourse to demand rights to environmental goods (for example, right to a healthy environment). This meant that the existence racial discrimination could not be properly investigated by campaigners, or debated publicly. It would also add on to existing racial tensions because the Chinese campaigners of Bukit Merah would continue to hold on to personal beliefs that there was racial discrimination. What this situation also shows is that in a postcolonial society that was organised in a racialised manner, and still living with the effects of colonial processes, and developing at a fast rate, the concept of environmental racism was too US-centric (as it fits the particularities of the local conditions in the US) and could not be of use to the campaign in Bukit Merah.

9.2 How environmental justice travelled

Despite the record low tolerance for dissent and claims for human rights on the part of the state, a discourse of environmental conservation and environmental justice began to trickle into Malaysia (Chapters Five and Eight). As discussed on p. 131, **Chapter 5.2 Sustainable development**, environmentalism entered into popular discourse through the Malaysian government's response to the Sarawak campaign. Through this campaign, the Malaysian government became involved in international political processes in order to defend its right to extract timber resources (see pp. 131-138, **Chapter 5.2 Sustainable development**). In the eyes of the Malaysian state, environmentalism is narrowly viewed only in the context of sustainable development or green growth. In other words, environmental concerns should fall in line with the mantra of economic growth (see **Chapter 5.2 Sustainable development**). Another expression of such a green modernisation approach can be observed in Malaysia's oil-palm policy. Despite the Malaysian Palm Oil Board saying it is dedicated to '...the

Lumpur during the Communist Insurgency. The town of Kepong, of which Jinjang is a part of, is now part of Kuala Lumpur as it has been swallowed up by the expansion of the capital city.

sustainable triple bottom line of people, planet and profits’ (www.palmoilworld.org/sustainability.html), there has been rapid oil-palm plantation expansion in Malaysia, especially in the Borneo states of Sabah and Sarawak. Eighty-seven percent of deforestation between 1985 and 2000 has been due to oil-palm plantation expansion (Buckland, no date). Violations of customary land rights are frequently reported (Friends of the Earth International, 2013). The indigenous peoples of Sarawak face not just a loss of livelihood as forest cover disappear from the expansion of oil-palm plantations, but also displacement due to the rapid expansion of dam-building (The Borneo Project, no date; Environmental News Service, 2013). Furthermore, despite commitments to sustainably develop Malaysia’s natural resources, Malaysia was the world’s largest exporter of tropical logs, sawn timber, veneer and plywood in 2012 (International Tropical Timber Organisation, 2012, pp. 9-25);¹⁰⁵ and only 3.61 million hectares or 11 percent of the country’s total land area were designated as totally protected areas (Friends of the Earth International, 2013, p. 13). Therefore, very often, the considerations for people and planet in environmental issues are secondary to profits. As discussed in Chapter Eight, demands or expressed concerns for environmental protection framed through environmental justice often do not carry much weight with the Malaysian government, nor does the outright demand for rights.

Therefore, how were environmental justice concepts and discourses utilised since they contain a wide range of radical ideas of rights and justice as well as environmental protection? One way in which to understand this is to examine the role the Consumers’ Association of Penang (CAP) played in spreading the ideas of environmental justice in conditions of restricted civil liberties. CAP was founded in 1969 in circumstances where it had to appear to be apolitical and where it was aware of new authoritarianism which suppressed grassroots political opposition (see Box 9.1 below) (Weiss, 2006). For example, in the years following 1969, in the early to mid-1970s, a broad coalition of left-leaning parties were banned and many members were arrested (Loh, 1988). A former CAP staff said this of the post-1969 political context of Malaysia: ‘Since opposition was no longer tolerated, the way was opened for an apparently neutral organisation like CAP to move in and to articulate grievances that had been outlawed as

¹⁰⁵ The International Tropical Timber Organization, ITTO, is an intergovernmental organisation promoting the conservation, sustainable management, use and trade of tropical forest resources. Its members represent about 80 percent and 90 percent of the world’s tropical forests and global tropical timber trade, respectively (www.itto.int/about_itto/).

political concerns...’(T. Rajamoorthy, cited in Hilton, 2009, p. 19). Subsequently, such authoritarianism did not lessen. In fact, it worsened under the 22-year rule (1981-2003) of Dr Mahathir Mohamad, the fourth Prime Minister of Malaysia (Hilley, 2001). CAP operated in difficult circumstances. For example, CAP’s legal officer (who was also Sahabat Alam Malaysia’s (SAM) legal officer), Meena Raman was arrested under the Internal Security Act in 1987, and placed in solitary confinement for 47 days (Hilton, 2009, p. 64). Since she was never informed of what she was being charged for, it is hers and CAP’s assumption that it was due to her involvement with the Asian Rare Earth (ARE) case. She was one of the lawyers involved in the litigation against the ARE, and she did so as a representative from SAM.

Box 9.1 The Consumers’ Association of Penang (CAP)

This non-governmental organisation was founded in 1969 in the state of Penang after the May 1969 racial riots by middle-class urban professionals, very much aware of the change in tone of racial politics in Malaysia. They wanted to move away from communal politics and were looking for ‘a new type of public commentary’ (Anwar Fazal, principal founder of CAP, cited in Hilton, 2009, p.18). Though it initially received several grants from the state and federal governments, by 1973, it had become an independent organisation

(Hilton, 2009, p.25). Originally interested in consumer issues such as public health, it now incorporates a wide-range of issues including development, social justice and the environment. Its expansion has been very organic, responding to the needs of Malaysians who came to them seeking for help. For example, in the 1970s, CAP became involved with inshore fishermen whose livelihood suffered because of illegal fishing from large, deep sea trawlers, or when fish were polluted or killed by effluents discharged from the operations of factories in Free Trade Zones.

CAP became a superstructural node for many international networks from the 1970s and 1980s and continued to do so in the present (Khou, 2012). Nodes are sites where knowledge, capacity and resources are mobilised and organised, and actions and governance flow from these nodes (Drahos, 2004; Castells, 2000). Besides networking with the International Organisation of Consumer Unions (IOCU; now, Consumers International, CI), CAP is also linked to the International Baby Food Action Network (IBFAN), Health Action International (HAI), Friends of the Earth, Pesticides Action Network (PAN). Anwar Fazal, went on to become the President of the IOCU from 1978-1984; and has been labelled ‘Asia’s Ralph Nader’ (Hilton, 2009). In 1982, CAP established Third World Network, a Southern

Box 9.1 The Consumers' Association of Penang (CAP)

policy platform for economic policy and United Nations reform in terms of just, sustainable and human-centred development (Khoo, 2012, p. 17). CAP also established Sahabat Alam Malaysia (SAM) (which is affiliated with Friends of the Earth International, an organisation that is known for fusing issues of social justice with environmental sustainability (see Latta, 2008)) after the 1972 United Nations Conference on Environment and Development. CAP and SAM share many of the same personnel. As recognition of the work of CAP and SAM with the indigenous Penan of Sarawak, S. M. Mohamad Idris, CAP's first and only President, SAM and Penan activist, Harrison Ngau, received the Right Livelihood Award in 1988 (Hilton, 2009, p. 41). This award is commonly referred to as the alternative Nobel prize.

While worldwide, many researchers have criticised the consumer movement as a form of corporate colonisation because the ideology of consumerism supports global capitalism through their concerns with consumer choice, market-based strategies and economic self-interest (O'Donovan, 2007; Owen, 2009), CAP is seen to represent an alternative, Southern consumer activism (Hilton, 2009). CAP integrates local and global health concerns with development, social justice and environmental issues using a rights approach (specifically, a basic needs approach) emphasising entitlements, accountability and participation (Khoo, 2012). Hilton (2009) considers CAP's activism as an alternative to 'Western' consumer movements because its primary motivations are concerned with the unmet basic needs of a wider, Southern (conceptually rather than geographically) population, and with addressing the negative consequences of development. As a result of CAP's position on development, the Malaysian government has labelled CAP 'anti-development' or 'anti-modernisation' at various points in time (Hilton, 2009).

Hence, this concern with the poor shouldering a disproportionate share of the burdens of development was what drew CAP to the issue of toxic waste. CAP has been involved with the international movement against toxics from its very first inception in the late 1970s (Utusan Konsumer, 1993a, 1994b; Third World Network, 1988). The movement is concerned with waste from the developed world being dumped in a developing country and with polluting industries or technology being relocated to the developing world because of less stringent environmental rules and regulations. This international movement uses discourses of human rights and environmental justice in order to theorise about global environmental inequality (Pellow, 2007).

Given CAP's involvement with such a wide-range of transnational advocacy networks, it was unsurprising that CAP was familiar with

Box 9.1 The Consumers' Association of Penang (CAP)

the environmental justice frame originating from the USA. CAP extended information, links to international networks and experts, personnel and resources to not only support the Bukit Merah campaign, but crucially, through its legal department, provided experienced lawyers to represent Bukit Merah residents when they took the Asian Rare Earth (ARE) to court. Similarly, even though the Broga campaign evolved differently, CAP also extended support and other resources through their links with the Global Anti-Incinerator Alliance (GAIA), a transnational advocacy network. CAP does not advocate high-tech, industry-driven waste management, and prefers an approach that focuses on waste reduction and the elimination of toxics (Khoo and Rau, 2009). The CAP officer in charge of waste issues said this in regards to the role CAP played in the proposed Broga incinerator:

CAP continued its activities with other groups in GAIA, exchanging experiences and resources, mobilizing global assistance for local campaigns, signing on petitions against proposed incinerator projects in other areas, writing letters of protest to governments and parties promoting incineration technology and others. Networking of communities and like-minded NGOs involved in similar issues provides significant benefits, which act to increase the chances of success of the cases taken up (Mageswari Sangaralingam, cited in Pellow, 2007, p. 92-93)

Thus, while CAP and other environmental activists in Malaysia utilised environmental justice concepts and discourses, they were reshaped to fit Malaysia's political circumstances where actions of rights claiming must not appear to be too radical. On the one hand, activists worked within the boundaries of what was permissible, whilst at the same time, they pushed on the walls of those boundaries.

It was a delicate balancing act; and its manifestation could be observed from the arguments made in court as well as in campaign discourses and practices. In court, lawyers for the Bukit Merah campaign argued for equal health rights under the Malaysian constitution even though such a specific right is not spelled out in the constitution. Since Bukit Merah villagers were exposed to an unequal share of ionising radiation, and since all citizens have the right to equal treatment under the constitution, Bukit Merah lawyers argued that this then meant Bukit Merah villagers had equal health rights as others who were unexposed to such radiation (p. 228, **Chapter 8.5**

Litigation). The legal argument for health rights demonstrated the influences of an environmental justice frame. Furthermore, Mr Martin Khor, the Research Director of CAP in the 1980s, testifying in court as an economics expert witness called by Bukit Merah lawyers, said that Malaysia did not need the type of development as exemplified by the ARE because the negative health and environmental consequences outweighed the economic profits (The Star, 1988b). This view reflects CAP's definition of development in terms of adding value to peoples' lives instead of obtaining value for money as is usually associated with the workings of a consumer organisation.

In public discourses, the emphasis was on the unjust burden of development on the poor. However, there was no talk of racial discrimination, which remained a privately held belief. In campaigning strategy, the focus was on putting pressure on Mitsubishi Kasei/Chemicals. However, the other two local shareholders of the ARE venture, Tabung Haji and BEH Chemicals, were never asked to be accountable. It was argued that the technology was provided by its main shareholder Mitsubishi Kasei, and so it made sense to pursue Mitsubishi through international campaigning (Interview, Ms Meena Raman, Penang, 19-08-2010).

When asked, some interview participants did not know why the other two shareholders of the ARE were not pursued. One interpretation is that campaigning against Tabung Haji and BEH Chemicals would not have been a successful endeavour because local Malaysian companies were generally unresponsive to pressure from campaigners. Campaigning against Tabung Haji would have been especially problematic because it was (and still is) a government-linked financial institution and as mentioned before, the authoritarian Malaysian state does not tolerate dissent kindly. The Tabung Haji (or, in English, The Pilgrims Management and Fund Board of Malaysia) was set up with the single purpose of enabling Malaysian Muslims to be able to afford the cost of at least one trip to perform the Hajj in Mecca. It also organises the entire pilgrimage, taking on the role of travel agent. The savings of Muslim depositors (Tabung Haji now receives deposits from Muslims all over the world) are invested by the Tabung Haji in Syariah-compliant financial vehicles. In the late 1990s, the Tabung Haji had ruled that it would not invest in tobacco companies because they promoted *haram* (religiously immoral and forbidden in Islam) activities such as rock concerts and addictions (for example, the drinking of alcohol) (Zakiah Koya, no date; Muhammad-Bashir Yusuf, 2011).

Malaysian religious authorities had also declared investments in tobacco companies as *haram*.

It was not part of the Bukit Merah campaign strategy to question Tabung Haji as to whether investing in a business activity that exposed many people to low-level radiation was immoral in the eyes of Islam. This again, illustrates the delicate balance activists had to maintain – of having to act within acceptable limits placed by the state but with an inspiration to find the most effective way to bring about change. NGO activists settled on Mitsubishi Kasei as a main target through whom external pressure could be placed to elicit a response internally because the Malaysian companies and the government have been normally not as responsive to local or national campaigning (see p. 50, **Chapter 3.1 Social movement theories** for an explanation of Keck and Sikkink's (1998) 'boomerang pattern'). CAP utilised its experiences and links to large transnational advocacy networks to launch an international campaign. CAP activists, other Bukit Merah campaigners and their international advocacy partners not only acted as political entrepreneurs, carefully choosing the appropriate target (Mitsubishi Kasei) for campaigning, but also went venue shopping to search for a more receptive political venue (in Japan as well as internationally, as opposed to restricting campaigning to within Malaysia) (see Keck and Sikkink, 1998).

Even though CAP extended support and resources to the Broga campaign, it did not play as large a role as it had in the Bukit Merah campaign. The grassroots campaigners of Broga who lived near to the proposed incinerator exerted their agency, and leadership came primarily from them in terms of the direction of campaigning. There were several reasons for this. First, the campaign was multi-racial and cut across class. From the beginning, there were many middle-class professionals from all major races (Indian, Malay and Chinese) who were actively organising against the proposed incinerator. It was only later that Ms Alice Lee, who had a rural and working class background, emerged as one of the two co-leaders of the Broga campaign. Second, the national political context had changed quite dramatically. *Reformasi*, which began in 1998, saw the masses taking to the streets with a new political consciousness of rights and demands for increasing spaces of democracy (Chapter Five). Experiences of 'doing' protest actions fuelled a greater sense of agency. Hence, the growing voices of

not just the middle classes but also for some individuals such as Ms Lee, who came from a rural and working-class background, were being heard, if not listened to.

A few years before the start of *Reformasi*, street demonstrations involving thousands of people were a rare occurrence (Weiss, 2006). However, now, Malaysians took to the streets not just in regards to political and economic issues but also to address environmental concerns. Environmental issues were beginning to be regarded as not just about lifestyle concerns. For example, when *Himpunan Hijau* (Green Coalition), a campaign group protesting against the operations of the Lynas Advanced Materials Plant (LAMP), asked the Malaysian public to join them for their 14-day, 300 km Green Walk from Kuantan to Kuala Lumpur in November 2012, more than 20,000 people showed up at Dataran Merdeka, Kuala Lumpur, the final rally point before the end of its walk at Parliament (Lee Long Hui, 2012; Boyle, 2013).¹⁰⁶ Never has an environmental campaign attracted that many people in protest actions in Malaysia. Lynas is an Australian mining company which built the world's largest rare earth elements extraction plant in Kuantan, after having been granted pioneer status - a 12-year tax exemption- to operate in Malaysia (Bradsher, 2011a). What was different in the current political context of Malaysia was that nationally, environmental concerns were now linked to larger debates of good governance, rights and democracy, and to attempts to alter dominant power arrangements – similar to many environmental justice campaigns in other countries that link social justice with environmental concerns (Pulido, 1996).

While the Broga campaign emerged at the end of 2003, a few years after the beginning of *Reformasi* in 1998, and before the large environmental protests witnessed in 2011-2013, it was nevertheless situated in a political context of change. This was (and still is) a period of many changes with widespread demands for greater civil liberties, independence of the judiciary, a free press, and criticisms of corruption, cronyism and nepotism by opposition political parties, civil society and many ordinary citizens

¹⁰⁶ This was said to be the largest environmental protest march in Malaysia's history. *Himpunan Hijau* went on to collect 1.2 million signatures in a petition calling for the pull-out of Lynas from Malaysia between September –November 2013. After that, in November 2013, they camped outside the headquarters of Lynas, Sydney, Australia in the days before its annual general meeting (AGM). They leafleted outside the AGM urging shareholders to divest their Lynas shares. In Sydney, *Himpunan Hijau* received assistance from Stop Lynas!, an Australian affiliate campaign of Friends of the Earth Australia (<http://foe.org.au/articles/2013-11-26/shareholders-urged-divest-lynas>).

(Verma, 2004; Weiss, 2006). These demands also included calls by Islamists for Islamisation, which was seen as the solution for the perceived moral decay of government and society. As such, both the Broga campaign tone and leadership reflected at the grassroots level what was happening politically at a national level. The rhetoric and demands were focused on justice, transparency, accountability, right to know and to participation; and the eventual leadership evolved into a Malay-Chinese partnership, reflecting the attempts of opposition party politics to undo the racialised divisiveness of politics (Chapter Five).

To summarise, this section has highlighted how environmental justice travelled into Malaysia through the organisation, Consumers' Association of Penang. Concepts of environmental justice were adapted to fit the particular political, economic and cultural settings in different periods of Malaysia's history. It is not just processes of history that are important, but also the evolution of social movements in response to changing politics and civil society. Of importance to note is how the use of the environmental justice in the era of the Bukit Merah case was more restricted compared to that in the era of the Broga case. Less emphasis was placed on environmental concerns, participatory rights, and right to know, than rights to health and safety, thereby signifying how while the environmental justice can become a 'wedge' with which to open up spaces of debate, the amount of currency it gained had to be placed within larger structures of the particular period and site of conflict. The Broga campaign took place within the background of *Reformasi* politics. It was within this larger context of political and societal change that environmental justice concepts and discourses had come into its own: because there was now a growing public consciousness that linked environmental issues to questions of social justice, good governance, rights and democracy.

9.3 Outcomes of the Broga and Bukit Merah campaigns

What are the consequences of such acts of claiming rights through environmental justice? As discussed in **Chapter 8.5 Litigation**, formal claims of human rights, premised on claims of equal health rights, did not find any favour with the authoritarian state as seen in the failure of the Bukit Merah case in the Supreme Court. While such a position did not provide legal victory, informal practices of claiming citizenship

through campaigning, the use of discourses of rights and environmentalism, protest actions and through international lobbying, all generated consequences that are still meaningful today. Some of these consequences affected some campaigners at a personal level and for others, at a communal and bureaucratic level.

In the case of Broga, Ms Lee, who had never voted in an election prior to her involvement in the Broga campaign, has now voted in every election (Interview, Ms Alice Lee, Kajang, 01-08-2010). Not only did she develop confidence and acquired a consciousness of her rights, she has now a sense that she has the power to make things happen. She said, 'I used to worry when I received a parking ticket, but now, that's a small matter compared to all the obstacles I had faced during the Broga campaign' (Interview, Ms Alice Lee, Kajang, 11-05-2009). She has found it quite incredible that she, described in her own words as 'a nobody,' made many public speeches and held meetings with powerful bureaucrats and politicians in the course of the campaign. In other words, Ms Lee was politicised through her experiences of campaigning. Thus, with a new consciousness and understanding of power, democratic politics and a sense of empowerment, Ms Lee now regularly volunteers at the local level in elections (for example, performing as an usher in local polling stations), gives talks when requested during electoral campaigning, and helps out in other ways when approached by those opposition political parties who had previously given support to the Broga campaign. It is not just Ms Lee, but also a handful of other Broga villagers who have been politicised. They had played mostly a supportive role to Ms Lee as she led the Broga campaign, and they now would come together to take action on any pressing issues of concern in the village of Broga (Interview, Ms Alice Lee, Kajang, 01-08-2010).

Furthermore, Ms Lee made use of her newly-found confidence and newly-formed political and social networks, in order to organise the procurement of long-term leases for lands on which the homes of Broga New Villagers stood. She organised the applications of over 100 households for long-term leases. Politicians seeking re-election during electoral campaigning repeatedly promised voters the procurement of long-term leases, but nothing had ever materialised. Initially, Ms Lee was not successful despite repeated attempts at applying for long-term leases at the District Land Office (in Bangi, Selangor). However, after 2008, when the state of Selangor (of which Broga is part of) fell into the hands of the opposition, Ms Lee tried again. With help from her

political and social networks, and after more than 30 visits to the Bangi Land Office in order to check-up on the slow wheels of Malaysian bureaucratic processes, Alice managed to obtain long-term leases for over a 100 households in Broga NV (Interview, Ms Alice Lee, Kajang, 20-03-2013).¹⁰⁷

Another milestone of note, was Ms Lee's idea, supported by those who made-up the village committee (JKKK)¹⁰⁸ of Broga, to ask the new village headman to sign a pledge to transparency, accountability and good governance when taking up the post of village headman (Interview, Ms Alice Lee, Kajang, 01-08-2010). Previously, the former members of the JKKK, who were also party members of the Malaysian Chinese Association (MCA), had tried to silence opposition to the proposed Broga incinerator.¹⁰⁹ However, after the 2008 general elections when the state of Selangor fell into the hands of the opposition coalition, all the members of the Broga JKKK were replaced by new members chosen by Broga villagers. The chosen candidate for village headman was Alice Lee but despite declining the position and settling for the position of secretary, she helped to ensure that the new village headman signed a good governance pledge. The signed pledge was pinned up on a public bulletin board in Broga NV (Interview, Ms Alice Lee, Kajang, 01-08-2010).

Although Ms Lee was politicised through her role in campaigning against the Broga incinerator project, she was not trying to change gender roles – something others have noted too (Di Chiro, 1995; Bullard and Smith, 2005). Ms Lee co-led the Broga campaign and was the only person from the Broga campaign to bring the state and business interests to the law court. In a male-dominated society like Malaysia,

¹⁰⁷ A distinction has to be made between the states of Selangor (where Broga is located) and Perak (where Bukit Merah is located) in terms of access to agricultural land. While Bukit Merah villagers have not been able to access agricultural land, Broga villagers have been able to do so. As described on pp. 125-130, **Chapter 5.1 The marginalisation of the Chinese: from colonial Malaya to New Villages**, this is because of shortage of available land in Perak from competing interests such as population pressures, mining, timber extraction and plantation activities, as well as Malay objection. However, Broga is located in an area where mining ceased many decades ago, and where there is relatively less population pressures which means there is less competition for land.

¹⁰⁸ In Malay, Jawatankuasa Kemajuan dan Keselamatan Kampung (JKKK).

¹⁰⁹ MCA is one of the three main political parties in the ruling coalition, Barisan Nasional. As is usually the case in many campaigns protesting against a decision that is made by the government, besides NGOs, the Broga campaigners were also supported by opposition political parties such the Parti Sosialis Malaysia (PSM; or in English, the Socialist Party of Malaysia) and Parti Islam Se-Malaysia (PAS, or in English, Pan-Malaysian Islamic Party). Hence, once the state of Selangor (of which Broga is part of) fell into the hands of the opposition coalition, the members of the JKKK who were all also members of the MCA, resigned (see Chapter Five for information about politics in Malaysia).

occupying such positions (co-leader of a campaign and the sole plaintiff bringing the government to court) is not a common occurrence for a woman. Thus, while the primary objective of an environmental justice movement such as Broga is not to change traditional gender roles, it did challenge such roles at various scales.

Another example of change at a personal level was through the changes in the occupational circumstance for Mr Phang Kooi Yau, one of the leaders of the Bukit Merah campaign. Mr Phang demonstrated greater awareness of environmental issues following his campaigning experiences. When he and two other Bukit Merah villagers visited Japan to lobby Mitsubishi Kasei in 1992, they also visited several NGOs in Minamata city. Minamata was home to many community NGOs concerned with environmental issues and green living because of their historical experiences with severe mercury poisoning in the Minamata Bay area in the 1950s, 1960s and 1970s. One of those NGOs manufactured and sold environmentally-friendly laundry soap,¹¹⁰ and proposed to Mr Phang that they teach him to start a small soap-making business and would also provide start-up seed money for which they did not expect repayment. The NGO saw this as one of the ways to spread the message of living in a green manner. According to Mr Phang, the seed money together with investments from himself, family, friends and relatives enabled him to start his soap-making business but it did not perform well. While Mr Phang managed to recover costs, it was only after about 20 years of manufacturing that he started making a profit. Today, he is exporting to several countries such as Singapore, Taiwan and Australia (Interview, Mr Phang Kooi Yau, Bukit Merah, 18-07-2009).

The Bukit Merah campaign had many implications beyond transforming the political subjectivities of the villagers of Bukit Merah as outlined above. It also served a transformatory role in the political consciousness of the Malaysian public, for transnational environmental campaigning as well as for better regulatory and institutional health and safety processes. In regards to this, some examples of the results of the Bukit Merah campaign are described below.

¹¹⁰There are many NGOs and community organisations in Minamata city that are concerned with sustainable living and are involved in the production of green products (Interview, Mr Phang Kooi Yau, Bukit Merah, 18-07-2009).

First, campaigners found that knowledge and campaigning experiences gained were empowering processes that could be shared with others. For example, many villagers and members of the public became aware of the potential risk of exposure to low-level radioactivity. Most Bukit Merah villagers as well as those from surrounding villages had not known what ionising radioactivity was, much less the possible effects of its exposure on human health and the environment. Both the knowledge of ionising radiation and its effects, and the experiences of campaigning against the Asian Rare Earth (ARE) provided knowledge and lessons from which activists for the current, on-going anti-Lynas campaign could learn from. Mr Hew, one of the leaders of the Bukit Merah campaign, has made several trips to Kuantan, Pahang, to hold ‘sharing sessions’ with those active in the anti-Lynas campaign (Interview, Mr Hew Yoon Tat, Bukit Merah, 15-08-2010).

Second, the Atomic Energy Licensing Board (AELB) was set up in response to campaign activities against the ARE. Although the government had plans in place for an atomic regulatory body, it had not come into existence and was only subsequently formed in 1985, amidst a national campaign against the operations of the ARE and more than two years after the start of large demonstrations in the village of Papan - the original proposed site of a long-term storage facility for waste produced by the ARE.

Third, the existence of the AELB meant that there was now a regulatory body to ensure that health and safety standards, according to national legislation were adhered to in terms of managing non-medical radioactive material. The AELB monitored the Lynas Advanced Materials Plant (LAMP) plant, while it was being constructed in Gebeng, near Kuantan, Pahang. Despite the completion of the construction of the LAMP in 2012, commercial production only began in June 2013 due to delays in obtaining final permission from the AELB amidst large protest actions in Malaysia as well as internationally (Bradsher, 2011a; Tanquintic-Misa, 2012; Friends of the Earth Australia, 2013). Needless to say there are currently several on-going campaigns, involving transnational campaigning with many demonstrations having taken place in both Malaysia and Australia. Campaigners are concerned with the potential environmental and health problems from rare earth elements extraction processes, the long-term storage of low-level radioactive waste, and with the fact that large amounts of radioactive ore will be imported for processing from Mount Weld, Western Australia,

as well as other parts of the world (www.savemalaysia-stoplynas.blogspot.co.uk/; www.stoplynas.org/campaign/). As of December 2013, three deaths have been reported: two occurring on the grounds of the LAMP, and the third was attributed to the development of complex respiratory problems after the deceased worked at the LAMP for 12 months. Reports of these deaths have fuelled fears of the continued operations of the LAMP (www.savemalaysia-stoplynas.blogspot.co.uk/).

Lynas is argued to have relocated a polluting industry to Malaysia because of cheaper production costs, and more lax environmental, health and safety standards (Friends of the Earth Australia, 2013).¹¹¹ Therefore, despite nearly 30 years separating the anti-ARE and the anti-Lynas campaigns, such international travelling of global toxic materials not only makes transnational movements for environmental justice a necessity (see Pellow, 2007), but it also reinforces the power of the polluter-industrial complex in an age of globalisation (see Faber, 2008). The silver lining in the anti-Lynas campaign is that due to the history of the Bukit Merah campaign and the experiences of the AELB in managing the anti-ARE conflicts, the LAMP now operates within relatively higher standards of health and safety compared to the operations of the ARE. As Raja Dato' Abdul Aziz, the DG of the AELB has pointed out: 'We have learned [sic] we shouldn't give anybody a free hand' (Bradsher, 2011a).

Fourth, the organising of transnational advocacy networks also improved through the experiences of the Bukit Merah campaign. CAP, in its role as a superstructural node and as part of large international advocacy networks saw a gap in the needs of lawyers and

¹¹¹ The world rare earth element trade is today a very lucrative one because increasingly, many technologically advanced items are utilising rare earth elements: smartphones, laptops, wind turbines, hybrid electric cars and smart bombs (Jefferies, 2014; Bradsher, 2011a). However, in the developed world, production of rare earth elements had almost completely ceased because of high production costs. Not only is the cost of labour high, stringent health and safety and environmental regulations have contributed significantly to the costs of rare earth element production. By 2010, China had cornered 97% of the world trade in rare earth elements (Poole, 2012). In that year, due to a territorial spat with Japan, China imposed a temporary embargo on rare earth element exports to Japan (Poole, 2012). China also began restricting the quantity of rare earth elements it exported to Europe and the USA. This made many corporations and countries nervous about the economic harm caused to their businesses. Thus, many mining companies which had abandoned their mines and rare earth element extraction facilities began to re-open them. For example, Molycorp, a USA-based rare-earth business, re-opened its Mountain Pass mine in California to mine ore from which rare earth elements would be extracted in an adjacent, newly rebuilt refinery (Poole, 2012). Likewise, in Australia, Lynas re-opened their closed mine in Port Weld, Western Australia. However, instead of extracting rare earth elements locally in Australia, they decided to locate their refinery in Malaysia. Lynas' executive chairman, Nicholas Curtis, said it would cost four times as much to build and operate such a facility in Australia (Bradsher, 2011a).

activists involved in environmental litigation in developing countries. CAP lawyers relied substantially on those networks based in Japan and the USA in order to gather evidence, investigate claims made by the ARE and the background of experts hired by the ARE to testify in court. CAP also relied on those same networks for expert knowledge, information and to make contact with international experts who could testify for Bukit Merah residents in court. According to Ms Meena Raman, one of the lawyers for Bukit Merah residents, as a result of the experience of taking the ARE to court, ‘... an international network of environmental lawyers has been formed, called Environmental Law Alliance World-wide (E-LAW) to assist environmental lawyers around the world who have similar struggles’ (Raman, 1999).

Finally, unexpectedly and surprisingly, the Bukit Merah campaign yielded two positive outcomes. The first is the decommissioning and decontamination (D and D) of the ARE facility and the clean-up of all other known places where waste from the ARE was indiscriminately dumped. The second was the payment of compensation to Bukit Merah villagers by Mitsubishi Kasei.

First, the D and D were carried out by radioactive waste management experts. The ARE facility (buildings and equipment) as well as waste was sent to a long-term storage facility (LTSF), constructed six kilometres from Bukit Merah (Fieldnotes, 10-08-2010). All clean-up costs, and the construction and management of the LTSF were borne by Mitsubishi Kasei at the cost of USD 100 million (Bradsher, 2011b). This investment in a LTSF is being carried out without a legal order to do so. It is the ‘largest radiation clean-up yet in the rare earth industry’ (Bradsher, 2011b). The process of immobilising and storing the radioactive waste was still on-going in 2010 (Field visit with the AELB, Bukit Merah, 10-08-2010). Furthermore, the monitoring of the LTSF has meant that the Malaysian atomic regulatory agency, the AELB, has been able to build capacity and skill in monitoring and safeguarding a large nuclear waste storage facility according to international standards. This capacity building experience is something that the Director-General of the AELB is proud of (Interview, Raja Dato’ Abdul Aziz Raja Adnan, Dengkil, 06-08-2010).

Second, Mitsubishi Kasei paid compensation to Bukit Merah campaigners. This move was unsolicited and took place at the point of D and D of the ARE, and about 10 years

after the Supreme Court decision where the Bukit Merah residents were ordered to pay costs to the ARE, the ARE approached one of the leaders of the Bukit Merah campaign to offer compensation in either 2003 or 2004¹¹² (Interview, Mr Hew Yoon Tat, Bukit Merah, 13-08-2009). The amount agreed upon, RM 500,000, was used to establish an interest-free loan facility for the local tertiary education of students from low income families. In a public ceremony, the cheque was handed directly to *Dong Zhong* (in English, the United Chinese School Committees Association of Malaysia) who has been managing and disbursing the funds annually.

9.4 Environmental citizenship

The descriptions of some of the effects of the Broga and Bukit Merah campaign above demonstrate that those acts of rights-claiming in the name of environmental justice (for distributive justice, recognition, information and participation) can have powerful consequences. Some researchers have noted how environmental justice movements have provided new spaces for class-based political mobilisation in an age of neo-liberal globalisation where labour rights have eroded (Harvey, 1996; Schroeder et al., 2008). Indeed, in both Broga and Bukit Merah, campaigners emphasised the poor and stigmatised status of those most severely affected, and by grounding campaign claims as rights, new spaces of debate and accountability are opened up and campaigners become empowered. Claims were grounded in concepts of rights precisely because they became meaningful only when grounded in such a manner (see Gaventa, 2002; Cornwall, 2002a).

Therefore, the utilisation of the notion that one has the right to have rights or can claim rights, as found in those demands in the environmental justice frame, means the position as claimant is strengthened (Somers, 2008). Instead of being passive recipients of rights as found in traditional Western notions of citizenship, those who claim rights are enacting or claiming citizenship (Isin et al., 2008) (Chapter Three). In Chapter Three, I argued that it is important to read environmental justice through the lens of citizenship. When rights are claimed or demanded, the question that inadvertently follows is who has rights – who qualifies and on what basis are rights granted? Rights

¹¹² Mr Hew was not able to remember if it was in 2003 or 2004 when he was approached to discuss the matter of compensation.

are dealt with in the literature on citizenship; however, the focus is generally on formal mechanisms such as political, legal and civil rights (see Gaventa, 2002). The intersection of formal rights with social, economic, environmental and knowledge rights is rarely studied, and it is this which provides the focus for this study. Emphasis is also given to the nature and definition of rights but with little attention paid to how marginalised people perceive their rights. These perceptions will influence how marginalised people make claims and demands through political or social mobilisations, and are bounded by issues of knowledge/power and representation and differences in identity (see Gaventa, 2002). These boundaries are not static but are tied to processes of change and engagement with larger political and social forces (see Gaventa, 2002).

Thus, in this study, through an examination of perceptions from the opposing sides of two conflicts - from above and from below - and through an examination of larger political and social forces, a more accurate understanding is elicited by why and how demands or claims for rights and justice are being made. By understanding those various perceptions, participation exercises or programmes that are relevant can be more effectively created for marginalised peoples (see Gaventa, 2002). In claiming legitimacy through their experiential knowledges of ill health, and in disputing scientific claims and presenting alternative scientific views, and in demands for participation, campaigners of Bukit Merah and Broga questioned the undemocratic nature of scientific debates and decisions, as well as assumptions about their roles as found in the risk discourse of official and authoritative science. In other words, campaigners were demanding for new participatory rights based on ideas of cognitive justice or knowledge rights. Such actions in demanding rights enlarge the role and agency of ordinary citizens, thus broadening the politics and notions of citizenship (e.g. Leach et al., 2005; Latta 2007, 2008). Participation, in the sense of knowledge rights and identity formation around claiming the capacity for judgement, links issues of redistribution and recognition. Thus environmental justice is a site where the dimensions of redistribution, recognition and participation are linked and politicised. This means that a broader politics of citizenship are involved as the character of democratic institutions and relations of power more generally are brought into question (Latta, 2007).

Furthermore, in asking questions concerning social justice and in demanding rights, campaigners are performing their fundamental right to have rights (Isin, 2002, 2008) (Chapter Three). This way of viewing acts of claiming rights as a definition of a practice of citizenship, is a departure from the traditional orientation in which citizenship studies are conducted (Chapter Three). Citizenship is regarded as not just either status or practice but as a mediation between experiences and formal entitlements in which the boundaries of belonging to a polity are contested, extended and redefined (see Latta, 2008). In other words, those acts of contestation or of being political are very much part of what citizenship means (e.g. Jelin, 2000; Isin, 2002; Kabeer, 2005; MacGregor, 2006; Latta 2007, 2008; Smith and Pangsapa, 2008) (Chapter Three). As such, the actions of claiming rights to health and safety, to a clean environment, to information, participation and recognition whether formally or informally mean that non-state actors (for example, individual campaigners and NGOs) now have a larger role in claiming, monitoring and enforcing rights. This also means that the nation-state is no longer regarded as the sole custodian of citizenship (Newell, 2006). Furthermore, by trying to hold transnational business interests accountable for environmental ills, the transnational arena has become a site of contestation for ‘articulating rights claims and for establishing the ties that bind which have the potential for generating obligations and duties’ (Smith and Pangsapa, 2008, p. 51) – as was observed in the decision of Mitsubishi Kasei to commit to undertaking the largest rare earth industry clean-up operation of the ARE facility. Such a move shows that citizens’ involvement in a transnational arena with a transnational force in the contestation of citizenship practices (or the meaning of citizenship) may present opportunities for promoting environmental responsibility in the corporate sector.

In an age when neoliberal ideology intersects with environmentalism – where the deregulation of economies and politics coincide with an emphasis on personal attitude change such as green consumerism, the reduction of carbon footprints and an emphasis on less polluting modes of transportation – environmental justice is demanding the opposite (see p. 59, **Chapter 3.2 Environmental justice theories**). Rather than focusing on individualised responsibility, environmental justice demands more regulations of toxic waste and polluting industries using discourses of rights and agency. Unlike neoliberal ideology, which centres on the importance of individuals, such a perspective emphasises the importance of communities (Latta, 2008; see also

Harvey, 1996). As inequality becomes embedded in both landscapes and neighbourhoods and ‘. . . more generally in the ecological metabolisms through which human society reproduces itself, both locally and on a global scale, environmental justice has opened up a new terrain for social politics’ (Latta, 2008, p. 257). The contestation of redistribution and recognition aspects of environmental justice brings socio-economic power relations into public scrutiny, thereby also contesting the socio-economic dimensions of citizenship.

As environmental justice shifts the meanings of citizenship through expanding citizens' capacities to actively politicise the understandings of ecology and the broader social relationships that constitute such understandings, environmental justice should also be read through the lens of environmental citizenship (Latta, 2007, 2008). As discussed in Chapter Three, concerns with citizenship issues in political and social theorising have seen a parallel in green theorising because of interests in promoting ‘greener’ forms of political organisation (Barry, 1999; Dobson, 2003; Latta, 2007). However, current understandings of environmental citizenship framed largely through ideas of personal responsibility and governance institutions are lacking in democratic politics, and have the effect of narrowing space for democratic exchange in regards to nature. However, such democratic politics abound in environmental justice discourses (Latta, 2007). Demands for the recognition of identity and place (poverty, New Villages/places of stigmatisation) and the contingent nature of all knowledges; for recognition of experiential knowledges (experiences of ill health); for access to information; for more local autonomy in economic decisions;¹¹³ and for participation in decision-making processes all together comprise demands for more democratic processes and politics. In these ways, environmental justice expands regimes of citizenship for democratic exchange.

Concepts of environmental citizenship based on individual choices through green consumption and lifestyle issues, might not necessarily resonate with many of the poor in developing countries (Martinez-Alier, 2002; Latta and Wittman, 2010). This is not to say that issues of environmental responsibility and the promotion of the understanding of reasons for personal change in reducing one's carbon footprint are unimportant.

¹¹³ The proposed incinerator in Broga would not have incinerated solid waste generated locally but that from Kuala Lumpur and its urban conurbation.

Besides being resource poor (for example, the poor are less likely to get on an aeroplane to go on holiday), many marginalised peoples do not have or have poor access to basic public goods and services such as health, housing and education. As such, in environmental justice struggles such as Broga and Bukit Merah where environmental burdens are placed or threatened to be placed on already largely poor peoples, the issue of rights to justice, participation and recognition of their conditions take priority over 'personal responsibility' approaches towards the environment. A similar parallel can be drawn with the environmental justice work of Taylor (1992) with urban minorities in the US. She found that lower income communities and poor people of colour are concerned with environmental issues that affect their standard of living rather than some far-away notion of wilderness that they may not travel to (Taylor, 1992). Likewise, in writing about issues of identity and citizenship in agrarian conflicts involving Brazilian peasant farmers demanding for land rights in the Amazon, Wittman (2010) calls for a broadening of an understanding of environmental citizenship beyond issues of sustainability. By linking the politics of nature to questions of justice, there can be a new basis for understanding environmental conflicts in the Global South, where many such conflicts are tightly bound up with issues of human rights, democracy and social and economic justice (Pellow and Brulle, 2005; Wittman, 2009). To illustrate the point, there were attempts to encourage the recycling of household waste at Broga which were not successful. In the midst of campaigning, Broga residents were host to many talks, one of which was by an environmental organisation which gave a presentation on the importance of consumption patterns, recycling and the reduction of waste. Initial attempts at recycling in Broga at the village level never took off (Interview, Ms Alice Lee, Kajang, 11-05-2009). It was not just a simple issue of apathy amongst residents, although this may have played a part. These were private, communal efforts directed at behaviour change vis-à-vis recycling but with no support from the existing system of collection of household solid waste, which resulted in many problems with separation of waste and with arrangements for private collection of recyclables. However, during interviews with campaigners at the grassroots, most participants said that recycling was a good idea but in reality, most did not recycle. This reinforces the fact that unless there is systematic and large-scale support in recycling through the existing solid waste collection system, individual efforts at the village-level may not work. Furthermore, change at a personal-level in terms of recycling behaviour was also influenced by becoming politicised, as Ms Lee did through processes of

claims-making for a wide-range of rights. Although Ms Lee has now moved away from Broga to live in a town nearby, she recycles as much of her waste as possible. By becoming politicised, she gained not only empowerment but also a greater sense of environmental responsibility. That is to say, with the dawn of awareness of the fact that she has the right to have rights, she also became much more aware of issues of personal responsibility.

In the context of Malaysia, where there is a highly unequal distribution of social and environmental rights, conceptions of rights and responsibilities have to evolve together. Environmental citizenship approaches that narrowly focus on personal responsibility need to be widened to include democratic politics in terms of issues of distributive justice, recognition and participation, because understandings of environmental responsibilities cannot be separated from questions of distribution of power and rights (e.g. Bickerstaff and Walker, 2002; Wittman, 2010; Clarke and Agyeman, 2011) (Chapter Three).

To summarise, the connection of environmental justice to environmental citizenship is clear in the context of Malaysia. Other campaigns calling for more democracy across a wide range of issues increasingly find resonance with environmental justice campaigns, something which has never happened before. Widespread agitation for greater civil liberties, independence of the judiciary and a free press; and criticisms of corruption, cronyism and nepotism converge with environmental justice campaigns. As a result, campaigns couched in the language of environmental justice now often draw many more supporters than they did in the past. When the Broga campaign unfolded in 2003 after *Reformasi* (which began in 1998), there was more widespread public support at a national level than was evident when the Bukit Merah campaign took place. Today, environmental justice campaigns have incrementally drawn greater public support as observed in the Green Walk rally organised by anti-Lynas campaigners. By being political, environmental justice campaigners assert their agency; no longer acting as citizens who occupy a passive position as receivers of rights, but rather, by being ‘makers and shapers’, they contest and enlarge their role in participatory democracy (Cornwall and Gaventa, 2001). In essence, campaigners question the rights (knowledge rights included), practices and identities of citizenship. Thus, it makes sense to read how the discourses and practices of environmental justice transform the meanings of

citizenship, specifically, an environmental citizenship that asks how responsibility is distributed relative to power.

9.5 The limitations of environmental justice

Environmental justice campaigning in Malaysia has now become part of wider Malaysian struggles for better governance, greater civil liberties, independence of the judiciary and a free press. In other words, it is now part of a larger national movement for democracy. However, researchers warn that the environmental justice agenda stands in danger of being co-opted by the agenda of good ecological governance because demands for inclusion in decision-making processes are refracted through the neoliberal ideology of ecological modernisation (Christoff, 1996; McDonald, 2008; Scott and Oelofse, 2005; Latta, 2008). The good ecological governance agenda embraces ideas of participation and recognition. Such a collaborative approach is not as benign as it seems. Claims for distributive justice, participation and recognition are ‘. . . taken up by dominant political actors and woven into policy structures whose real goals and functions are to protect the reigning socioeconomic model’ (Latta, 2008, p. 254). Scott and Oelofse (2005) observe that impact assessment has failed to achieve inclusive participation in South Africa, and that there are few instances where substantive rights were translated into concrete legal or policy outcomes despite South Africa enshrining rights to a healthy environment and to participation in environmental assessment in its Constitution (see also McDonald, 2005, 2008). McDonald (2008) suggests that this is due largely to the South African government’s adoption of neoliberal economic policies, and associated ideas of ecological modernisation.

Likewise, in Malaysia, there is a similar embrace of neoliberal ideology for pursuing solutions to waste management (see p. 154, **Box 6.1 Kualiti Alam Sendirian Berhad**; pp. 136-138, **Chapter 5.2 Sustainable development**). Legislation for hazardous waste management was formed in consultation with business interests and with the advice of DANCED (Danish Cooperation for Environment and Development), and modelled on Danish legislation in order to provide for the privatisation of waste management. Kualiti Alam, who was awarded the concession to process hazardous waste, is a Danish-Malaysian private waste company formed as a result of the formation of waste legislation that encouraged the private management of hazardous waste (see p. 154, **Box**

6.1 Kualiti Alam Sendirian Berhad). The opposition to the Kualiti Alam project fizzled out after being demobilised by narratives of economic progress and development, and by the co-optation of landowners through the re-zoning of agricultural land to industrial land, thus raising its market value. Malay villagers were encouraged to acquire shares in Kualiti Alam as part of the government's affirmative action plan to promote Malay ownership of corporate equity.¹¹⁴ By doing so, these Malay villagers were 'participating in development' (p. 153, **Chapter 6.2 Acceptable risks and expert solutions**). The situation in Malaysia is similar to that found in studies elsewhere in the developing world where narratives of development, modernity and progress are used both to legitimise private gains and unequal decisions taken by various developing country governments (Wright and Wolford, 2003; Leichenko and Solecki, 2008; Sneddon and Fox, 2008; Schroeder et al., 2008).

As part of the embrace of ecological modernisation, a technocratic approach using the private sector to provide solutions to development objectives (sustainable development) is preferred.¹¹⁵ This is reflected in the capital intensive and high-technological solutions used to manage solid waste in Kuala Lumpur, as was seen in the proposed Broga incinerator project. In interviews with bureaucrats, I was informed that incinerators were used widely in 'advanced' places such as Japan, South Korea, Scandinavian countries and the United Kingdom, and that incineration was regarded as modern, technologically advanced, clean and reflective of development progress – thus, signifying that Malaysians had nothing to worry about in using incineration technology. The bureaucrats interviewed also thought that Malaysians were overly worried about incinerators probably because they were not used to living with incinerators unlike the citizens and residents of 'developed' countries who were used to living alongside incinerators, or to the idea of incineration (Interviews, Dato' Nadzri Yahaya, Kuala

¹¹⁴ As in many government policies, decisions are organised along racial lines. Even though Kualiti Alam incinerators sit amidst seven Chinese New Villages compared to five Malay villages, only the Malays were offered shares (p. 154, **Box 6.1 Kualiti Alam Sendirian Berhad**). For more information regarding Malaysia's plan to promote Malay ownership of corporate equity see Gomez and Jomo, 1997.

¹¹⁵ In line with this approach, the Solid Waste Management and Public Cleanliness Act 2007 (Act 672) was enacted. Solid waste management was transferred from local councils into the hands of the Federal Government under the administration of the Department of National Solid Waste Management. The Act came into effect on 1 September 2011, and is applicable throughout Peninsular Malaysia, the Federal Territory of Putrajaya and Labuan except the states of Selangor, Perak and Penang (www.kpkt.gov.my/kpkt_bi_2013/index.php/pages/view/358). It grants licences and approval to private concessionaires who bid to manage solid waste – from collection and recycling, to building and operating waste transfer stations, landfills and incinerators (Interview, Dato' Nadzri Yahaya, Kuala Lumpur, 25-08-2010).

Lumpur, 25-08-2010; Dr Muhd Noor Muhd Yunus, Bangi, 24-08-2010). Dato' Nadzri also emphasised the fact that his department in charge of solid waste management had received advice on waste management policy from DANCED between the years of 1997-2004. This was to emphasise how the latest 'clean' and 'better' technology was being sought to find solutions.

Part and parcel of a technical approach is a rigid belief and trust in the concepts and tools of science as truth, and as an arbitrator of social problems (Chapters Three, Six and Seven). Dato' Nadzri (Interview, Kuala Lumpur, 25-08-2010) on this: '... yes, we know that dioxin causes cancer. I accept that qualification. The literature is all there. The question is how much of dioxin causes cancer. You have to follow the permissible levels'. Dr Muhd Noor Muhd Yunus also had similar things to say (Interview, Bangi, 24-08-2010):

Yes, there are studies that show dioxin is harmful to human health. . . [However, there is such a thing as] permissible levels of [dioxin] emissions which is 0.1 nanogram per metre cube. What this means is that the rate of cancer is less than one in one million. The public wants zero risk. That's where we disagree – as a technical person. There are other factors to consider such as the risk from smoking. . . The risk to your health is far greater from an activity such as smoking compared to the one in one million estimated for exposure to dioxin.

There was a clearly expressed belief that because the concepts and tools of science used to assess risk (risk discourse) are 'correct', technologies such as incineration or rare earth elements processing cannot be rejected in order to gain a balance between economic growth and environmental protection. The conflicts in the Broga and Bukit Merah campaigns have been reduced to technological problems that need technological solutions. As discussed in Chapters Six and Seven, it is clear that in the case of Malaysia, only scientific knowledge produced by expert-led, institutionalised science is considered as universally valid knowledge. Alternative understandings of protesting campaigners are held to be invalid. Despite the fact that risk assessment exercises were first used as a method to assess financial risk, over time, they had gained 'scientific' status (Jasanoff, 2005, p. 265). Therefore, they were regarded as a universally correct approach to solve problems of risk. Not only is the knowledge of such risk discourse contingent, as is all other knowledge, embedded in a risk discourse are assumptions about the roles of experts and lay persons. These assumptions are undemocratic (Chapter Six). The lay person is assumed to: (i) agree with the core definitions of risks

made by scientific experts; (ii) be exposed to high or low risks without taking into consideration local or contextual conditions (a bivalent view); (iii) be incapable of dealing with uncertainty and thus expect experts to deal with it; (iv) be only interested in the consequences of innovations; and (v) be unable to construct independent public meanings outside of expert-led, institutionalised science and state-authority (p. 67, **Chapter 3.3 Questioning science**). With these assumptions, there is little room for alternative understandings of risk. Which is why, according to Wynne (2005), in programmes or countries where community participation has been incorporated in risk assessment, there is little success of participation meeting the needs of those who have participated.

In the cases of Broga and Bukit Merah, participation was not meaningful in any way (Chapter Eight). Part of the reason was the lack of political will to provide genuine spaces for inclusion in decision-making processes (see pp. 210-214, **Chapter 8.2 A rights approach**). I also argue that another reason lies in the colonisation of environmental justice demands by the imperatives of green modernisation. Due to the rigidly held adherence to the validity of risk concepts such as ‘permissible levels’, all discussions with the state as well as with those business interests behind the ARE facility and the proposed Broga incinerator were severely limited to finding technological solutions to the issues brought up by campaigners. The multiplicity of meanings and definitions of what the conflicts in the cases of Broga and Bukit Merah were about were not regarded as acceptable by state-business authority (Chapter Seven). Issues of unequal distribution of environmental ills, poverty, experiential knowledges, personal experiences of ill health, alternative values and a sense of place, and an existing lack of trust were all factors influencing perception and actions of those who campaigned in Broga and Bukit Merah (Chapter Seven). Yet, none of these factors were recognised as valid discussion points, unlike technical details and discussions which were welcomed (Chapters Six and Seven). As such, the limited participation processes that were available concentrated on finding better technical solutions (for example, improving health and safety in the factory and proper disposal of waste produced in the case of the ARE, and installing a 50 metre chimney to funnel emissions further away in the case of the proposed Broga incinerator) (Chapters Eight). In other words, because the focus was on technical details, and how ‘scientifically correct’ risk

assessments were,¹¹⁶ there is little room for participation in terms of offering alternative views.

While there are limitations to the environmental justice frame, in terms of colonisation by ideas of ecological modernisation and by narratives of progress, development and modernity, environmental justice campaigners continue to be active through a wide range of actions from rights claims in courts to direct, political action, and through demands for better regulation and participation at different scales (see Schroeder et al., 2008). In the cases of Broga and Bukit Merah, demands for rights and participation were made formally as well as informally, campaigners formed strategic alliances with transnational advocacy networks and focused on communal wellbeing instead of individual rights (Chapter Eight). In other words, the environmental justice frame here emphasises issues of access, control, choice and participation – a far shift from the earlier origins of environmental justice (in the USA) which focused heavily on distributive outcomes and environmental racism. According to Cornwall (2000), claiming rights and making demands for participation are powerful forms of agency on the part of campaigners, constructing campaigners as political citizens, and not just as beneficiaries or consumers of development projects. Herein lies the power of the environmental justice frame: subaltern voices who politicise dominant socio-ecological orders through their demands for distributive justice, recognition and participation (see Latta, 2007). The demand for greater spaces of democratic participation by subaltern voices has implications for the definition and meanings of citizenship as discussed in detail in the previous section. As argued there, that because of the way environmental justice movements shift meanings of citizenship, it is then important to make connections between environmental justice and contemporary debates in environmental citizenship which arose from concerns for ‘greener’ forms of political organisation.

9.6 Conclusion

This chapter has contextualised the environmental justice campaigns analysed in the thesis by asking how the environmental justice frame travelled in Malaysia, and how environmental justice matters to shifting meanings of environmental citizenship. In

¹¹⁶ Risk assessment are now regarded as standard tools of science to estimate risk, and science is considered as universally valid knowledge – see Chapters Six and Seven.

Malaysia, the history and political dynamics of race, political change and state-civil society relations all impinge on how the environmental justice frame was used and expressed. Although race appeared to be a factor in siting decisions of a long-term waste storage facility in the case of Bukit Merah, it was not expressed as such in formal and public discourse. Race was not the only social distinction in determining the places of stigmatisation. Class was certainly another factor, and this was used as an explanation by campaigners as to why they were being discriminated against. No public claims of racial discrimination were made, reflecting the political realities of Malaysia. The way environmental and rights concerns as found in the environmental justice frame were altered also reflected state-civil society relations and the context of political change. Unlike the Bukit Merah campaign where health and safety issues were the primary focus, the Broga campaign equally emphasised participatory rights, a discourse of right-to-know and the health of the environment. This change was a reflection of the larger political change in the country where there has been a growing public consciousness that links environmental issues to questions of social justice, good governance, rights and democracy.

I argue that it is important to link environmental justice concerns to those of environmental citizenship precisely because of the centrality of democratic politics found in the environmental justice frame. Arguments for rights in terms of participation, distribution and for recognition are also part of what democratic politics are about. Without those democratic politics, there would only be partial understandings of many Global South environmental justice conflicts which are defined by the ecological dimensions of social injustice. Environmental justice demands for more regulations against the unfair and unequal distribution of environmental ills, and together with its emphasis on communal wellbeing contrast with a neoliberal approach to environmental protection and economic growth (green modernisation). In such an approach, economic growth is not regarded as in opposition to environmental protection as advances in technology would enable technical solutions to be found to environmental problems. The demands for environmental justice stand in danger of being colonised by green modernisation which embraces the language of participation and rights without actually translating such language into concrete legal, policy or political outcomes. Solutions still remain welded to technological advances, rather than to alternative knowledges. Therefore, it is important not just to talk of environmental justice but also to talk of the

environmental citizen who actively claims his/her agency by contesting dominant socio-ecological orders and power. Such a conception of an environmental citizen is also important because in the context of limited social rights, conceptions of an environmental citizen as one who takes personal responsibility to reduce a personal ecological footprint has little resonance with poor, grassroots environmental justice campaigners. Despite the limits placed by a green modernisation discourse adopted by the state and corporate sector in Malaysia, acts of claims-making in the local, national and international arenas enabled campaigners of Broga and Bukit Merah to feel empowered by their experiences of campaigning. As outlined above (**9.3 Outcomes of the Broga and Bukit Merah campaigns**), while the actual material gains may not have appeared to be substantial, gradual incremental changes in terms of not only personal empowerment and consciousness, but also institutional health and safety processes were achieved.

CHAPTER TEN

CONCLUSION

The research in the thesis arose out of concerns with the lack of environmental justice research in the context of Southeast Asia. Much of the research on environmental conflicts in this region focuses on deforestation and the dispossession of indigenous peoples in rural areas. Much less is known about how campaigners in environmental justice-type conflicts (or NIMBYism) engage with powerful actors in situations common in Southeast Asia, where democracy is less developed, and where there are fewer opportunities for the contestation of rights (e.g. human rights, information rights, participation rights, environmental rights and others). The environmental justice-type campaigns in Broga and Bukit Merah arose in the context of rapid economic development and urbanisation that have been taking place in Malaysia for the last three to four decades.

Since little is known about such conflicts, the thesis set out to examine what these conflicts were about, and their implications for contemporary theorising of environmental justice and citizenship issues. To this end, I asked four research questions, the first - how did the state and business interests respond to campaigners' demands for justice and accountability, and why did they respond using a particular framework of science and technology? - was aimed at eliciting the views of the state and business interests and at understanding why they responded to the demands of campaigners in a particular manner; the second - why were campaigns launched in Broga and Bukit Merah, and how did campaigners demand their rights and challenge the responsibilities of the state and business interests? Furthermore, why did these demands and challenge take the form they did? - was aimed at eliciting not just the views of campaigners, but also at understanding the methods (campaign discourses and practices) through which demands for justice and accountability were deployed; the third – why were environmental justice concepts and discourses adapted in particular ways in the Broga and Bukit Merah campaigns, and how can we understand this adaptation with reference to how environmental justice travels globally? - was aimed at understanding how the Broga and Bukit Merah campaigns adapted environmental

justice concepts to fit the Malaysian political, economic and social contexts, and what accounted for these adaptations; and the fourth – how are concepts of environmental justice linked to that of environmental citizenship in the context of the Broga and Bukit Merah campaigns? - was aimed at understanding the implications of overlapping concerns of democratic politics found in both the literature of environmental justice and environmental citizenship.

Below are the main conclusions of the research, which are further explored in what follows:

- (i) The concept of environmental racism, which underpins much of the first generation US environmental justice research, is place specific and US-centric. Its deployment in the context of a racialised, postcolonial society such as Malaysia was not possible. While many Bukit Merah campaigners privately believed that there was environmental racism being practised by the state, this was not made obvious in public and in campaign rhetoric and demands. This was because the Chinese in Malaysia were regarded as economic oppressors of the indigenous Malays, and hence, any public claims of environmental racism by the Chinese would have been detrimental to achieving campaign objectives. The situation of the Chinese has its roots in the emergence of a racialised political economy and society, and although originating from the period of British colonial rule, continued to hold sway in postcolonial Malaysia. Discussions of ‘racially sensitive’ issues are banned in Malaysia as is questioning the ‘special position’ of indigenous Malays. Thus, unless these issues become more open for public and democratic debate about racial equality, the use of the original, US-based concept of environmental racism would not gain relevance in the context of the Chinese in Malaysia. This signals the importance of using a historically-embedded and more nuanced approach to the question of race as a factor in political campaigns and environmental struggles. It also feeds into the research of environmental justice scholars who emphasise the importance of understanding how environmental justice concepts travel from the US (or the West) to other countries and become locally grounded in order to gain

relevance in the new location where they are being used (Debbane and Keil, 2004; Schlosberg, 2007; Walker, 2012).

- (ii) The lack of trust that characterises the relationship between the state and campaigners of Broga and Bukit Merah is an important factor in influencing the formation of the Broga and Bukit Merah campaigns. This distrust is rooted in: the historical negative experiences during the Communist Insurgency and the postcolonial state formation, as well as in the contemporary corrupt practices of the state. Such a situation also signals the importance of a historically-embedded approach to investigations of political campaigns and environmental struggles.

- (iii) The lack of recognition by the state and business interests shown towards the different forms of knowledge expressed by campaigners was another important factor in influencing the formation of the Broga and Bukit Merah campaigns. The state and business interests regarded discussions focused on finding technological solutions, as the only appropriate approach to resolving the two environmental conflicts. However, campaigners in both campaigns disagreed. They expressed these reasons for dissent: the unequal and unjust distribution of pollution risks and the poverty of grassroots campaigners; grassroots campaigners' experiences of ill-health and sense of identity and attachment to their homes and surroundings as unspoiled by pollution; and the lack of trust in the state or business interests in safeguarding their well-being. Campaigners felt that these reasons should be the focus of conflict resolution and not those issues of finding technological solutions.

- (iv) The use of a wide-range of discourses and practices opened up spaces for dissent despite conditions of limited democratic processes. In particular, the comparison of two campaigns in two different periods showed how participation in international campaigning through transnational advocacy networks shaped both the language and the course of each of the two campaigns. This was more pronounced in Broga than Bukit Merah because

of the possibilities opened up by easier communication through new media technologies.

- (v) The linking of the democratic politics found in environmental justice concerns (distributive justice, recognition and participation) with those found in environmental citizenship concerns (rights, agency in contestations/claims-making and responsibilities) contributes to further empowerment of campaigners in both environmental justice and environmental citizenship movements.

It is important to analyse how the environmental justice concepts emerged in a new place (in Malaysia, outside of its origins in the US), and how the concepts have been adapted in its new political and cultural setting (or become locally grounded) (Walker, 2012, p. 24, discussing Debbane and Keil, 2004). This is because such adaptation is influenced by the local context, and so understanding the context within which an environmental justice frame is used and deployed in a campaign is crucial to understanding the development and implications of the campaign. In the cases of Broga and Bukit Merah, key factors shaping the campaigns have been the history of the development of a racialised political economy and society, contemporary political change and the government's sustainable development agenda (Chapter Five).

In both the cases of Broga and Bukit Merah, claims of environmental racism were absent from public discourse, even as they emerged in campaigners' offstage remarks in the case of Bukit Merah. This is because such claims would have impeded the success of an environmental justice campaign given that the Chinese have historically been viewed as possessing fewer rights as a result of being immigrants, and having stolen the economic wealth from its rightful owners, the indigenous Malays (Chapter Five). Hence, claims of environmental racism (in the choices of the sites of the proposed Broga incinerator and the long-term radioactive waste storage facility) by protesting villagers would not have elicited the desired outcome for the Broga and Bukit Merah campaigns. It is for this reason within the racialised context of Malaysian society, that claims of environmental racism due to ethnicity (being Chinese) were absent in public demands for justice. For example, in the case of Bukit Merah, some residents of Papan and Bukit Merah made claims of environmental racism (Chapters Seven and Nine).

They were convinced that Papan was chosen as the site for a waste depository because it was occupied by poor and rural Chinese people (Chapter Seven). This opinion was widely reported in Malaysian newspapers after residents in Parit, a pre-dominantly Malay area, protested against the location of a radioactive waste depository in their communities (Berthelsen, 1984; Nair, 1984). Subsequently, the waste depository was moved to Papan. Despite interview participants' belief that there was environmental racism, this belief was absent from the Bukit Merah environmental justice claims or demands, which instead focused on another social distinction, that of class and poverty (Chapter Seven).

In the case of Broga, interview participants did not express opinions of environmental racism. This was due to two reasons: that the proposed incinerator was located in an area that was close to several different communities with more racially mixed demographics; and that the two lead campaigners were made up of a Malay-Chinese partnership. I argued in Chapter Nine that this working together of different ethnicities mirrored the political development of the day. The development of *Reformasi*, the widespread political movement calling for change in Malaysia, advocated and attempted to go beyond racialised politics (Chapters Five and Nine). Furthermore, the Broga campaign garnered more public support because within the context of *Reformasi*, there was now a growing national political consciousness that linked environmental issues to questions of social justice, good governance, rights and democracy, exceeding the politics of race in the Malaysian context (Chapter Nine).

Hence, it is clear that contexts of political development (*Reformasi*) as well as the historical development of a racialised political economy and society, are important factors that influence how environmental justice concepts become locally grounded. The environmental justice campaign of Broga reflected the contemporary political development through its emphasis on the links between environmental issues to questions of social justice, democracy and good governance, and its mixed racial composition of campaigners and campaign leaders. The environmental justice campaign of Bukit Merah was constrained by a racialised ordering of society. The absence of claims of environmental racism in public campaign rhetoric and demands in Bukit Merah (and Papan) is very different from the explicit claims of environmental racism, which have been used in many US environmental justice campaigns/movements (see

Bullard, 1993 who gives many examples of environmental justice campaigns where black and ethnic minority campaigners and activists make explicit claims of discrimination based on race in the siting of polluting industries or the dumping of toxic wastes in their neighbourhood). This difference demonstrates the place specificity in the way the term environmental racism was used. In the US, because of its specific political conditions and environmental laws, it was possible to speak publicly of environmental racism, but in the case of Bukit Merah (and Papan), it was not possible for Chinese campaigners to do so despite being ethnic minorities and believing, privately, that there was environmental racism. This is due to the specificity of Malaysia's racialised ordering of society which had its roots in colonial economic arrangements and political processes, and which has been sustained in a postcolonial context (Chapter Five). This also illustrates the importance of place specificity in understanding how environmental justice campaigns become locally grounded.

There is another historical process which further marginalised the Chinese in Malaysia, and this is the Communist Insurgency where poor, rural Chinese farmers and tin miners were forcefully interned in heavily fortified New Villages (NVs). This was carried out by the colonial administration based on the stereotype that all Chinese were sympathetic to communism; something which was not true as highlighted in Chapter Five. This stereotyping and incarceration of the Chinese resulted in further marginalisation of the Chinese in Malaysia. The historical experiences of Chinese New Villagers of poverty, deprivation, violence, loss of livelihood and insecurity of housing under the colonial government have influenced the way the state is viewed by New Villagers. Furthermore, despite independence, the Chinese New Villagers continued to experience unequal access to housing and to socio-economic opportunities (Chapters Five and Seven). Therefore, this has also influenced the perceptions of Chinese New Villagers towards the Malay-dominated postcolonial state. This issue is representative of the second main conclusion which is that the lack of trust that characterises the relationship between campaigners and the Malaysian state is also crucial to the formation of dissent in both Broga and Bukit Merah (Chapters Five and Seven).

In Bukit Merah, the perception of mistrust towards the state was influenced by the historical abuses experienced during the years of Communist Insurgency, and also by the continued housing insecurity, and economic and social neglect by the post-

independence Malay-dominated state. In the case of Broga, the perception of mistrust was influenced mainly by the daily lived experiences of a corrupt government, accused of serious abuses of power (Chapter Seven). While Broga is a New Village like Bukit Merah, by the time the Broga campaign began in 2003, most of the grassroots Broga campaigners involved in the Broga campaign were born after the emergency years and did not experience the deprivations, poverty, insecurity and abuses associated with the Communist Insurgency, unlike many Bukit Merah grassroots campaigners. In Bukit Merah, the neglect and marginalisation of Chinese New Villages in government development policies were much more keenly felt than in Broga (see Chapter Five for the neglect of the development of New Villages in government policies). Broga is relatively more prosperous in terms of greater availability of employment opportunities compared to Bukit Merah, due mainly to its proximity to Kuala Lumpur and its urban conurbation (see Chapter Two for descriptions of the case studies). Instead, Broga campaigners expressed misgivings about shoddy construction involved in government projects (the proponent of the proposed Broga incinerator is the Ministry of Housing and Local Government/KPKT), and that therefore, they were concerned that the proposed Broga incinerator would experience shoddy construction. Given the history of corruption and mismanagement in contemporary Malaysia, Broga campaigners were concerned with the fact that there might be a high probability of an accident of a serious nature occurring since the incinerator would be a very large one using complex technology. They also expressed doubt in regards to the safety of the proposed Broga incinerator because of a general lack of cultural practices of maintaining health and safety standards in Malaysia (Chapter Seven).

Due to those historical and daily lived experiences outlined above, the campaigners of Broga and Bukit Merah did not trust the Malaysian government, and did not view government or government-backed business sources as credible. According to Wynne, trust and credibility are ‘major contextual factors influencing uptake and understanding of scientific messages, and perceptions of risk’ (Wynne, 1996, p. 20) (Chapter Seven). Hence, both Broga and Bukit Merah campaigners did not believe assurances of safety given by the government and the business interests who had the government’s support in building and operating the ARE and the proposed Broga incinerator. As argued in Chapter Seven, campaigners’ perceptions of risk or belief in the scientific messages sent by the state and business interests were influenced by the social relationships

experienced historically and in their daily lives. Therefore, the lack of trust, or the nature of the relationship between the campaigners and the state (and also the business interests who had the approval and support of the state) translated into protest actions, and fed into the push towards campaigning internationally (through transnational advocacy networks) to bring external pressure to bear on the state and business interests.

The third main conclusion is in regards to the contested nature of all knowledges. The government and business interests in both the Broga and Bukit Merah campaigns demonstrated beliefs in the concepts and tools of science as truth and therefore, in the use of expert-led and institutionally generated scientific knowledge as arbitrator of social problems (Chapters Six and Seven). The use of such scientific truths was used to shut down any resistance that arises. For example, radiation was regarded as not dangerous because the levels were low, and therefore, as long as proper health and safety procedures were followed, there would not be a problem. Therefore, there should be no need to protest against the ARE operations or campaign for the proper disposal of its waste. The Malaysian government would ensure proper health and safety regulations were carried out – see Chapter Six in relation to the Bukit Merah campaign. However, such logic expressed by the government required not just a belief in the idea of science as truth, but also that the campaigners place their trust in the Malaysian government. The issue of trust brings us back to the previous second main conclusion which is that a lack of trust in the government and government-backed business interests is a crucial factor in the formation of dissent.

I argued in Chapters Three and Seven, that the view of science as truth is highly problematic. The literature on science and knowledge contains many arguments that scientific knowledge is contingent. Scientific knowledge reflects the limits of not just expert knowledge, training and imagination but also of institutional processes, obligations and culture (e.g. Irwin, 1995; Irwin and Wynne, 1996a, 1996b; Jasanoff, 2003, 2005) (Chapters Six and Seven). However, by measuring campaigners' reasons for protest against the view of 'science as truth', a picture emerges of campaigners as 'ignorant' (of scientific knowledge) and 'emotional' (Chapter Six). Conflicts such as Broga and Bukit Merah become defined as technical problems requiring technical solutions by the state and business interests. Such a technocratic approach to solving

environmental conflicts is also bolstered by the government's sustainable development agenda (Chapters Five and Nine) which also advocates the same technocratic approach. This sustainable development agenda, not only emphasises the use of technology to achieve a sustainable development outcome; it also advocates privatisation and deregulation to manage environmental issues (for example, the privatisation of waste management) (Chapters Five and Nine). Deregulation is the very opposite to environmental justice demands for more regulations to monitor the production, disposal and movement (locally as well as internationally) of waste, especially toxic waste (see Pellow, 2007). Thus, the sustainable development agenda, in emphasising the importance of technological approaches, further strengthens the view of science as truth. The differing views of campaigners - historical experiences of poverty and deprivation, the unequal and unfair distribution of environmental ills, personal experiences of ill-health, beliefs in the existence of a poor maintenance culture, or differing values for an unpolluted environment - all became irrelevant in the eyes of government and business because they were not constitutive of technical problems or solutions (Chapter Seven).

I also argued in Chapter Seven that the lack of recognition of different forms of knowledge is an important factor influencing the formation of dissent in Broga and Bukit Merah. Cognitive democracy (where not just scientific knowledge but different forms of knowledge or views are considered valid) is also just as important as political, social and economic democracy, and that the demand for cognitive justice is a demand for different forms of knowledge to be recognised and to carry weight in decisions that affect people's lives (see Leach et al., 2002). Instead of being gridlocked in opposing views between the state and business interests on the one hand, and the campaigners on the other hand, recognition and acceptance of the different perspectives offered by campaigners can pave a path forward for conflict resolution.

Furthermore, there is another problem with viewing science as truth. It creates a standardised model of the citizen which assumes that: (i) citizens naturally agree to the core definition of risk discourses; (ii) citizens are either exposed to high or low risks without taking into consideration local or contextual conditions (a bivalent view); (iii) citizens are incapable of dealing with uncertainty and thus expect experts to deal with it; (iv) citizens are only concerned with consequences of innovations and not upstream

issues such as processes of knowledge creation - who defines the research agenda or what drives it; and (v) citizens are not able to construct independent public meanings outside of expert-led, institutionalised science and/or state authority (see Wynne, 2005, p. 72, for a standardised model of the citizen; see also p. 67, **Chapter 3.3 Questioning science**). As demonstrated in Chapter Seven, these assumptions are not accurate. Campaigners' understandings or perceptions of the two conflicts are embedded in their relationships with social, political and historical processes (see Fairhead and Leach, 2002). For example, in the case of Bukit Merah, experiences of ill health together with knowledge about radiation gained from independent, local and international experts helped Bukit Merah villagers to construct their beliefs that the ARE facility was responsible for their ill health. Campaigners also did not believe in the messages released by the state and business interests about the safety of the ARE operations, bringing us back to the second main conclusion. Another example is through the case of Broga. Here, campaigners were keen to participate in discussions about national waste policy, and questioned why they could not have local control over the management of waste. This stemmed from the fact that the proposed Broga incinerator would be incinerating waste from Kuala Lumpur and its urban conurbation and not waste generated locally in Broga (and its surrounding areas). Campaigners reflected on their lack of scientific knowledge about incinerators, assessed the information they obtained independently (from the internet, friends, relatives, other scientific experts) and arrived at the conclusion that they would accept small incinerators spread out in individual communities so that risk is more equally shared (Chapter Seven).

In recognition of the contingency of all knowledges, and in the hope of undoing the assumptions of a standardised model of citizens' behaviour (in the above paragraph), researchers have advocated the importance of participation in upstream and downstream science and policy processes (Jasanoff, 2003a; Liberatore and Funtowicz, 2003; Wynne, 2005). In other words, science and policy processes must be made more democratic by opening up processes of expert deliberation upstream, where the agenda for scientific research is determined, as well by opening up processes downstream, in processes that attempt to control the consequences of sciences and technology (for example, in policy deliberation and setting) (Chapter Eight). In a democracy, expertise must be made accountable, and it 'is entitled to respect only when it conforms to the norms of transparency and deliberative adequacy' (Jasanoff, 2003a, p. 160).

Such advocacy for participation in science and policy processes resonates with campaigners' demands in the Broga campaign to have the right to participate in decision-making processes (Chapter Eight). This discourse of participation was emphasised repeatedly in the Broga campaign, but not in the Bukit Merah campaign. I argued in Chapter Eight that this is because discourses of participation had not gained international popularity yet in the period the Bukit Merah campaign unfolded. Not only was the discourse of right to participation an international trend in the period that the Broga campaign unfolded, so too were discourses of environmentalism and right to information. So these new discourses were used extensively by Broga campaigners in campaign rhetoric and demands. Besides the availability of a wide-range of new international discourses, the internet and new media technologies were also available to be used by Broga campaigners; again, this was something not available to Bukit Merah campaigners (Chapter Eight).

In the fourth main conclusion, I argued that the use of a wide-range of discourses and strategies opened up spaces for dissent despite conditions of limited democratic processes. In the case of Bukit Merah, the focus was on claiming formal political rights (Chapter Eight). Bukit Merah residents went to court seeking equal rights to a healthy environment. Since the Malaysian constitution guaranteed all citizens equal treatment, and since other citizens were not exposed to the radiation produced by the ARE facility, Bukit Merah residents went to court justifying their demands through the right of equal treatment granted by the constitution (Chapter Eight). In campaign rhetoric, Bukit Merah campaigners framed their demands in terms of the right to health and safety. In the Broga campaign, more emphasis was placed on claiming informal rights in comparison to that of Bukit Merah. In the Broga court case, Ms Alice Lee, the sole plaintiff sought not just a stop-work order, but for the right to information about the Broga incinerator project. In campaign rhetoric, Broga campaigners framed their demands in terms of concerns for the environment, and rights to participation and information. (Chapter Eight). However, both campaigns shared in common: (i) demand for distributive justice and recognition for many campaigners' status as poor people being unfairly burdened with environmental ills; (ii) the use of citizen science as both discourse and a way to produce evidence in legal and administrative processes; (iii) the pursuit of litigation to stop the operations of the ARE and to prevent the proposed

incinerator from being built; and (iv) campaigning on an international scale through transnational advocacy networks.

I concluded that despite these differences of focus in campaigning (Bukit Merah on claiming formal rights and Broga on informal rights), the use of such a wide range of discourses and practices had the collective effect of opening up spaces of dissent in a country with limited democratic processes (Chapters Eight and Nine). The process of campaigning had the effect of building or bringing about political consciousness or an awareness of the 'right to have rights' within those who were actively participating in the campaigning (Somers, 2008), which then had a cyclical effect of further encouraging acts of empowerment (or reinforcing agency). Such acts of democratic politics are central to the environmental justice frame of redistributive justice, recognition and participation, and to debates on the meanings of environmental citizenship (see Latta, 2008).

This brings the discussion to the fifth main conclusion which is that linking environmental justice issues with that of environmental citizenship is important because it contributes to empowering campaigners of environmental justice and citizenship issues. According to Latta (2007), the present theorising of environmental citizenship focuses heavily on issues of the ethics of green consumption and personal responsibility. I argued for the co-evolving (or, co-constitution) of these issues together with the democratic politics of distributive justice, recognition and participation (Chapters Three and Nine). This is because many pressing environmental conflicts in the Global South, as the case studies of Broga and Bukit Merah have illustrated, are defined by the highly unequal distribution of both social and environmental rights (see Wittman, 2009; Latta and Wittman, 2010). That makes it important and necessary to ask how responsibility is distributed relative to power. Furthermore, by demonstrating their agency through political acts of rights-claiming in the local and international arenas, and through using a wide-range of discourses and strategies to create spaces for the construction of rights and entitlements, campaigners managed to shift traditional notions of citizenship – from that of passive recipients of rights to active 'makers and shapers' (Cornwall and Gaventa, 2001).

10.1 Time, place and scale in the Malaysian context

The thesis used a case study methodology which enabled an examination of how environmental justice concepts travel in two Malaysian campaigns occurring in two different locations and in two different historical periods. Such an examination was possible through the development of an in-depth description – i.e. a case study - for each of the two campaigns. In developing the case studies of two campaigns, the various groups of people involved in those campaigns in two different sites, as well as issues, connections, associations and relationships were examined and analysed across space to enable an in-depth understanding of both cases. Analysis was carried out not just through case study descriptions, but also through an examination of the themes of each case as well as cross-case themes. Such a comparative case study methodology enabled particular findings to emerge. For example, I would not have been able to observe the strong use of discourses of environmentalism and rights to participation and information in the Broga campaign (but which were not emphasised in the Bukit Merah campaign), if I concentrated on Bukit Merah as a single case study. I would also not have been able to understand in greater depth why NGOs such as Consumers' Association of Penang (CAP) played a larger role in the Bukit Merah campaign but not the Broga campaign.

The in-depth descriptions and analyses of the two case studies were embedded within the political economy, politics and history of Malaysia (Chapter Five). This has enabled an investigation of how environmental justice concepts, although originating in the US (Chapter Three), do not adhere to a US-specific definition but develop differently in different spatial and social contexts. Holifield et al., (2010; p. 6) on this:

In these new spaces environmental justice discourses have revealed a diversity of forms of environmental good and bad interacting with various forms of social difference (no longer only a matter of race and class) working across and between multiple scales. . . . attention to local context has become particularly important as international organizations have begun creating policies to address existing environmental injustices. No matter how well intentioned these policies may be, if they lack sensitivity to the place specificity of the term's meanings they risk imposing US-based solutions that are ill-suited to social and environmental conditions elsewhere.

In other words, time, place, scale and space, are important factors influencing how environmental justice issues manifest in different places.

Therefore, understanding the multiple local and national contexts particular to Malaysia, and how environmental justice issues themselves interact across multiple axes of difference are important in order to make sense of the two campaigns (Chapters Three and Five).

In both the campaigns, the elements of time, place and scale were clearly important. The campaigns of Broga and Bukit Merah unfolded in different periods of history and political development, influencing the types (or emphasis) of environmental justice campaigning methods (discourses and practices) that were used. In terms of place, both place history and the geographical location of Broga and Bukit Merah were important. The historical legacy of the Communist Insurgency resulted in the development of NVs as ‘places of stigmatisation’ (see Walker, 2009, p. 626), and influenced the lack of trust that characterised the relationship between the campaigners and the state, including the government-backed business interests. The lack of employment opportunities for Broga grassroots residents were less of an issue than in Bukit Merah because Broga was located near Kuala Lumpur and its urban conurbation. In terms of scale, local, national and international campaigning and lobbying were important because they brought both internal and external pressure to bear on the state and those business interests the state supported (Chapters Eight and Nine).

10.2 The wider significance of this study

In terms of contributions to contemporary debates in the environmental justice literature, the Malaysian case studies have demonstrated how the use of environmental justice discourses was adapted to fit local conditions. The case studies have also demonstrated that the deployment of environmental justice concepts and discourses and a wide-range of tactics, have opened up spaces for dissent despite the limited availability of democratic processes.

The environmental justice frame as is used in Malaysia is not directly transplanted from the US from where it first emerged. It has instead, been adapted to fit local

circumstances. Debbane and Keil (2004, p. 222) on this: ‘. . . systematic political conditions, ideological realities, legal systems, histories of racism, peculiarities of spatialisation, natural conditions, etc. all play a role in how environmental justice is perceived and acted upon’. For example, in the US, many environmental justice studies focused on the links between racial discrimination and distributive injustice. In the case of Bukit Merah, there was an absence in the use of claims of environmental racism in public campaign discourses despite the fact that this was a belief held privately by many campaigners (that they were being discriminated against because they were ethnic Chinese). This is because in the Malaysian context of a racialised society, the Chinese were regarded as the oppressors instead of the oppressed (see Chapter Five). Thus, any public claims of environmental racism would not have gained currency/saliency with the Malaysian state.

Besides a racialised political economy, other factors which influenced the local adaptation of the environmental justice frame were: the marginalisation of the Chinese, especially the historical process of the formation of New Villages during the Communist Insurgency; a dictatorial and semi-democratic state who pursued development and economic growth aggressively; a culture of using technocratic approaches to solving environmental conflicts which were bolstered by similar approaches in Malaysia’s sustainable development agenda; and contemporary political change (*Reformasi*).

However, despite those conditions specific to the Malaysian context, core environmental justice issues of distributive justice, recognition and participation were also central to the Broga and Bukit Merah campaigns. Therefore, the Malaysian case studies through their adaptation of the environmental justice concepts and discourses also demonstrate the plurality and ambiguity of the discourse. Schlosberg (2007) refers to this as ‘multivalency’ of environmental justice discourses. This has led many scholars to call for a relative and contextualised understanding of the definitions of environmental justice concepts, instead of looking for conformity and a universal meaning (Debbane and Keil, 2004; Schlosberg, 2007; Schroeder et al., 2008, Walker, 2012).

The Malaysian case studies also demonstrated that despite the limited availability of democratic processes in a developing country context, spaces of dissent were opened up through the use of a wide-range of campaign tactics and discourses, to demand rights and challenge the responsibilities of the state and business interests. This resulted in gradual incremental changes in terms of personal empowerment and consciousness, and institutional health and safety processes (for example, the political awakening of Ms Alice Lee; the greater caution exhibited by the Atomic Energy Licensing Board of Malaysia in monitoring ionising radiation).

The study has also illustrated how critical the contestation of scientific knowledge is in a developing country context. While there is a lot of literature on the contestation of scientific knowledge, technology and policy in the developed world, and the role it plays in environmental justice campaigning, there is little written about its importance in environmental justice struggles in developing country contexts. I would go so far as to argue that the questioning of the epistemology and ontology of science, and science and policy processes may be even more critical in a developing country context. This is because development is more often than not defined by an unshakeable belief in the universally valid knowledge produced by institutional science and expertise. Technical solutions based on science as truth are used to silence protest actions and press ahead with development projects. Therefore, challenging this belief is crucial to environmental justice movements, and the democratisation of development more generally.

Environmental justice scholars in the US have criticised the absence of radical social critique in the environmental justice movement in the US (Benford, 2005; Pellow and Brulle, 2005). In the case of Malaysia, perhaps a nascent environmental justice movement would be a more accurate description because there is no national environmental justice movement to speak of. It is only with national political change (*Reformasi*) that many members of the public are now beginning to make connections that link environmental issues to questions of social justice, good governance, rights and democracy as is observed in the Broga case study where there was more widespread public support (Chapters Eight and Nine).

However, the environmental justice agenda stands in danger of being co-opted by the agenda of good ecological governance that is refracted through the neoliberal ideology of ecological modernisation (Chapter Nine). I argue this provides even more impetus for linking the concepts of environmental justice to that of environmental citizenship (Chapter Nine).

First, core issues of environmental justice – distributive justice, recognition and participation – are about democratic politics. Current literature on environmental citizenship focuses disproportionately on the issues of ethics and personal responsibility that contribute to sustainability, and are lacking in democratic politics (see Latta, 2007, 2008). Yet democratic politics are central to expanding ideas of citizenship. Citizenship is increasingly regarded as a site of contestation where citizens question issues of social justice and demand their rights, and where boundaries of citizenship are being contested, extended and redefined (see Isin, 2002, 2008; Latta, 2008). Citizens now play a larger role in holding states and business interests accountable for their actions. In this sense, it is important to talk about the implications of environmental justice for environmental citizenship.

Second, many environmental justice conflicts in developing countries are precisely refracted through the prisms of justice, equalities and rights because environmental rights are not distributed unconditionally or equally. In many developing countries, environmental conflicts are the sites where ‘. . . the most pressing environmental questions are instead defined by the ecological dimensions of social, cultural and economic marginalisation and injustice’ (Latta and Wittman, 2010, p. 109). It is only through linking issues of democratic politics and citizenship to the politics of nature that a new basis can be formed for understanding many environmental conflicts in the Global South (Latta and Wittman, 2010). However, according to Latta (2007, 2008), the majority of environmental citizenship literature focuses on an ethics of environmental responsibility. This is inadequate because it is the politicisation of social rights and justice that brings about an awareness of a politics of responsibility. In the context of Malaysia where there is a highly unequal distribution of social and environmental rights, it is important to ask how responsibility is distributed relative to power. Therefore, the development of rights and responsibilities go hand in hand together. Furthermore, going in the reverse direction, concepts of environmental citizenship also

help to strengthen arguments for environmental justice. By demanding for environmental justice in terms of citizenship rights, campaigners strengthen their position as claimants. In these ways, both environmental justice and citizenship concepts strengthen each other.

In practical terms, there are also other wider implications for environmental justice activism in Malaysia. Today, Malaysians continue to make links between environmental concerns with social justice and democratic politics. Environmental justice campaigns garner large public support. For example, the current anti-Lynas campaign¹¹⁷ attracts tens of thousands of supporters when it calls for protest actions (Chapter Nine). The Green Walk in 2012, a protest march against Lynas, a newly built rare earth elements extraction facility, attracted over 20,000 participants, becoming the largest environmental protest march ever in Malaysia. This was because environmental concerns have now become linked to larger debates of justice, good governance, rights, democracy and to attempts to alter dominant power arrangements. Environmental justice campaigning in Malaysia has now become part of a larger national movement (*Reformasi*) calling for greater democracy. Activists who are now actively campaigning have learnt lessons from past campaigns (Mr Hew, one of the leaders of the Bukit Merah campaigns have lent support through sharing with anti-Lynas campaigners how Bukit Merah campaigners organised themselves and campaigned) in terms of the multiplicity of discourses and tactics to open up spaces for dissent. In November 2013, one anti-Lynas campaign group called *Himpunan Hijau*, flew to Sydney to camp outside the Lynas headquarters to protest against the Lynas rare earth elements extraction facility in Malaysia. *Himpunan Hijau* also leafleted to raise awareness and spoke to the media about their protest actions (Chapter Nine). This international protest action in terms of camping for a few days outside the headquarters of a multinational company overseas has never before been carried out by Malaysian environmental activists.

Despite this unusual protest action, however, the pursuit of growth, development and modernisation through green technology continues to dominate the Malaysian government's agenda. More incinerators are in the planning by the Ministry of Housing

¹¹⁷ The Australian mining company, Lynas, has opened the largest rare earth elements extraction facility in the world in Gebeng, near Kuantan, in the state of Pahang (see p. 251, footnote 106, Chapter Nine).

and Local Government/KPKT. The proposed Broga incinerator project, which was temporarily shelved has now been resurrected in a new location in Kepong, Kuala Lumpur. Kepong, although now part of Kuala Lumpur, was historically a deprived area and where Jinjang NV (the largest NV in Malaysia) is located (see p. 243, footnote 104). The Lynas rare earth element extraction facility is now in full operation despite initial delays due to protest actions of environmental justice campaigners in Malaysia and Australia. Even though Gebeng (the location of the Lynas facility) is geographically near to middle-class housing areas, it is largely rural, with fishing villages located close to the rare earth elements extraction facility. Thus, issues of spatialities in terms of urban-rural bias, the growth of peri-urban areas as sites of contestation as well as how places become stigmatised will continue to be areas for investigation within the environmental justice frame (see Walker, 2009).

The thesis also highlights the gaps in environmental justice research which could be addressed in future work. There are two points to make in this regard. First, linking environmental justice to environmental citizenship opens the door to a whole range of theoretical and methodological approaches to studying the relationship between justice, nature and citizenship. By including democratic politics in the definition of environmental citizenship, it means that ‘. . . both citizens and natures are dynamic, contested and mutually conditioning elements within the politics of the environment’ (Latta and Wittman, 2010, p. 113). Rights and responsibilities would not be viewed as fixed but as being perpetually contested by claims for social and ecological justice. This broadening of environmental citizenship also means that the approach to studying the environment and citizenship is more complex, encompassing a wide range of methodologies, from ethnographic approaches to archival research, investigations of socio-ecological discourses and a political economy that sheds light on the way economic inequality is linked to socio-ecological change (Latta and Wittman, 2010). Contemporary research should move towards showcasing the complex intertwining of those multiple issues and contexts.

Second, in the course of interviewing NV participants and carrying out literature searches, I have become acutely aware how little is known about what has happened to NVs and their residents politically, economically and socially. This is an important area for future research. Anecdotally, it is known that the population of NVs continues to

dwindle steadily due to outmigration. However, where do these villagers go? Do they move to urban areas in Malaysia or do they go overseas? There is some evidence that many go to work in developed countries as service sector workers or labourers. Do they settle permanently in the developed countries where they go to work? Furthermore, what are the consequences of the suppression of stories, fiction and non-fiction alike, good or bad, of the experiences of those living in the NVs especially during the Communist Insurgency? It is very revealing that as late as 1999, the demand for the modernisation of infrastructure in Chinese NVs was still being made by Chinese interest groups as a general election appeal to all political parties (p. 140, footnote 53, Chapter Five). This at least tells us that NVs remain places of stigmatisation. Are NVs in a state of disrepair? No one seems to have formal knowledge; just experiential and anecdotal knowledge of the state of affairs in NVs. While some NVs, such as Jinjang in Kuala Lumpur, have been swallowed up and gentrified by urban expansion, most NVs have been neglected in terms of government policy on infrastructure planning and economic development (Chapter Five; see also Loh, 2009). There are also few employment opportunities unless the NV happens to be located near an expanding city. So another area of research would be to collect and collate data on especially the demographics, the state of infrastructure development, and other social-economic indicators for all NVs in Malaysia. This way, a more accurate reflection of the state of affairs in NVs can be ascertained and consequently, used for appropriate planning and development policies. Future directions for research regarding NVs should address these issues.

The depth of the marginalisation of the Chinese in NVs was something that was not immediately obvious when I began the research project. It was the utilisation of environmental justice type claims-making that drew me into an investigation of the Broga and Bukit Merah campaigns. Focusing on environmental justice in turn, opened up a consideration of the processes of marginalisation of the Chinese with specific focus on the conditions of the Chinese in NVs. However, these same processes are being incrementally challenged by environmental justice campaigns that seek to expand spaces of democracy in a challenging and authoritarian context. Present day environmental justice-type campaigns have now become linked to larger attempts to alter dominant power arrangements and thus attract large public support, throwing up serious challenges to the *modus operandi* of the Malaysian government.

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APPENDIX ONE

QUESTIONS USED TO GUIDE SEMI-STRUCTURED INTERVIEWS

1. Areas of questions targeted at the state and business interests, or non-supporters of the Broga and Bukit Merah campaigns

- a. Why do you think people were protesting?
- b. What do you think the protestors should have done?
- c. How did you respond to the demands of those protesting?
- d. Were you satisfied or happy with the outcome of the campaign?
- e. What is the government's solid waste management policy? Do you favour incineration?
- f. Do you think that there would be less conflict if there were better participatory policies and practices, and better information dissemination?

2. Areas of questions targeted at campaigners and supporters of the Broga and Bukit Merah campaigns

- a. How did this campaign come about? Tell me about the history.
- c. Why did you get involved in the campaign? What role did you play?
- d. What were your demands?
- e. How did you go about making your demands?
- f. What is radiation/dioxin? Do you think it is dangerous? If yes, why?
- g. Were you satisfied or happy with the outcome of the campaign?
- h. Do you think race was an issue in the campaign?

APPENDIX TWO

PARTICIPANT INFORMATION SHEET (English)

NIMBYism and environmental accountability in Malaysia: Exploring the Broga and Bukit Merah environmental campaigns

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Talk to others about the study if you wish. Please ask Li Kheng if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

As part of my doctoral research, I am exploring how the Broga and Bukit Merah environmental campaigns developed and progressed and their implications for theorizing environmental accountability and participation. Studies on environmental campaigns that have been labelled ‘Not-in-my-backyard’ such as Broga and Bukit Merah have rarely been examined in detail in the context of developing countries. With that in mind, I will be exploring the ways in which citizen campaigners sought accountability from the state and business interests, the responses of the state and business interests, and the roles played by individual activists, environmental non-governmental organisations and opposition political parties.

Why have I been chosen?

You have been chosen because you were involved in the campaigns.

Do I have to take part?

No. It is up to you to decide whether or not to take part. If you do, you will be given this information sheet to keep and be asked to sign a consent form. You are still free to withdraw at any time and without giving a reason. It is your decision to withdraw at any time, or not to take part. If you do decide to withdraw, there will be no consequences whatsoever.

What will happen to me if I take part?

The interview is voluntary, and if necessary I may request for repeat interviews afterwards for further information. The interview involves asking questions about your involvement in the Broga/Bukit Merah campaign and will be audio-taped. Information obtained from the interview will be used in the writing-up (of my thesis) and dissemination of my research (for example, in publications such as journals and monographs, and in lectures or talks). Any information or quotes will be used anonymously to ensure confidentiality unless you give permission for me to do otherwise. I will request consent for use of this information in the consent form.

What are the possible disadvantages and risks of taking part?

You may experience emotional distress at having to talk about past actions and events. You may also recall previous unresolved tensions regarding various aspects of the environmental campaign that you were involved in. I encourage you to turn to your

PARTICIPANT INFORMATION SHEET (English)

social networks for support if this should arise, or to withdraw from the interview if you find it overwhelming.

Will my taking part in this study be kept confidential?

The interview will be audio-taped and treated anonymously and will be stored in a locked filing cabinet. Following transcription, it will be stored in a combination of CD-roms (which will be stored in a locked cabinet) and/or a secure PC with password protection. After completion of analysis, the information obtained during the interview will be stored in accordance with University governance requirements. Any identifiable personal data (such as name, address, etc.) will be separated from the contents of the interview. By agreeing to commence the interview, you are agreeing to the storage and treatment of data set out above.

What will happen to the results of the research study?

You will not be identified in any thesis/report/publication unless you have consented to release such information. You will be given the opportunity to receive feedback on the results of this research by contacting me Poh Li Kheng at lkp11@brighton.ac.uk. I may also contact you for feedback after initial analysis of my research. After the completion of my write-up, I shall summarise my findings in a short leaflet that I will make available to you. I will not be actively seeking to publicise my research through the mass media. However, there is a possibility that the media may themselves pick up and publicise the research I am conducting.

What if there is a problem?

If you have any complaints, you may contact Dr Rebecca Elmhirst, Geography Division, School of Environment and Technology, Cockcroft Building, Brighton University, Lewes Road, BN2 4GJ. Tel: 44-1273-642288. Email: R.J.Elmhirst@brighton.ac.uk

受访者须知单

马来西亚“宁避”主义与环境责任：探讨武来岸及红泥山之环保运动

您被邀请参与此项研究计划。在您作出决定之前，先了解此研究的开展原因以及它牵涉的层面是重要的。请花一些时间仔细阅读下面的资料。您愿意的话可以与他人讨论此研究。倘若您有任何不清楚的地方或需要更多资料请向Li Kheng询问。仔细考虑您是否愿意参与此项研究。

此研究的目的是什么？

作为我博士研究的一部分，我正在探究武来岸及红泥山环境保护运动的形成与进展以及它们对环境责任与参与理论化的影响。被标签为“别在我家后院”的环境保护运动例如武来岸及红泥山之研究鲜少在发展中国家的发展背景中被深入考查。有鉴于此，我将探究公民运动家如何向国家及利益集团寻求环境责任，国家及利益集团的回应，以及积极分子，环保组织及反对党们所扮演的角色。

为何选中我？

您被选中因为您参与了运动；或者您是武来岸焚化炉/亚洲稀土计划利益相关者。

我非参与不可吗？

不。参与与否完全由您决定。如果您选择参与，我们将提供您这一份资料说明单以供收藏，并将被要求签署一份同意书。您仍然可以在任何时候及不提供理由的情况下退出。您有权决定在任何时候退出，或不参与。如果您决定退出，将无须承担任何后果。

我参与之后将发生什么事？

此访问属于义务性质，若有需要我将要求重複访问以取得进一步的资料。访问将包括提问有关您在武来岸/红泥山运动的参与，并将被录音。从访问中所获得的资料将被使用在书写（我的论文）及传播我的研究（例如期刊及专著等的出版，及讲课或讲座等）。除非得到您的允许，任何资料或引用将以匿名性方式使用以确保其机密性。我将在同意书内要求授权使用这些资料。

参与访问会有什么可能的不利以及风险？

因为必须谈论过往的行动与事件，您或许将经历情绪压力。您或许亦将忆起过去您所参与的环保运动中各方面未解决的紧张状况。如果出现这种情况，我鼓励您向社工寻求支持，或中止访问，如果您觉得压力过于巨大。

我的参与可会被保密？

此访问将被录音及以匿名式处理，并将收藏于一个上锁的资料柜里。在转为文字记录之后，它将被储存于光盘组合中（将被收藏于上锁的橱柜中）及/或于安装了密码加护的安全电脑中。在完成分析后，从访问中所获取的资料将依据布萊頓大學之管理条规保存。任何可辨认的个人资料（例如名字，地址等等）将会与访问内容分开。一旦您同意开始接受访问，这表示您也同意上述列出的资料收藏与处理方式。

PARTICIPANT INFORMATION SHEET (Chinese)

此研究计划的结果将会如何？

您的身份将不会曝露在任何论文/报告/出版中，除非您同意发布这些资料。您将有机会获知有关此研究成果的回应，只须通过lkp11@brighton.ac.uk联络我Poh Li Kheng。我也许将在我的研究的初步分析之后联络您以便取得您的回应。在我的书写完成后，我会将我的研究成果总结于一份小传单并将提供给您。我将不会积极地将我的研究发表于传媒中。然而传媒有可能会选择及刊登我正在进行的研究。

出现问题怎么办？

如果您有任何投诉，您可以联络 Dr Rebecca Elmhirst, Geography Division, School of Environment and Technology, Cockcroft Building, Brighton University, Lewes Road, BN2 4GJ. Tel: 44-1273-642288. Email: R.J.Elmhirst@brighton.ac.uk

APPENDIX THREE

PARTICIPANT CONSENT FORM (English)

NIMBYism and environmental accountability in Malaysia: Exploring the Broga and Bukit Merah environmental campaigns

Researcher: **POH Li Kheng**

I agree to be involved in this research that investigates the strategies and discourses used in the environmental campaigns and their implications for environmental accountability and participation. I give my permission to Li Kheng to use excerpts from the interview.

Li Kheng has explained to my satisfaction the aim of the study. I understand the principles and processes of the study and I have been informed of its nature and purpose.

I am fully aware that I am being asked to partake in an interview with Li Kheng

I understand that my personal details (including my contact details) will remain confidential. All information gained from the interview will be stored in a secure area and will be stored in accordance with Brighton University's governance requirement (normally for 10 years). I understand that relevant (anonymous) sections of any data collected during the study may be looked at by Li Kheng and the supervisors of this project for teaching and research purposes.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

I understand that the data collected will be used as part of a research project. I understand that the data will be used in writing-up and disseminating Li Kheng's research (including in a thesis which will be held in the School of Environment and Technology, University of Brighton; and in the Royal Geographical Society-Institute of British Geographers, London, United Kingdom). Dissemination of the research includes lectures and publications (such as journals and monographs). I understand that, unless otherwise requested, only anonymous excerpts from the research will be used in this write-up.

I agree to take part in the interview proposed.

Name of Participant:.....Date:.....Signature:.....

Address:.....

Researcher: **POH Li Kheng** Date:.....Signature:.....

PARTICIPANT CONSENT FORM (Chinese)

同意书

马来西亚“宁避”主义与环境责任：探讨武来岸及红泥山之环保运动

研究员：**POH Li Kheng**

我同意参与此项有关上述环保运动中所使用的策略与话语以及它们对环境责任与参与的影响之调查研究。我允许Li Kheng使用访问中的摘录。

Li Kheng已清楚地向我解释此项研究的目标。我明白此项研究的原则及进程，并已被告知它的属性及目的。

我完全清楚自己被邀请在Li Kheng的访问中分享看法。

我明白我的个人资料（包括我的联络资料）将会被保密。所有从访问中获得的资料将会被保存在一个安全的地方并将依据布萊頓大學之管理条规保存（通常为10年）。我明白此研究所收集的资料中任何相关（匿名）部分将为Li Kheng 及此计划的导师们所阅读，主要为了教学及研究目的。

我明白我的参与是义务性质，我拥有在任何时候及不提供任何理由退出的自由。

我明白所收集的资料将成为研究计划的一部分。我明白资料将使用于Li Kheng的研究之书写与传播（包括一部将收藏于布萊頓大學，环境与科技系，以及英国伦敦皇家地理學會-英國地理學研究所的论文）。该研究的传播包括讲课与出版（例如期刊及专著）。我明白除非是特别请求，此书写将只使用研究中的匿名摘录。

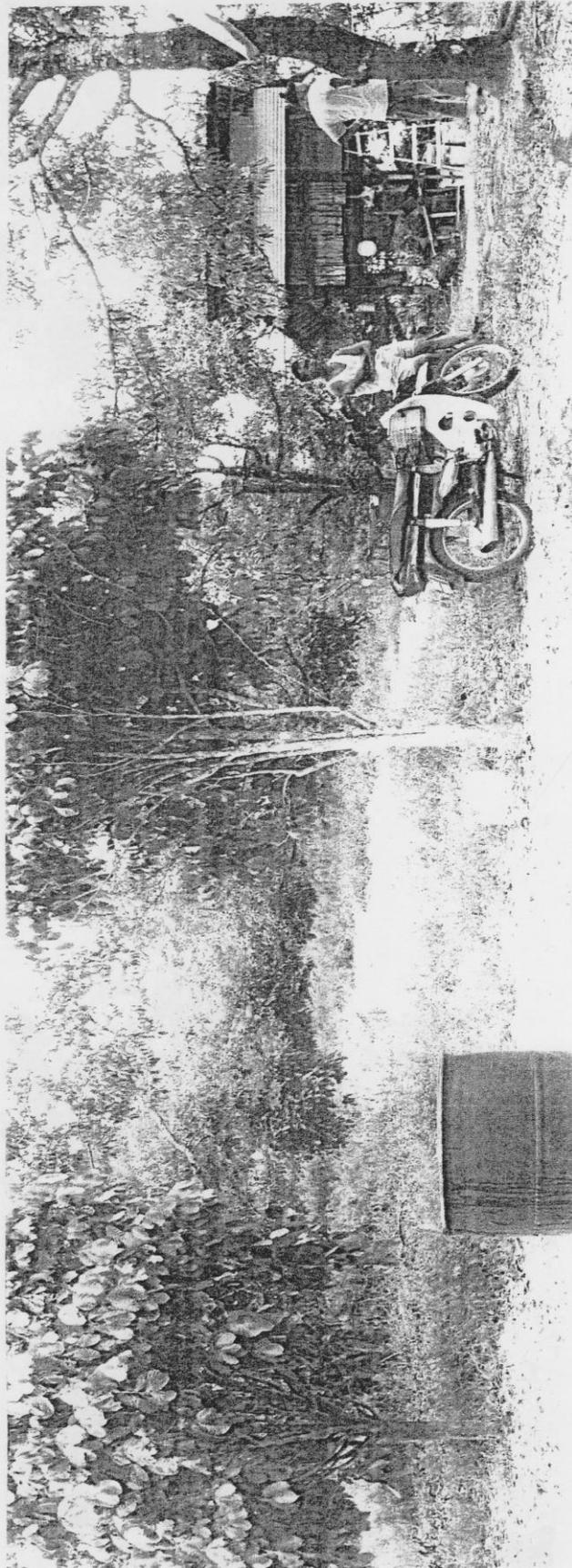
我同意参与所提议的访问。

参与者姓名： 日期： 签名：

地址：

研究员：**POH Li Kheng** 日期： 签名：

INSINERATOR MENGGANGGU KEHIDUPAN KAMI



Ini adalah dusun buah-buahan kami di Broga.
Kesemua pokok buah-buahan di sini berusia 17 tahun.



Jenis buah-buahan :-

1. Durian
2. Rambutan
3. Pulasan
4. Manggis
5. Mangga
6. Langsat



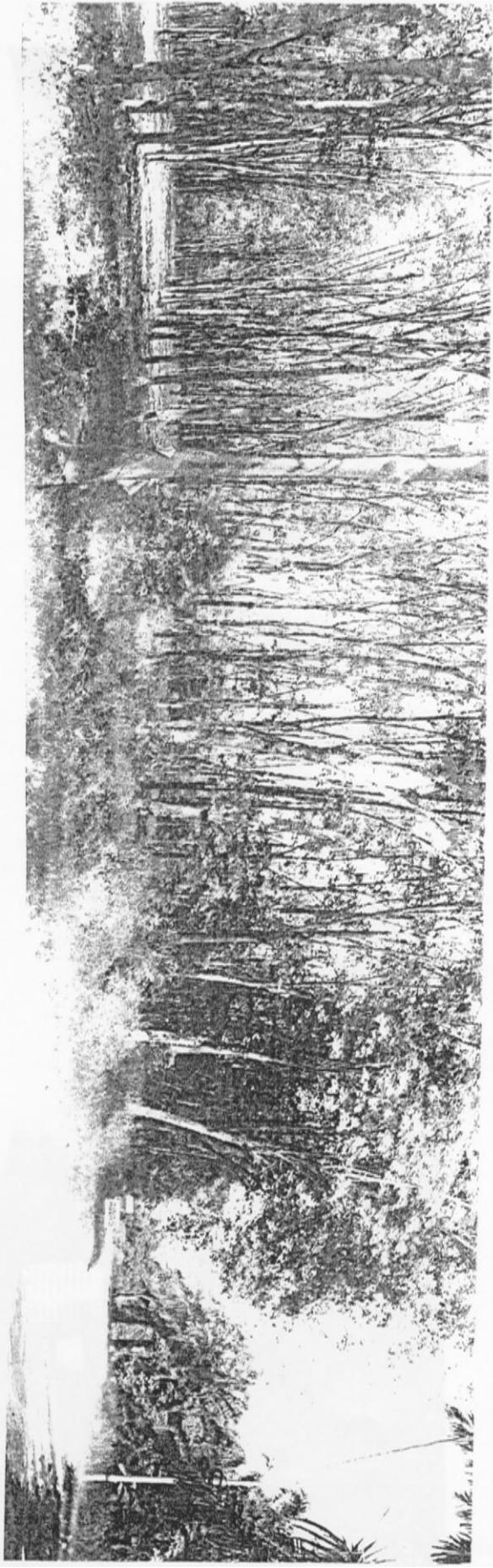
Semua pokok durian sudah bertunga.



Di sini terdapat 95 pokok durian.
Selain daripada menoreh getah, dusun ini merupakan punca pendapatan kami yang utama.
Kini dusun kami telah diambil oleh pihak kerajaan utk projek insinerator.

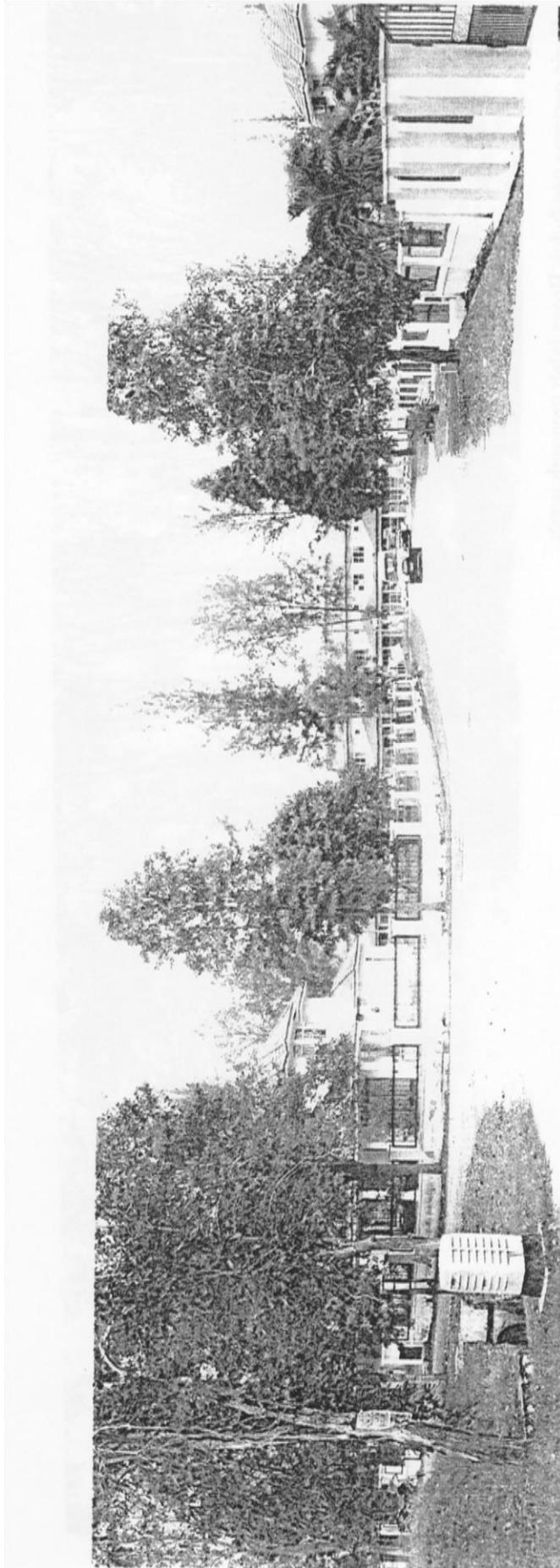


Sg. Saringgit.
membekalkan air minuman kepada 2 juta penduduk di N. Selangor & Lembah Klang.
n projek insinerator adalah di tepi sungai ini.



Kerja pertama penduduk Broga ialah menoreh getah.

Kini Pejabat Tanah telah menggunakan Akta Pengambilan Tanah utk mengambil tanah-tanah mereka. (Tanah-tanah tersebut digunakan utk membuat jalan ke tapak insinerator)



Ini adalah Taman Tasik Semenyih.

Kawasan perumahan ini amat hampir dengan tapak insinerator (1.9KM)

Mengikut Garis Panduan Perancangan Tapak Insinerator, insinerator perlu ditempatkan jauh daripada orang awam (Sekurang-kurang 50KM)



Ini adalah University Of Nottingham.
Kini terdapat > 900 orang pelajar di sini.
Kedudukan projek insinerator adalah di belakang universiti ini.



Tempat ini aman, sunyi & cantik. Ia adalah kampung kesayangan kami – **Broga**.
Tolong jangan rosakkan alam sekeliling & suasana kehidupan kami di sini !

< 80 buah keluarga di Broga tidak boleh menjalankan kerja harian mereka (Menoreh getah & kerja pertanian) selepas pembinaan projek insinerator disebabkan ladang mereka terlalu hampir dengan tapak insinerator.

Kawasan ini **TIDAK** sesuai untuk projek insinerator kerana :-

1. Kawasan ini terlalu **hampir** dgn kawasan perumahan.
2. Kawasan ini merupakan **Kawasan Pertanian**.
3. Kawasan ini merupakan **Kawasan Alam Sensitif**
4. Kawasan ini merupakan **Kawasan Tadahan Air**
5. Kawasan ini merupakan **Kawasan Yang Bercerun Tinggi**.
6. Kawasan ini merupakan **Kawasan Yang Sedang Berbangun**.
7. **Tiada Pusat Pelupusan (Landfill)** di sini untuk melupus 30% abu bertoksid yang dilepaskan oleh insinerator.

Tapak pelupusan sisa pepejal di Broga (Broga Landfill) yang dicadangkan oleh pihak kerajaan telah **DITOLAK** oleh Jabatan Alam Sekitar pada 13/9/2004 berdasarkan kepada faktor-faktor di atas.

