

A Landscape Political Ecology of ‘Swiftlet Farming’ in Malaysian Cities

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Creighton Connolly

Department of Geography
School of Environment, Education and Development

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List of Abbreviations

BNM: Malaysia Federation of Birds' Nest Merchants Associations

BWM: Badan Warisan Malaysia (National Heritage Trust)

CITES: Convention on the International Trade and Endangered Species of Wild Flora and Fauna

CSO: Civil Society Organization

DAP: Democratic Action Party - Malaysian opposition party

EBN: Edible Birds' Nests

ETP: Economic Transformation Programme (Malaysian Economic Policy)

GTWHI: George Town World Heritage Incorporated (government office).

JPV: Jabatan Perkhidmatan Veterinar (Federal Veterinary Department)

KL: Kuala Lumpur (capital of Malaysia).

LPE: Landscape Political Ecology

MOA: Ministry of Agriculture and Agro-Based Industries

MOH: Ministry of Health (Malaysia)

MOSTE: Ministry of Science, Technology and Environment

MBPP: Majlis Bandaraya Pulau Penang (City Council of Penang Island)

NKEA: National Key Economic Area (part of the ETP)

PERHILITAN: Jabatan Perlindungan Hibupan Liar dan Taman Negara - Department of Wildlife and National Parks

PHT: Penang Heritage Trust

RFID: Radio Frequency Identification tracking system (used to track birds' nest products to the original source of production).

SME: Small-Medium Enterprise(s)

UNESCO: United Nations Educational, Scientific and Cultural Organization.

UPE: Urban Political Ecology

UPM: Universiti Putra Malaysia

UTM: Universiti Teknologi Malaysia - University of Technology Malaysia

WHO: World Health Organization

Abstract:

A Landscape Political Ecology of ‘Swiftlet Farming’ in Malaysian Cities

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Creighton Paul Connolly

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This dissertation develops the conceptual framework of landscape political ecology (LPE) to consider particular forms of socio-ecological transformation resulting from the relatively recent but heavily contested practice of ‘swiftlet farming’ in Malaysian cities. Swiftlet farming is a colloquial term given to the semi-domestication of edible-nest swiftlets (*aerodramus fuciphagus*) in converted buildings within urban areas in order to harvest their nests. These nests have long been a highly sought-after delicacy in China and overseas Chinese communities, and subsequently fetch over US\$2000 on the international market. The primary research question investigated asks how the industry has been perceived and contested on an everyday basis in Malaysian cities. Engaging these controversies provides the opportunity to capture the significant negotiation that is embedded in the mechanisms of landscape production and capital accumulation as they take place through struggles over swiftlet farming in contemporary Malaysian cities. This research also seeks to understand how the swiftlet farming industry has transformed not only the cities in which it has been located, but also the ecology of swiftlets and their breeding patterns.

The dissertation is centered on a six-month participatory ethnography which took place primarily in the city of George Town, Penang, but also investigated other related sites in peninsular Malaysia. I maintain that such ‘co-productive’ research has enabled a more situated view of socio-ecological transformations that have transpired through urban swiftlet farming in Malaysia, and the controversies surrounding them. The empirical chapters aim to unpack the controversies and discourses that emerged in response to swiftlet farming in the study areas, primarily its perceived impact on urban health, forms of cultural heritage, and the wider implications of ‘farming’ such animals in urban residential areas. In exploring these topics, LPE provides a cohesive and integrated approach that helps to untangle the interconnected economic, political, ecological and discursive processes that together form increasingly heterogeneous socio-natural landscapes. The implications of this thesis thus speak to the fraught cultural politics underlying processes of urban socio-ecological transformation in contemporary Southeast Asian cities.

Declaration

No portion of the work referred to in this thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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Chapter 1 - Introduction

1.1 Introducing Swiftlet Farming

In the summer of 1998, the Southeast Asian financial bubble imploded. Global capital moved spasmodically from place to place, leaving cities like Jakarta with a social and physical wasteland where dozens of unfinished skyscrapers are dotted over the landscape while thousands ...roam the streets in search of survival....Puddles of stagnant water in the defunct skyscrapers that had once promised continuing capital accumulation for Indonesia became breeding grounds and ecological niches for mosquitoes... Global capital and the technoscapes of the world's financial architecture fused with global climate, with local power struggles, and with socio-ecological conditions to re-shape Jakarta's social ecology in profound, radical, and deeply troubling ways (Swyngedouw & Heynen, 2003: 898).

The particular moment that Swyngedouw talks about in this excerpt is also the very same moment, and combination of various socio-economic conditions, that led to the rise of 'swiftlet farming' in Malaysia. 'Swiftlet farming' is a colloquial term that refers to the cultivation system of edible birds' nests (EBNs) by preparing specially designed buildings for swiftlets to roost and nest. Edible-nest swiftlets (*Aerodramus fuciphagus* and *Aerodramus maximus*) are a small species of bird, found only in Southeast Asia, which make edible nests entirely of their saliva. These nests (which are also referred to colloquially as 'caviar of the east' or 'white gold'), have long been a highly sought-after delicacy in China and their trade and consumption within the Asian region dates back as far as the Tang Dynasty (618-907 CE) (Lau & Melville, 1994; Blussé, 1991; *Starmag*, 23 August 2009).

EBNs are a luxury item, and rank among the most expensive animal products consumed by humans. A single bowl of birds' nest soup can sell for upwards of US \$30 dollars in Chinese restaurants, while a kilogram of high-quality white nests can cost upwards of US \$1,700 (Kam, 2003; Lim & Henry, 2005).¹ Birds' nests are a Chinese delicacy that are believed to have a number of medicinal, therapeutic and pharmaceutical qualities, and were once exclusively served to Chinese emperors and the most senior of court officials. Though there is only limited evidence to support these qualities, consumptions is driven by strong cultural be-

¹ A single nest costs about \$55 after processing. Indeed, as Hobbs (2004: 2210) points out, birds' nests 'are almost worth their weight in gold'. See Figure 1.1.

Figure 1.1: Birds' nests for sale in a shop in Singapore. The boxes photographed range from S\$278 - 728 (US\$ 196-515), depending on source, weight, and quality (author's photo).



liefs in the panacean powers of birds' nests (see Section 1.3). Thus, along with rising incomes and affluence in China and elsewhere, birds' nests are now in much higher demand.

Traditionally, nests were collected from caves by (typically) indigenous peoples across Southeast Asia, where harvesters would scale the cave walls on bamboo scaffoldings up to a height of 60 meters. In fact, Sarawak's Niah Caves, in Malaysian Borneo, used to have the world's largest concentration of swiftlets before over-harvesting reduced the population there (Chin, 2009b; see also Chapter 7). However, a more recent response to the increase in price and demand for birds nest since the 1990s has been the proliferation of 'swiftlet farming', in Indonesia, Malaysia, Thailand and Vietnam. As of 2009, the birds nest industry in Malaysia was estimated to have generated an annual output of approximately 275 tons² worth approximately 1.5 billion (US\$420 million) annually (*The Sun*, 26 November 2009). This established Malaysia as the world's second largest exporter of birds' nests, after Indonesia, which supplies 75% of the 3,750 ton global demand for birds nest every year (Lim & Henry, 2005; *The Star*, 14 June 2003; *The Sun*, 20 October 2011). Thailand is the third largest producer, which meets

² There are approximately 110-120 nests per kilogram.

around 10% of the world demand (Lim & Henry, 2005). However, edible birds' nest harvesting, particularly in urban areas of Malaysia, have become highly contested as political conflict and social tensions have intensified as urban 'swiftlet farms' are now increasingly dominating the landscape.

Though I use the term 'swiftlet farming' throughout this dissertation, the appropriateness of the term is debated amongst swiftlet farmers and other stakeholders. As one operator put it, 'by using the word 'farming', it gives the impression to the Westerners that we are conducting the trade on a large scale...but in fact, this is not farming. We merely attract the birds....We just provide a place for them to roost and more importantly, we do not feed them' (Tan, S.C., 2011: N10). As such, 'swiftlet farming' more resembles apiculture and some would argue that the term 'swiftlet ranching' or 'swiftlet breeding' would more accurately describe the activity.³ Nonetheless, swiftlet farming is the most commonly and consistently used term in most existing academic work on the topic in the media, and public discourse.

This chapter will introduce the aims, theoretical framing and methodology employed in this dissertation. However, given the rather peculiar nature of this topic, I will first introduce edible-nest swiftlets, their nests, and the nature of swiftlet farming, including its growth over the past 15 years.⁴ Following these sections, I will then discuss the motivation for the project, including the reasons why swiftlet farming emerged as a key source of controversy in contemporary Malaysia. I will also introduce the key actors referred to throughout the dissertation (Table 1.2), and provide an overview of the key research sites visited.

³ In fact, none of these classifications are correct, as operators merely provide a nesting environment for the birds, which come and go freely. Perhaps a more appropriate term would thus be 'swiftlet hosting'.

⁴ Readers already familiar with the topic may thus skip to Section 1.7.

1.2 The Birds: Edible-nest Swiftlets

Two types of swiftlets make the majority of edible birds' nests consumed around the world: the White-nest Swiftlet (*A. fuciphagus*) and the Black-nest Swiftlet (*A. maximus*). Of these, the White-nest swiftlets are most commonly found in swift-houses, while cave populations include both White- and Black-nest Swiftlets.⁵ The distribution of swiftlets ranges from the southern coasts of India and Sri Lanka through continental Southeast Asia (and southern China), Indonesia, New Guinea as well as northeastern Australia and the islands of the West and South Pacific (see Figure 1.2). However, White and Black-nest Swiftlets have a somewhat smaller range from the Andoman and Nicobar Islands in the Northwest, through Peninsular Myanmar, Malaysia and Thailand, southern Cambodia, coastal Vietnam, southern Hainan Island (China), Palawan Island (Philippines), all of Indonesia (excluding Sulawesi) and Borneo in the East.

Figure 1.2: Range of Swiftlets in Southeast Asia. The pink area corresponds to all swiftlets (*Aerodramus* and *Collacia* families); while the purple area corresponds to White and Black-nest Swiftlets in particular (*A. fuciphagus* and *A. maximus*). Source: Lim and Cranbrook (2002: 1).



⁵ Due to the focus of this thesis on swiftlet farming, I will be mostly referring to White-nest Swiftlets and their nests in this thesis, unless otherwise specified.

Swiftlets are often confused with their cousins, the swallow (*Hirundinidae*), which both have a similar appearance, but some important differences. The main difference, of course, is that swallows do not produce edible nests from their saliva, but another is the ability of swiftlets to echolocate, which allows them to find their way around in the total darkness of caves and swift houses. This produces a distinctive sound that seems like a series of rattling clicks to the human ear. Finally, unlike swallows, swiftlets belong to the genetic order *Apodiformes*, which roughly translates as ‘without feet’ in Latin (Thorburn, 2014: 536-7). Indeed, swiftlets have very short legs, which means that they cannot perch or walk, but only cling onto the rock surfaces in caves (or wooden planks installed in swiftlet farms).

Swiftlets usually fly into the farms in the evening around sunset (6:45-7:30 pm) and will fly out at dawn (6:45-7:30 am) to forage for food. Typically, the birds will only return during the daytime hours to feed their young. Swiftlets spend approximately 30-40 days constructing their nests, and have three breeding cycles per year, producing one to two eggs each time. The nests are then collected once the babies leave the nests, but this is sometimes also done upon completion of the nest, before the eggs are laid.⁶ The rationale is that the nests which have not been used for an entire breeding cycle will have less impurities such as feathers, or bits of egg shell and so on. If the nest is removed, the swiftlet will just rebuild the nest, and it is common for them to construct new nests each breeding season. The eggs will normally take two weeks to hatch, and the hatchlings will subsequently spend another three weeks inside the house learning to fly and strengthening their wings, during which time the adults come back intermittently throughout the day for feeding. Once a swiftlet builds its nest, it is believed that the birds will then return year after year to the same place.

⁶ There is typically a seven to ten day window between nest completion and the first egg being laid.

1.3 Edible Birds Nest: Tonic or Placebo?

Birds' nest soup is the primary dish, which is either served hot or cold and is typically prepared with other (more flavorful) ingredients such as chicken stock, lotus seeds, red dates, lily bulbs, rock sugar, or ginger. Birds' nests can also be steamed whole, and are often served in such a manner alongside Chinese dinner banquets, usually to celebrate special occasions, due to its role as a status symbol or signifier of fortune. However, there are now a wide range of birds nest or birds nest flavored products such as beverages, moon cakes, or even pharmaceutical items, such as skin or anti-aging creams which are primarily sold in East Asian markets to meet surging demand for the product.

Traditional Chinese medicine places the tonic effects of edible nests second only to ginseng, with which they are often combined (Lim & Cranbrook, 2002). Birds' nests are thought to contain molecular compounds that speed up cellular differentiation and development which can lead to enhanced recovery from illness and hinder the effects of aging. They may thus be consumed for recuperative purposes, to treat specific illnesses, as an aphrodisiac, to increase metabolism, or improve digestion. Advocates also claim that the nests contain glycoproteins that aid the division of cells in the immune system thereby relieving gastric problems, aiding kidney function, alleviating asthma, suppressing coughs, and curing tuberculosis (Hobbs, 2004; Thorburn, 2015). As Lim and Cranbrook note, the nests are hence considered to contain benefits for all organs of the body and all bodily activities. 'Coupled with the elements of luxury and ostentation, it is this universal contribution to well being, above all, that is the attribute that makes the edible birds'-nests so highly esteemed' (Lim & Cranbrook, 2002: 94). Or as Blussé puts it, 'in short, birds'-nests were thought to be a cure for almost anything' (1991: 333). Indeed, some of my interviewees even believed that birds' nest consumption would beget their children to grow taller, or alleviate cancer in relatives.

Though most of my respondents in the field would aggressively defend the health properties of swiftlet nests, others consider that the therapeutic value of the nests is possibly as simple as simply believing in its goodness. Indeed, Sodhi *et al.* (2011: 60) note that the glycoprotein responsible for the medicinal properties of birds' nests may be lost during the cleaning process prior to eating. Furthermore, Hobbs (2004: 2210) assert that laboratory analyses reveal that 'there is nothing of medicinal or therapeutic benefit' in birds' nests, given that the nests simply consist of equal amounts of inorganic ash, protein and carbohydrates.

1.4 The Global Market for Edible Birds' Nests

Human consumption of birds' nests can be traced back 1,500 years to China's Tang Dynasty (618-907). In Chinese circles, it is believed to have been brought back from South-east Asia by the Chinese explorer Zheng He (郑和) as a gift for the emperor (Lim & Cranbrook, 2002). During Zheng's travels in Java and Sumatra, the islands' natives told him that the nest of the swiftlet is made from its saliva, and contains solidified seaweeds and other nutrients that the bird swallowed, and that these nests have tonic and even aphrodisiac effects. However, documentary support for this theory is lacking in historical documents. As swiftlet biologist Gathorne (Lord) Cranbrook explained, 'there is no evidence for Cheng Ho's discovery of birds' nests, rather, they were introduced from cross-border trade with Vietnam', where they were first consumed (interview, 7 November 2013; see also Thorburn, 2015). Nonetheless, since the early origins of the trade, China has always been the largest consumer of edible birds' nest in the world, now accounting for 70% of the world's total consumption, with much of this trade historically being conducted through the port of Hong Kong (Kong, 2012).

As Thorburn (2014) has noted, the trade in edible nests expanded rapidly in the 18th century, when the nests became much sought after in China due to their alleged medicinal, tonic, and longevity effects. 'Logically speaking', Blussé has written, 'this implied an unlimited, everlasting demand. Limited supply kept the price high and the risks of sudden inflation nonexistent' (1991: 332). Given this value of the nests, Blussé further notes that birds' nests were even used as a currency in some occasions, as it was far more reliable than silver during the late 18th century (ibid).

Towards the latter part of the 20th century, demand for EBNs in China skyrocketed, which some scholars have attributed to the retreat of Maoism, which for many decades discouraged the consumption of birds' nests as bourgeois excess (Jordan, 2004; Thorburn, 2014). According to political economic studies of the trade in edible nests (Lau & Melville, 1994; Jordan, 2004), this opened up the global market, resulting in an annual growth rate of 10% per year since 1985. The period from 1981-1991 constituted a period of rapid growth in demand for EBNs, resulting in a fifty-fold increase in prices between 1971 and 1991 (Thorburn, 2012). By this latter date Hong Kong imported 18.7 million EBNs, worth approximately HK\$300 million (US\$39m) which accounted for almost all of the total world trade in that year

(Lau & Melville, 1994). This point speaks to Hong Kong's historic role as the primary hub for the trade in EBNs. As Lim and Cranbrook (ibid) note, this is because most of the nests imported in Hong Kong were used for domestic consumption (including mainland China), and only a small portion of these nests were trans-shipped to other East Asian or North American countries. Given the export-focused nature of EBNs, less than half of the birds' nest produced in Malaysia are consumed domestically, with the majority being exported to China, Hong Kong and Singapore.

At their peak, raw birds' nests could command up to 5000 RM (\$1185) per kilogram in the mid-late 2000s, but this price has since dropped to around 1000 RM (\$240), due to the market crash in 2011 (Chok & Bhatt, 2006; see also Chapter 8). However, these are the export prices received by farmers, while the market price in China would be significantly higher, up

Table 1.1: Historic price for white nests collected in Malaysia. Prices in Malaysian Ringgit (RM), with US\$ equivalent.

Year	Price (min-max)	Price (average)	Source
1989-1990	800-1000 (\$187-235)	900 (\$210)	Lim and Cranbrook (2002)
1994	5180-7728 (\$1200-1800)	6454 (\$1511)	Pakpahan and Soehartono (1994)
1997	--	5500 (\$1300)	Lim and Cranbrook (2002)
1999	5000-7000 (\$1170-1640)	6000 (\$1400)	Lim (1999)
2001	3700-5000 (\$866-1170)	4566 (\$1070)	Lim and Cranbrook (2002)
2005	4000-5000 (\$940-\$1170)	4500 (\$1050)	Chok and Bhatt (2006)
2013-2014	900-1200 (\$210-280)	1000 (\$235)	Swiftlet farmer in Sitiawan and Perak

to \$3,000 per kilogram (*The Sun*, 7 May 2012).⁷ Table 1.1) lists the historic prices for white nests in Malaysia, which shows a sharp jump in price between 1990-1994, and an equally sharp drop after 2011, due to severe trade restrictions from China.⁸

1.6 The Rise of ‘Swiftlet Farming’ in Malaysia

This practice of ‘swiftlet farming’ is said to have originated in East Java, Indonesia as early as the 1960s, primarily by chance, as swiftlets were found nesting inside old or abandoned buildings (see Chapter 5). Following the swiftlet farming ‘boom’ in Indonesia, the practice of actively ‘farming’ swiftlets spread to Peninsular Malaysia, starting in the Manjung region around the early-mid 1990s, as a result of the surging demand in China and overseas Chinese communities. This took place in the wake of rapid urbanization in the country (see McGee, 2002), but was soon followed by the Asian financial crisis of 1997-1998, which left many of the buildings constructed during the previous boom abandoned. The effects of this crisis were amplified by the repeal of the Rent Control Act in Malaysia in 1999,⁹ which removed the restriction on inner-city landowners arbitrarily increasing rents. This Act was enacted by the Federal Government following independence in 1966, in order to prevent the exploitation of tenants in inner city areas.¹⁰ However, with the increase of tourism in George Town and Malacca, as well as the two cities’ planned joint bid for World Heritage Status, the Federal Government repealed the Act in 1997 in order to encourage new retail activities there, such as hotels and cafés. Its repeal thus led many landlords to evict their tenants and convert their properties to swiftlet houses, or other lucrative forms of business. As numerous authors have lamented, and as I will discuss further in Chapter 6, this process eventually eroded George Town and Malacca’s rich cultural landscape which had been built up over the past two to three hundred years (see Fawzi & Lim, 2002; Mohit & Sulaiman, 2006).

⁷ This considerable difference in price indicates how middle men in key nodes such as Hong Kong and Singapore are profiting from and controlling the trade, which would be an interesting and important topic for future study (see Section 9.4).

⁸ Note: data adapted from Lim & Cranbrook (2014) and refers specifically to the price received from nest collectors in Malaysian Borneo. See Chapter 4 for a more thorough discussion of historic price fluctuations for the nests, and the more recent market crash in 2011.

⁹ Enforced as of January 1, 2000.

¹⁰ Note: This act referred specifically to pre-war buildings (those built before 1948), which were primarily shophouses. The act aimed to control housing prices given a post-war housing shortage.

Furthermore, it is said that the haze arising from large scale forest fires and Swidden agricultural practices in Sumatra (Indonesia) during the 1990s drove millions of swiftlets to Malaysia, particularly to the Manjung region of Perak, which is just across the Strait of Malacca (Thorburn, 2014). As a result, Manjung's towns such as Sitiawan and Teluk Intan have typically had the highest concentration of swiftlet farms in Malaysia since the industry's conception, with over 1,000 each (see Section 1.6.2). As the industry has developed, investors have begun to modify these buildings into specialized breeding sites for the swiftlets, thus transforming the skyline and ambiance of towns across Malaysia and Indonesia, which together source of around 80 per cent of the global nest supply (Thorburn, 2015). Buildings converted are typically heritage shophouses, old cinema halls or theaters and other commercial buildings.

Most small-scale swiftlet farmers in Malaysia (which comprise a majority of players in the industry) either sell the nests that they harvest directly to middlemen - who then export the nests to various countries - or first send them away to be processed and cleaned before passing them on to the middlemen. The price is of course different depending on whether the nests are processed or raw. The price for processed birds' nests can be up to RM15,000 (\$3,550) on the global market, which was three times the price for raw nests in Malaysia up until 2011. Most middlemen will then send the unprocessed nests to Indonesia for processing, while larger scale swiftlet farming companies will often have their own processing facilities on-site, such as the one shown in Figure 1.3, and export the nests they produce directly to the recipient country.

In both cases, impurities are painstakingly removed using tweezers, using young Indonesian women as laborers. The nests must be soaked in water for some time to allow the feathers or twigs to be removed, and then dried in molds to get the nests into the 'ideal' nest shape. There are at least eight large-scale producers throughout Malaysia, of which I visited two, one in central Malacca and one in Kuala Lumpur. Unlike the facility in Malacca, the one in Kuala Lumpur did not produce its birds' nests on site, but rather processed nests produced in other cities across Malaysia.¹¹

¹¹ This is likely due to KL's restrictions on swiftlet farms, and the high cost of land in the city.

Figure 1.3: Nest processing room inside a swiftlet house in Malacca (author's photo).



1.6.1 Anatomy of a 'swiftlet farm'

'Swiftlet farms', also known as 'swiftlet houses', 'swiftlet hotels', or *rumah burung* in Malay, are built structures intended to simulate caves (where the birds would naturally nest) and can either be converted from existing buildings or constructed anew (purpose-built). Both types of farms have several distinctive features, but these are more noticeable on converted buildings. First, entrances for the swiftlets are rectangular openings, often cut into a 'jack-roof' which is a square or rectangular shaped annex added on top of the existing roof. Originally these were used for ventilation in shophouses, but have since been modified for the purposes of swiftlet farming. Second, the windows are bricked up or blocked with thick shutters to stop any light from penetrating the building. They are then usually 'replaced' with rows of small ventilation holes (typically PVC pipes) to allow oxygen into the building for the birds to survive. Most swiftlet farms are also equipped with elaborate sounds systems playing recordings of swiftlet calls (during the mornings and evenings) to attract the birds. Though, sometimes the record-

Figure 1.4: A typical swiftlet farm in central George Town, Penang, which was converted from a heritage building - note the incongruence of the annexes and materials used (author's photo).



ings are no longer used once a successful colony of birds is established. In heritage buildings in George Town and Malacca, however, farmers operate more discreetly by replacing the windows with fake cosmetic shutters that cover the original (typically bricked up) windows and no longer use recordings.¹² Recordings are also less prevalent in George Town due to resident complaints and the need to disguise swiftlet farms given their illegal status in the city (see chapter 8).

¹² Nonetheless, many operators made permanent modifications without seeking building approval from their respective City Council. See Chapters 6 and 8 for more discussion of the legal aspects of this.

In order to illustrate the interior condition of a typical swiftlet farm, I have adapted the following excerpt from my field notes to try to convey my experiences from visiting one in central Sitiawan during fieldwork in September, 2013:

After Ding struggled with the thick padlocks - on both sides of the heavy metal door to his swift house in central Sitiawan - the door creaked open, and he invited me into the darkness. The first thing that hit me was the stench, from the bird droppings layering the floor, as well as the lack of ventilation in the building. The only light coming in was from the entrance hole on the 'jack roof' at the far end of the building. Despite being a few hours after sunrise, there were still a few swiftlets flying around, clearly disturbed by our presence.

This was Ding's most active swift house, the only one worth showing to me, he said, with probably over a thousand birds. The others he did not bother with, as their populations had declined in recent years.

In one isolated corner of the building, behind another locked door, Ding pointed out his sound system which was connected to a cassette player sounding recordings of swiftlet calls every morning and evening. He told me that the particular sound he played was extremely important to the success of the swiftlet farm, and the sound had to be changed frequently. In fact, I had met Ding through a friend of his with whom he traded new sounds with on occasion. This saved him the exorbitant amounts that can otherwise be charged for such recordings (up to \$200) -with no guarantees that they will work.

On the roofs of the buildings (typically not visible to most passersby) are often pools of stagnant water from which the swiftlets can drink. Such pools are also typically placed on the interior of the buildings to keep the humidity levels up, or, alternatively, humidifiers are used- in which case it is possible to see humidifier compressors on the exterior of the building.¹³ Other key interior features of swiftlet houses are the wooden planks along the ceiling - all of which are made with a groove for the birds to cling on to and build their nests. There are also open hose pipes running in order to keep the interior of the property wet. Most swiftlet farmers that I spoke with said that the interior temperature must be between 27 and 29C, with a humidity of 80-90%. Finally, unsurprisingly, there is usually a layer of guano on the floor, which, amongst other things, creates a smell that appeals to the swiftlets. These

¹³ See Chapter 7 for a discussion of the implications of this for urban health.

characteristics of swiftlet farms have accounted for much of the negative externalities and potential health impacts which I will explore in Chapters 5 through 7.

Many swiftlet farmers prefer the use of inner-city heritage buildings (see Figure 1.3) because they are not only much cooler but also devoid of potential predators which would be more prevalent in rural areas. In swiftlet houses, predators such as rats, pythons, owls and lizards can attack baby birds and eggs, so many swiftlet farmers equip their (rural) swift houses with electronic wires which will shock any animals or birds which crawl over or perch on the window sill (entry path). More importantly, many have noted that converting existing inner city buildings is much cheaper than acquiring a rural plot of land and constructing a new building from scratch. Furthermore, as will be discussed in Chapter 4, many swiftlet farmers that I consulted believe that swiftlets are more attracted to older buildings, because they do not have the same scents associated with newer buildings.

1.6.2 ‘Swiftly Growing’: Proliferation of Swiftlet Farms in Peninsular Malaysia

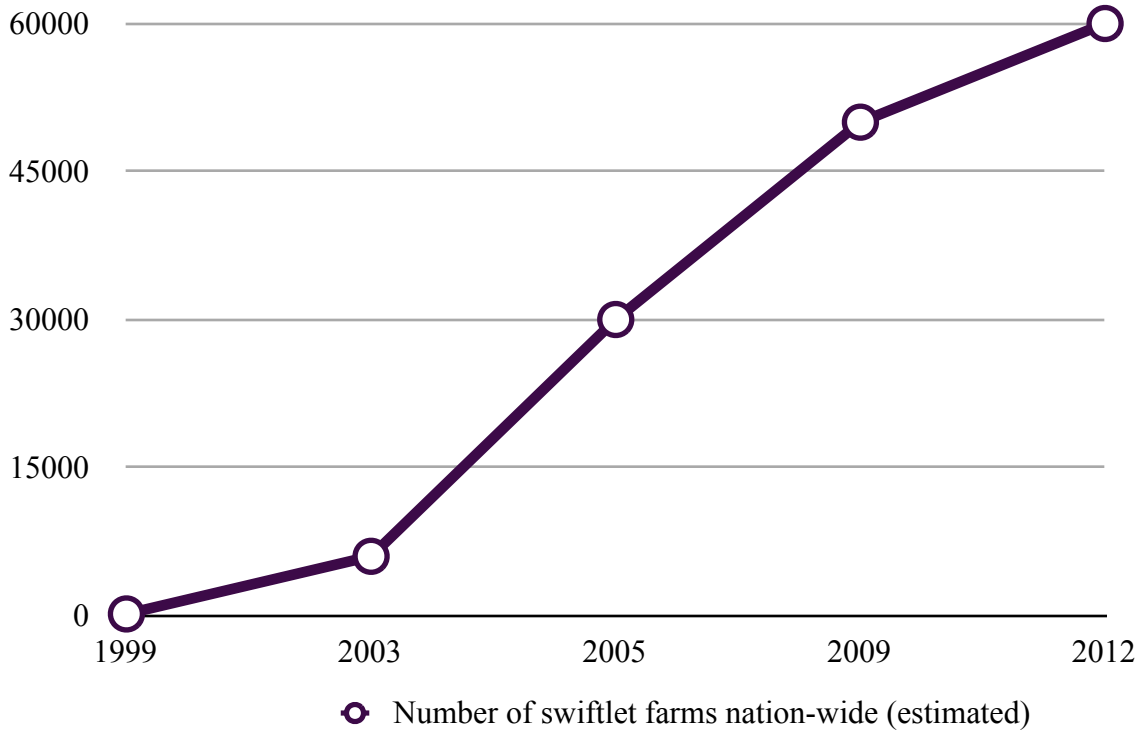
It is difficult to give precise numbers of swiftlet farms either nationwide or in any of my specific case study sites due to the unreliable nature of available figures, and the fact that the industry operates in a ‘grey zone’ between the licit and illicit (Bunnell & Harris, 2012; Kuyucu, 2014; Neo, 2009; Neuwirth, 2012; Nordstrom, 2007).¹⁴ Since swiftlet farming was not a formally registered industry (requiring licenses and operation permits) until 2003, any figures from before 2003 can only be estimates. Subsequently, several city governments made swiftlet farming illegal, which meant that many operators simply went about their business covertly by maintaining the facade of their building to disguise its status as a swiftlet farm. This meant that many official figures reporting numbers of swiftlet farms in a given area were often inaccurate. Nonetheless, I have sought to provide an overview of the development of swiftlet farms over the 15 year period from 1999 to 2014, using any available figures available to me, mostly taken from newspaper or industry reports.

After a strong period of growth in the first part of the 21st century, the Malaysian Swiftlets Nests Harvesters Association reported that the number of swift houses nationwide had increased from 158 in 1999 to about 8,000 in 2003 (Nathan, 2003; *The Star*, 14 June 2003). Given that the Manjung region of Perak was the birthplace of swiftlet farming in Malaysia, it has historically had the most swiftlet farms in Peninsular Malaysia (see Figure 1.3). By 2005, it was noted that the total in Perak was nearly 1,200 with over 600 in the Manjung district alone (*The Star*, 15 December 2005; Hafeez, 2005).

By 2005, the number had increased to 30,000, demonstrating strong national growth in the swiftlet farming industry between the years of 2004-2005 (Chok & Bhatt, 2006; *New Straits Times*, 4 September 2005). By 2009, it was estimated that the number had increased up to 50,000, though this is again only an estimate (Chin, 2009b; Foo & Balan, 2009; *The Sun*, 26 November, 2009). Because of the numerous advantages of urban over rural farms, as discussed above, more than 80% of all Malaysian swiftlet farms in 2010 were located in major towns and housing estates (Duckett-Wilkinson, correspondence, 19 January 2010). Moreover, as of 2011, there were only 986 registered swiftlet houses in the country, which means that over 98% of swiftlet houses were operating illegally (*New Straits Times*, 8 October 2011).

¹⁴ See Chapter 3 for a discussion of how I have handled this uncertainty throughout the dissertation.

Figure 1.5: Growth of Swiftlet Farms in Malaysia, 1999-2012



Nonetheless, it was estimated in 2009 that there would be 100,000 swiftlet farms by 2020, which would mark sustained growth in the industry. However, the industry's growth slowed somewhat to 2012, when there were an estimated 60,000 bird houses nation wide. After this date, the number of bird houses began to decline due to the impact of the Chinese import restrictions on Malaysian birds' nest imports (see Chapter 4). Figures are unavailable for recent years, likely because many swiftlet farms became unsuccessful and thus inactive - despite the structures remaining intact - which would give a false impression of the number of farms truly remaining.

1.7 Project Motivation, Aims and Contributions

Existing scholarly work on edible birds' nest harvesting has primarily focused on medical aspects of birds' nests (Chow *et al.*, 2012; Marcone, 2005); conservation of swiftlets and sustainability of harvesting practices (Hobbs, 2004; Lim, 1999; 2011; Lim & Cranbrook, 2014; Shirish & Sankaran, 2011); the political economy of the industry (Thorburn, 2015); and technical or business aspects related to the swiftlet farming industry (Ibrahim *et al.*, 2009; Alias *et al.*, 2013). Much less work has focused on the contentious socio-ecological aspects associated with the industry's rapid development, particularly from a political-ecology per-

spective (see Thorburn, 2014 for a notable exception). This is an important aspect to study, however, because the industry is incredibly lucrative, yet also poses significant implications to affected residents, particularly in relation to urban health and alternative livelihoods. Moreover, much of the above work has focused on Indonesia or Malaysian Borneo, rather than the Peninsula. Yet, the rapid growth of swiftlet farms across the country, and their location within urban residential areas, has resulted in a considerable amount of controversy over the presence of swiftlet farms in these areas.

The swiftlet farming industry has also significantly transformed the physical form of cities and indeed the nesting behaviors of swiftlets, which also poses important implications for the use of urban space, and the sustainability of urban swiftlet farming as a whole. As Lim and Cranbrook (2002: 149) put it, ‘scientists and laymen alike are deeply divided into two schools of thought. One promotes the advantages of swiftlet farming while the other strongly opposes it’. This thesis thus aims to examine both sides of this debate, by critically interrogating the claims made by the industry’s supporters and detractors. My intention is not to stake out a definitive normative stance, but rather to explore how the industry has been perceived and represented, and their discursive effects. By exploring the place of swiftlets and swiftlet farms in the ‘moral landscape’ of Malaysian cities (see Section 2.3; 5.1), this thesis intends to provide much substance for reflection on issues of socio-ecological relations, rights to the city, and ‘how to live together’ in an increasingly ‘hybrid’, or ‘cyborg’ world (Latour, 1993; Haraway, 1991).¹⁵

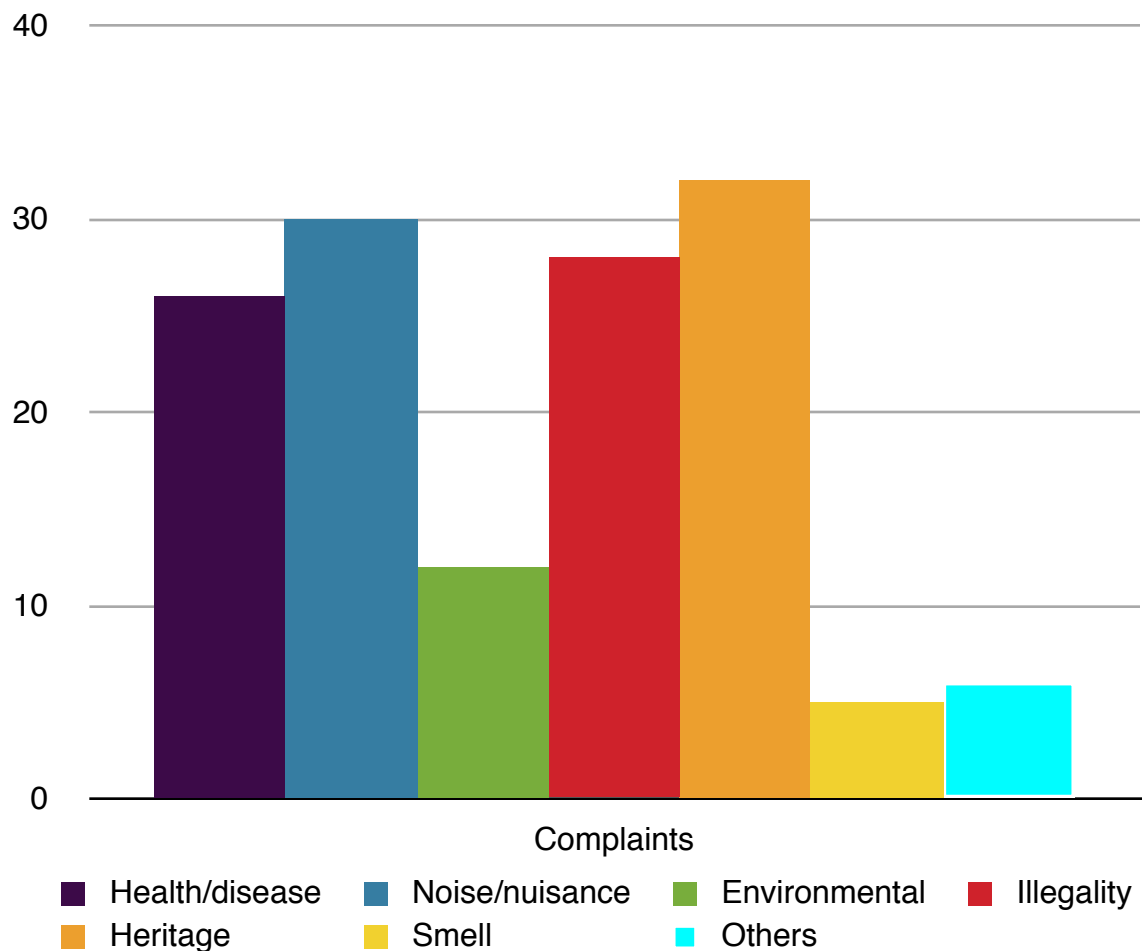
The primary question investigated in this dissertation asks how swiftlet farms have been perceived and contested in Malaysian cities. In probing this question, a discourse analysis was conducted using 145 news articles pertaining to swiftlet farming in Malaysia, as shown in the graph below (see Figure 1.6; Section 3.3.1b). The intent was to identify how swiftlet farming has been represented in public discourse in the country, and to quantify the main concerns. Out of the articles surveyed, 70 focused on the positive aspects of the industry, while the remaining 75 articles focused on the negative externalities posed by the industry, which indicates a strong balance to the views represented. The main concerns highlighted were, heritage impacts (32 citations), noise and nuisance aspects (30 citations), illegality (28 citations) and

¹⁵ The term moral landscape refers to the ‘association of particular landscapes [within] schemes of moral value’. In this way, moral landscapes both ‘reflect and reproduce senses of moral order’ (Matless, 2009: 479).

threats to human health (26 citations). Other, less prevalent, concerns identified were impacts on the (urban) environment, and concerns about the (social or ecological sustainability) of the industry. This analysis then guided the subsequent research probing these concerns more thoroughly, as discussed in Chapters 5 through 8.

It is also important to note that there was also a temporal aspect to the circulation of the above discourses. For instance, heritage concerns were mostly restricted to George Town and

Figure 1.6: Key areas of concern regarding urban swiftlet farms in Malaysia.



Malacca, only becoming dominant around 2006 or later. This is likely to do with the listing of Malacca and George Town as UNESCO (United Nations Education, Scientific and Cultural Organization) World Heritage Cities as of 2008, and the subsequent ban of swiftlet farming in both cities. Following 2011, most newspaper articles concerned the issue of the Chinese embargo placed on Malaysian birds' nests, which was not resolved until 2013.

The research in this dissertation thus interrogates the competing discourses (re)shaping local landscapes throughout the short history of swiftlet farming in Peninsular Malaysia. This follows previous work in political ecology which asserts that representations and discourses about nature are crucial to the production of just and democratic urban environments (Desfor & Keil, 2004; Millington, 2013). Controversies regarding the presence of urban swiftlet farms express the meeting of the local with the global, the collision of the past with the present, and the convergence of economic and cultural traditions. In illustrating this point, I will demonstrate how local experiences of swiftlet farming in Malaysian cities are bound up with culture and power relations in places elsewhere, which is a task taken up most explicitly in Chapters 4 and 6. My approach loosely follows that set out by Yeoh (1996), who suggests grappling with how the urban landscape is differentially perceived and utilized by various social groups, and to examine why conflicts over the use of this space arise, and how they are resolved. The focus here, as in Yeoh's work, is on 'the practical nature of everyday life' (Yeoh, 1996: 10). In doing so, it is possible to illustrate how the look and function of the landscape affects the daily routines of the people who live and work within them.

Additionally, a central aim of this research is to understand how the swiftlet farming industry has transformed not only the cities in which it has been located, but also the ecology of swiftlets and their breeding patterns - which is the primary research question addressed in Chapter 4. As I will demonstrate, various socio-ecological discourses have been used in representations of the industry, which have had crucial implications for its sustainability in urban areas. The social controversy surrounding the cultivation of EBNs in cities thus constitutes a complex case whereby differing cultures, ecologies and places 'bleed into and mutually constitute one another' (Cook & Crang, 1996: 131; see also Castree, 2001; Heynen *et al.*, 2006). The ecological, material and discursive aspects of the landscape transformation accompanying swiftlet farming therefore requires new approaches to understanding the controversies surrounding it. As I will argue and demonstrate throughout this dissertation, the nascent approach of landscape political ecology (LPE) can provide a cohesive and relational approach that helps untangle the interconnected processes that together form highly variegated and contested socio-natural landscapes examined here (see Chapter 2).

In addition to the depth of original empirical research on the urban swiftlet farming industry in Malaysia, this dissertation makes four conceptual, and methodological contributions,

which I will discuss in more detail in the concluding chapter. First, it develops the conceptual framework of landscape political ecology, which is a useful tool for examining the intersection of material, ecological and discursive factors accompanying contemporary processes of urban transformation. Second, the thesis adds to existing work on landscape and political ecology by demonstrating the various discursive strategies that are used by key stakeholders in naturalizing competing ideologies regarding the use of urban space on a quotidian basis. Third, it contributes to the emerging literature on the political ecology of health and disease by demonstrating how political-economic factors, socio-ecological considerations and health discourses or perceptions constitute equally important factors in shaping health decision making. Finally, the dissertation makes a methodological contribution to the literature on co-production, by demonstrating particular ways in which participatory ethnographic methods can be used to achieve both research and activist goals in urban settings.¹⁶

1.8 Conceptual Framing

This diversity of themes investigated in this dissertation in part reflect the nature of political ecology, which is open to a variety of conceptual orientations. For this reason, King (2010) sees political ecology as a loosely bounded geographic subfield that offers specific theoretical and methodological contributions to research on nature-society interactions (see also Harper, 2004; Prudham, 2015). As such, political ecology studies become unified instead by particular methods (e.g. participatory action research), themes (e.g. health and disease) and even research questions. In this way, political ecology is rightly understood as an interdisciplinary approach to the study of socio-natural relations, drawing on diverse bodies of literature and competing epistemological positions (Blaikie, 2008; King, 2010; Neumann, 2005). As Neumann (2005: 45) put it, ‘political ecology, perhaps more than any field, is particularly suited to positing an interdisciplinary understanding of nature-society relations’. Moreover, it is a dialectical framework, which necessitates engaging with a number of issues affecting the processes being studied (Robbins, 2004). Therefore, a great deal of recent effort has been made to synthesize political ecology with other fields, including landscape (Neumann, 2010) and environmental health (King, 2010). Given the contested nature of the swiftlet farming industry, the

¹⁶ European Network of Political Ecology. See www.politicaledge.eu for more information on this EU funded research project.

approach taken in this thesis follows the environmental conflict tradition within political ecology research (see Robbins, 2004).¹⁷

The same is true for landscape, as Gesler (1992) noted that attempts to define the concept tend to emphasize its ambiguity or pluralistic nature. Quite often the landscape is read as a text that reveals the set of social relations that govern its production (e.g. Duncan, 1990; Goh & Yeoh, 2003; Mitchell, 2000). However, I adopt a more relational understanding of landscape, which views it as a vehicle of social identity, a generator of profit, and a site of everyday life. Defined in this way, landscape becomes a lens which renders visible the social struggles over how the landscape is (or should be) made, thereby revealing the contrasting landscape interests and cultural politics at stake (see Mitchell, 2000; Schein, 1997). As Mitchell (2000: 103) remarks, ‘landscape representations are exceptionally effective in erasing the *social struggle* that defines relations of work’. In much of Mitchell’s work, the landscape is treated as a commodity in that it actively hides (or fetishizes) the labor that goes into its production. However, in the case of swiftlet farming in Malaysian cities, these struggles have been going on in a highly visible way over the past two decades, resulting in the (re)construction of landscape form over time. Excavating the various sides of this debate provides the opportunity to capture the significant social struggle and negotiation that is embedded in the mechanisms of landscape production and capital accumulation as they take place in contemporary Malaysian cities (see Chapters 4 and 6).

Given that one of the main tenets of landscape and political ecology is the need to understand phenomena in their wider context, this thesis necessarily engages with a diversity of topics, which are all viewed through the lens of LPE, namely: (urban) animal domestication, cultural heritage, and the political ecology of health and disease. This was not a decision made *a priori*, but rather, these topics all emerged through my fieldwork as interconnected issues which need to be fully engaged to properly understand the political ecologies of swiftlet farming. What such political ecologies attest to is ‘a world of commotion’ in which the geography of social and natural life is constantly being (re)made through complex networks of socio-natural relations which defy dualistic categorization as either local/global; natural/cultural or human/nonhuman (Whatmore, 1999: 33). In so doing, this dissertation will engage literatures

¹⁷ This theoretical synthesis between landscape and political ecology will be undertaken in Chapter 2, where I also review work in both fields that bears relevance for this dissertation.

which could be dealt with much more extensively, particularly that on the political ecology of health, and cultural heritage studies. However, the aim here is to investigate these themes through the lens of LPE, in order to demonstrate how each are bound up with the public responses to and lived reality of swiftlet farms in urban areas.

The methodology selected for this research is a mixed-methods approach to ‘tracing the controversies’ (Yaneva & Heaphey, 2012), based on a multi-sited, mobile ethnography. As Neumann (2005) has demonstrated, mobile ethnographic methods are a widely used methodology in political ecology research, due to their ability to highlight the conflicting perspectives on different forms of socio-environmental transformation (see Chapter 3). In particular, I conducted several ‘go-along’ interviews - which are a type of mobile methods used to explore the everyday experience of key participants (see Section 3.3.2). Moreover, all of the methods used were highly participatory, in that they allowed for the concerns and needs of key stakeholders to actively shape the research. I maintain that such ‘co-productive’ research has enabled a more situated view of socio-ecological transformations that have transpired through urban swiftlet farming in Malaysia, and the controversies surrounding them. The next section will now introduce the principal stakeholders referred to throughout this thesis.

1.9 Outline of Key Stakeholders

The key civil society organizations (CSOs) that have been involved in representing the public interest and advocating against swiftlet farming in Malacca and George Town have been primarily heritage-based organizations. Wildlife and nature groups have largely not engaged with the swiftlet farming issue, primarily because the industry is not endangering the swiftlets. Nonetheless, the centrality of heritage focused organizations and activists underscores the primacy of heritage in the swiftlet farming industry. In particular, the Malaysian Heritage Trust (BWM - *Badan Warisan Malaysia*) and PHT, have been the primary organizations involved in lobbying with the government over the impacts and risks associated with swiftlet farming in Malacca and George Town, respectively. Elizabeth Cardosa, a Malaysian of Portuguese descent, has been the director of BWM since 2001, and at that time began working on swiftlet farming issues in Malacca, when the industry was just starting to pick up. In the George Town context, Rebecca Duckett-Wilkinson, a Malaysian of British-Chinese descent

and member of the PHT has been the primary advocate over swiftlet farming in the city since 2008, as well as a central interlocutor in this research.

Swiftlet farmers' associations were able to command a great deal of political and economic power in Malaysia, and have exerted considerable influence in negotiating their right to urban space. By far the most influential of swiftlet farming associations has been the Association of Swiftlet Nest Industries (hereafter ASNI), which represents swiftlet farmers' interests in Penang. The group was lead by the former President, Carol Loh, who was active between 2010 and 2013, and was an extremely influential stakeholder in negotiations over swiftlet farming in Penang. Such industry associations have attained such a great deal of power not only through political and economic power that they command, but also in the discursive strategies that they have used in legitimizing swiftlet farming in George Town.

In the case of George Town, the Penang State Government and Penang City Council (MBPP - *Majlis Bandaraya Pulau Penang*), have been the primary actors involved in enacting and enforcing legislation on the swiftlet farming industry in the state. In particular, Chow Kon Yeow has been the main official in charge of the swiftlet farming issue in Penang since the current Democratic Action Party (DAP) Government was elected in in 2005. Chow has thus been the principal voice of the State Government, and has been in charge of negotiating with and mediating between various key stakeholders in regards to the Government's policies on swiftlet farming. Following the announcement by the Malaysian Deputy Prime Minister in 2010 that swiftlet farming would be banned in George Town and Malacca, Chow subsequently launched a three year action plan to remove swiftlet farms from George Town's WHS by the end of 2013, with enforcement beginning promptly in 2011. However, the state and municipal councils have had to act with a balanced hand given that swiftlet farming in Malaysia is a Government sponsored industry under the Malaysian Economic Transformation Program, which means that the Federal Government both benefits from and promotes the economic benefits of the industry. Table 1.2 details the full list of stakeholders most relevant to this research, which should serve as a useful reference for the following chapters.¹⁸

¹⁸ n.b.: this table is a listing of key stakeholders referred to frequently in the text of the dissertation. All were interviewed at least once, except for Carole Loh, Masanori Nagaoka (e-mail correspondence only), and Christopher Lim. A list of interviews cited in the text can be found on p.238.

Table 1.2: List of Key Stakeholders	
Actor	Role
Cardosa, Elizabeth	Director of <i>Badan Warisan Malaysia</i> (BWM) since 2001; Malaysian of Portuguese descent Began advocating against swiftlet farms in Malacca at that time when the industry was just starting to proliferate.
Chow, Kon Yeow	State Executive Chairman of the Local Government Committee, Traffic Management and Environment, Penang State Government; main official in charge of the swiftlet farming issue in George Town/ Penang since 2005.
Cranbrook, Gathorne (Lord) (PhD)	Also known as Earl of Cranbrook; eminent swiftlet biologist; professor emeritus at Universiti Malaya (Sarawak); co-author of <i>Swiftlets of Borneo</i> (Lim & Cranbrook, 2001).
Ding, D.H.	Swiftlet farmer in Sitiawan, Perak; property developer who started swiftlet farming as a hobby, and now owns five urban swiftlet houses in Sitiawan.
Ding, T.H.	Swiftlet farmer in Penang State; manages an oil palm estate, and started two swiftlet farms as a side-business, both of which are in rural areas of Perak and Penang state.
Duckett-Wilkinson, Rebecca	Former Council Member of the PHT; Malaysian of British-Chinese descent; has been the primary advocate against swiftlet farming in George Town since 2008, as well as a central interlocutor in this research.
Khoo, Salma	President of the PHT; involved in lobbying against swiftlet farming in George Town; mentor during my secondment at the PHT.
Liang, Clement	PHT secretary; critic of swiftlet farming in George Town.
Lim, Chan Koon (PhD)	Expert on swiftlet biology, PhD in swiftlet sustainability and conservation; co-author of <i>Swiftlets of Borneo</i> (Lim & Cranbrook, 2001).
Lim, Christopher (MD)	Renowned Malaysian physician <i>cum</i> swiftlet farmer; author of <i>Make Millions From Swiftlet Farming: A Definitive Guide</i> ; led popular courses on swiftlet farming throughout the 2000s.
Loh, Carole	Former President of ASNI (2010-2013), and was an extremely influential stakeholder in advocating for swiftlet farmers' rights in George Town, Penang.

Table 1.2: List of Key Stakeholders	
Actor	Role
Nagaoka, Masanori	Director of the regional UNESCO office in Jakarta, Indonesia. Was involved in mediating between swiftlet farmers' associations in Penang (such as ASNI) and those against industry's presence in George Town's World Heritage Site (notably the PHT).
Pak, Harry	Swiftlet farming consultant in Kuala Lumpur; author of popular blog 'Swiftlet Farming: Million Dollars A Year Potential Income'; offered courses on swiftlet farming during industry's peak.

1.10 Overview of the Dissertation

Chapter 2 provides a review of the literature used in developing the theoretical framework for this research, namely, landscape political ecology (LPE). This is a relatively nascent body of literature stemming from (urban) political ecology and studies of landscape in cultural geography. I will start by briefly introducing these literatures and then exploring how landscape has been treated in political ecology, while assessing the potential to engage these two approaches in new ways. My argument here is that UPE is a useful approach for this research, but that the particular focus of urban swiftlet farming is aided by a cross-fertilization with theorization of landscape in cultural geography. I believe that adding insights from landscape studies has the potential to bring about a different form of political ecological analysis which can allow for a better understanding of the various ways in which human activity and bio-physical agencies can come together to rework landscapes and their nested social relations.

Chapter 3 is contextual and methodological, introducing the specific sites in which research was conducted, as well as the methodology employed in carrying out this work. It justifies the combination of methods that I have used in conducting this research, in addition to the selection of field sites. The fieldwork consisted of two primary parts: the first where I conducted semi-structured and go-along interviews with a variety of actors in a range of different sites along the West coast of Malaysia and Singapore; the second consisted of an institutional ethnography where I worked closely with the Penang Heritage Trust (PHT) in refining my research questions and developing a more action-oriented approach. Therefore, the methodological insights presented here are intended to contribute to literature on the co-

production of knowledge by addressing how academics can engage with civil society organizations to address socio-ecological issues in urban contexts. .

As Don Mitchell (2008: 34) has asserted, the analysis of landscape's production also requires the analysis of networks of production, including the relations of production that sustain them. Chapter 4 thus provides an overview of the swiftlet farming industry, its key economic and ecological aspects, the challenges that it has faced over the course of its emergence, as well as the socio-ecological transformations that it has brought about. As I discuss, these various factors combined to bring about the rapid boom and eventual crash of the Malaysian swiftlet farming industry within a very short period of time. In particular, this chapter also looks at the ways in which the localized socio-natural transformations associated with the Malaysian swiftlet farming industry articulate with broader networks of commodity production, exchange and regulation. In so doing, it considers how regulatory mechanisms put in place by the Chinese state - the primary consumer of Malaysian birds' nests - led to a sharp and unexpected crash of the Malaysian birds' nest industry in 2011, thereafter creating a landscape of largely abandoned swiftlet farms across the country.

In the past few decades, geographers and political ecologists have become increasingly interested in the 'more than human' aspects of urbanization, which aims to place animals and other non-humans at the center of analysis (Braun, 2005; Millington, 2013). Following this tradition, Chapter 5 aims to explore how efforts to domesticate swiftlets in Malaysian cities have intruded upon ideas about the 'proper' place of animals in such areas (see Philo, 1995). This involves tracing the conflicts between swiftlets and humans in the city by studying the particular discourses that circulate in a given community, from rhetorics of health and disease (see Chapter 7) to moral discourses, which are either hostile or supportive of animal presence in the city. The chapter reviews literature on the history of (domesticated) animals in the city, using relevant work on animal domestication dating back to the mid 20th century. It then uses empirical material to analyze how various stakeholders have sought to compare swiftlet farms to other forms of farming, while also considering how others have sought to position swiftlets as 'natural' features of the urban environment. The chapter concludes that the presence of swiftlets themselves in cities is seen as a more or less 'natural' occurrence, but that efforts by swiftlet farmers to manipulate the house-seeking tendency of these birds has resulted in an

‘unnatural’ phenomena that has created implications for alternative uses of urban space and general social and ecological well-being in cities.

Chapter 6 continues with the discursive analysis undertaken in Chapter 5, focusing on the UNESCO World Heritage Sites of George Town (Penang) and Malacca. These two cities have experienced significant upheaval concerning swiftlet farming activities in the inner city areas, centering around the conversion of heritage shophouses into swiftlet farms. Two understandings of swiftlet farming are shown to co-exist in the moral landscape of these cities; one of which labels swiftlet farming ‘out of place’, while the other seeks to put it in its place. In the first, swiftlet farms are seen as degrading to the character and (in)tangible heritage of the heritage landscape. In the other, swiftlet farming is simultaneously a legitimate and lucrative business, which is in accordance of George Town’s living and natural heritage. This chapter asks why heritage issues have become the primary factor resulting in the expulsion of swiftlet farming from the urban landscape in George Town and Malacca, despite the range of other significant issues that have emerged, from (perceived) health risks, to impacts on quality of life. I argue that the reason for this ultimately has to do with the UNESCO World Heritage status that was ‘awarded’ to both sites in 2008.

Chapter 7 focuses on the debates surrounding the perceived impacts on urban health arising from the rearing of birds in urban residential areas. This was one of the central discourses used by critics of the industry in pushing for its removal from cities, despite the lack of empirical evidence to support their claims. The primary question investigated in this chapter is thus on how the perceived impact of swiftlets and swiftlet farms on human health and quality of life in Malaysian cities is framed by different stakeholders. In analyzing this debate, it engages with the literature on political ecology of health and disease to counterpose the narratives used by critics and supporters of the industry, as well as the standpoint of government health agencies. In particular, it considers the ways in which what come to be regarded as legitimate knowledge about diseases are constructed and contested. The material presented in this chapter focuses primarily on the UNESCO World Heritage City of George Town (Penang) and argues that narratives of health and disease continually police which landscape practices are acceptable for this increasingly globalizing and image conscious city.

Chapter 8 is the final empirical chapter of the dissertation which explores the various legislative and regulatory measures that have been developed to control swiftlet farming

across Peninsular Malaysia, and considers the challenges that have been faced in doing so. It begins by considering policies developed at the national level, before narrowing in on the specific case of George Town, Penang. This case was chosen because it was the primary site of research for this dissertation, and also because the Penang State Government has arguably put the most effort into regulating the industry of all states in Malaysia. Yet, at the time of research, there were still a number of swiftlet farms remaining in George Town, despite official government declarations suggesting otherwise, and the fact that the industry was declared illegal in the city as of 2009. This chapter thus probes deeper into this case, by asking why swiftlet farms still proliferate in Malaysian cities like George Town, despite their illegality. Drawing from Mitchell (1994; 2006), I suggest, that the reason also lies in the fact that the landscape is not a 'unitary form', in that it is shaped by various competing interests. In contemporary George Town, landscape has been fought over quite explicitly and vehemently in both the urban arena and the media. As a result, an 'uneasy compromise' had to be made by the state, taking into account the the economic merits and perceived social threats of swiftlet farming in the city (Walker & Fortmann, 2003).

Chapter 2 - Towards a Landscape Political Ecology

2.1 Introduction

The case of edible birds' nest farming in Malaysian cities opens up several lines of inquiry into the implications of appropriating urban space for the semi-domestication of birds. This chapter argues that urban political ecology is a useful conceptual foundation for this project, but that the particular case of urban swiftlet farming is better understood through a cross-fertilization with insights from landscape studies in cultural geography. Some scholars, including Walker and Fortmann (2003) and Neumann (2011), in addition to a paper session at the 2013 Dimensions of Political Ecology Conference, have initiated discussions around the conceptual synergies between the landscape and political ecology literatures. However, as of yet, there have been no sustained attempts to utilize an explicit LPE approach in empirical work. The chapter begins by highlighting the ways in which swiftlet farming is closely aligned with central concerns of political ecology, but given the urban focus of this dissertation, I spend more time emphasizing the usefulness of the urban political ecology literature for explicating this relatively recent phenomenon. The second half of this chapter specifies the particular aspects of the vast literature on landscape that I have mobilized in this dissertation, and the synergies they share with the UPE literature. This differs from the previous engagements with LPE, which have not been explicitly urban in focus. The chapter concludes by considering how a LPE framework can help to emphasize the crucial ways in which representations of the swiftlet farming industry have been enrolled in the (re)shaping the material and moral landscapes of Malaysian cities.

2.2 ‘Nested’ Urban Political Ecology

In many respects, the swiftlet farming industry can be seen to align closely with the central concerns of early research within the political ecology tradition, which examined resource related conflicts surrounding themes of access, governance, and exploitation (Blakie & Brookfield, 1987; Fairhead & Leach, 1996; Peet & Watts, 2004). In doing so, such political ecological analyses utilize a scalar approach which examines links between various actors to understand the contextual realities of decisions regarding resource production and conflicts (Neumann, 2009; Peet & Watts, 2004; Robbins, 2004; Swyngedouw & Heynen, 2003). According to the most widely recognized and quoted definition of political ecology (Blakie & Brookfield 1987: 17), the approach thus ‘combines the concerns of ecology and a broadly defined political economy ... encompass[ing] the constantly shifting dialectic between society and ... resources’. As Roderick Neumann (2005) has argued, the point is to emphasize the fact that the human transformation of natural ecosystems cannot be understood without considering the political-economic context in which such transformations are embedded. Properly applied, political ecology does away with unproductive dichotomies such as material/social or urban/nature, to produce a more vibrant analysis of ‘econo-natural networks’ through which nature is transformed into resources, commodities and conditions of production (Castree, 2003; Harvey, 1996). The framing thereby provides a productive lens through which to analyze the material manifestations and struggles embedded within the landscape (Hung, 2015; Neumann, 2005; 2011; Walker & Fortmann, 2003).

A major contribution of political ecology has been the (re)contextualization of ‘resources’ and ‘the environment’ within broader socio-economic systems and transformations across a range of spatial scales, from the body to the region and nation (Bakker, 2005; Kaika, 2005; Robbins, 2007; Swyngedouw, 2004; 2015). Therefore, as Schmink and Wood put it, the goal of political ecological analysis is to explain ‘how economic and political processes determine the way natural resources have been exploited’ (in Heynen *et al.*, 2006: 8). Erich Zimmerman was one of the first geographers to draw attention to the transformation and exploitation of natural resources under capitalism by arguing that ‘resources are not: they become’ (in Bridge, 2009: 1220). This emphasizes Harvey’s point that ‘resources can be defined only in relationship to the mode of production which seeks to make use of them and simultaneously ‘produces’ them through both the physical and mental activity of the users. There is,

therefore, no such thing as a resource in abstract or a resource which exists as ‘a thing in itself’” (1974: 265).

Indeed, the failure of resources to fit into conventional categorizations as either ‘natural’ or ‘social’ has thus triggered a considerable amount of recent work by geographers in rethinking relationships between, resources, discourse and power (Bakker & Bridge, 2006; Castree, 2003; Robbins, 2001; Swyngedouw, 1999; Whatmore, 2002). However, these commodity relations often veil the multiple and unequal socio-ecological processes and power relations operating at a variety of scales that feeds the capitalist urbanization and turns the city into a metabolic socio-environmental process (Heynen *et al.*, 2006; Katz, 1996). These are important to consider given that societies are composed of groups with different interests and competing objectives, which often leads to conflicts over the use of resources. As Gavin Bridge succinctly argued, ‘resources “become” only through the triumph of one imaginary over others’ (2009: 1221). Therefore, an important mission for political ecological analysis is to try to make the ways in which nature is produced more socially and ecologically democratic (Braun, 2002).

More specifically, the theoretical and empirical material mobilized within this dissertation is inspired by the more recent UPE literature (e.g. Gandy, 2002; Heynen *et al.*, 2006; Kaika, 2005; Keil, 2005; Swyngedouw, 2006a; 2006b), which offers dynamic ways of understanding the socio-natural production and contestation of urban landscapes. According to Neo and Pow (2015: 401) it is especially useful for considering the new urban forms constructed out of the interactions between politics, nature-environment and urban space. In examining such instances of environmental transformation, political ecologists have highlighted the material and discursive aspects of landscape from multiple angles. For example, Kaika (2005; 2006) has studied the role of iconography and symbolism of dam constructions in reconfiguring the relationship between ‘nature’ and the city in Athens, Greece. Such work has been an inspiration in conceptualizing this project, which emphasizes the discursive representations of the environmental transformations associated with urban swiftlet farming in peninsular Malaysia.

Over the past two decades, human-environment scholars have begun to recognize that an urban political ecology is necessary because of the highly inter-related nature of the urban and natural, human and non-human (Gandy, 2013; Loftus, 2007; Scott, 2006; Swyngedouw,

1996). As the subsequent chapters of this dissertation will demonstrate, urban swiftlet farms produce unevenly distributed costs, negative environmental externalities, as well as a perceived exploitation of nature which some feel uncomfortable with. Following the well-known ecological and dialectic principle that ‘everything is connected’, UPE thus interrogates how ecological change in cities (dis)empowers those involved, both locally and across time and space (Robbins, 2010: 413). After all, it is a form of historical materialist enquiry that adopts a dialectical and relational understanding of place, space, and nature/environment (Gandy, 2002; Harvey, 1996). Harvey summarizes dialectical thought as ‘emphasizing the understanding of processes, flows, fluxes and relations, over the analysis of elements, things, structures and organized systems’ (1996: 49). As he further argues, such dialectical analysis is important to deepen our understanding of various socio-ecological processes, which is open to myriad sources of knowledge (ibid).

The rapid development of the Malaysian swiftlet farming industry is an interesting case to study through this lens, as the change from cave-based harvesting in Malaysian Borneo to urban swiftlet farming techniques has created numerous socio-ecological implications, which will be discussed in most detail in Chapter 4. This transformation can be explained in light of the dominant trend of the commodity’s ever-expanding reach into the fabric of nature, which has been heavily theorized by prominent human-environment scholars (see Braun 1992; Haraway, 1997; Katz, 1998). Moreover, the landscape changes associated with the industry fit in with Purcell’s observations that ‘the valorization of urban space has been a key accumulation strategy for capital’ (Purcell, 2002: 103). In this way, edible birds nest cultivation is one example of an industry that has recently shifted from a *formal* to *real* subsumption of nature (Boyd *et al.*, 2001). Boyd *et al.*, inspired by Marx’s differentiation between the real and formal subsumption of *labour*, developed these terms in effort to conceptualize the ways in which nature is now being transformed by industrial capitalism. Cave based methods of swiftlet farming would align most closely with formal subsumption of nature, which is based more on a logic of extraction, whereby firms are unable to fundamentally transform the processes of biophysical world. Swiftlet farming, on the other hand, can be seen as an attempt to evade the ‘exigencies of nature’ (Boyd *et al.*, 2001: 563), by moving more towards a logic of cultivation through the intensification of biological productivity.

Geographers have been central in the campaign to develop this literature, by paying particular attention to the long neglected role of nature in shaping the urban experience (Hinchliffe & Whatmore, 2006; Massey, 2005). Noel Castree (1995), for example, has considered the ways in which capitalism brings all manner of environments and human labor processes together so as to quite literally produce nature anew. As he demonstrates, it is through such means that nature, under capitalism, is treated as a commodity to be produced and sold. Such ideas trace back to Marx's theorization of commodification, which he argues leads to 'the endless "co-modification" of human and nonhuman beings in both nature and culture' (Luke, 1999: 39).

For Loftus (2007), on the other hand, studying the role of (produced) nature in shaping the urban experience has meant developing an explicitly historical materialist approach to understanding how humans and non-humans are brought together in increasingly heterogeneous ways. In doing so, Loftus (2007; 2012) has repeatedly insisted on the importance of Smith's (1984) 'production of nature' thesis, which argues that nature is socially produced and increasingly co-opted as a product of capitalism. Similarly, urban political ecologists, like Loftus, have utilised this concept to point out that the city is not one that is geographically distinct from nature (Desfor & Keil, 2004; Heynen *et al.*, 2006; Kaika, 2005; Swyngedouw, 2004). Rather, Smith's theory of the production of nature is rooted in Marx's (1973; 1976) ideas regarding the role of human agents in the production and transformation of 'natural' environments. The production of nature thesis was thus one of the first studies in geography and related disciplines to explicitly argue that the natural and social are not in fact separate realms, as often conceived, but are rather inseparably intertwined. As such, he has had a significant role in unsettling the apparent naturalness of 'nature' and natural resources. This line of reasoning follows the dialectical principal that states: 'a thing cannot be understood or even talked about independently of the relations it has with other things' (Harvey, 1974: 265).

The significance of Smith's ideas around the production of nature is that it, as Alex Loftus writes, 'provides one of the most fecund starting points for rethinking the politics of the city', yet, for some scholars, this may today seem like a point that is taken for granted, one that has been made so frequently that it is simply part of the unquestioned 'geographical wisdom' (Loftus, 2012: xxii). However, the politics and significance behind the production of na-

ture theory have not been explored far enough (Castree and Braun, 1998; Prudham 2009: 590).

The crucial issue here is not just of blurring the boundary between ‘nature’ and ‘society’, but rather of taking responsibility for how social interventions in nature take place, with what consequences, and for whose benefit (see also Desfor & Keil, 2004; Kirsch & Mitchell, 2004). In this regard, Tornaghi (2014: 552) has noted how some urban agriculture projects are ‘playing with the urban form, challenging current land-use management and reinventing the urban landscape’. Her paper thus examines the role that urban agriculture practices play in the ‘reproduction of capitalism...urban metabolic processes and the discursive, political and physical production of new socio-environmental conditions’ (553). However, her approach differs to that taken up here in that she views these changes as potentially positive measures by which urban agriculture projects can reshape current urban spaces and create new forms of urban commoning. Rather, I aim to consider the potential negative implications of urban farming, by examining how it challenges accepted uses of urban space.

Inspired by Smith’s production of nature thesis, some urban political ecologists have also identified what Kaika and Swyngedouw (2000) refer to as the urbanization of nature - or the blurring of boundaries between city and country (see Chapter 2). For instance, the induced urbanization of swiftlets and concomitant transformation of urban space into spaces of birds’ nest cultivation reflects the type of created ecosystem that Harvey (1996) long ago identified. Thus, the production of nature, in this case, takes on an increasingly capitalist and urban form. As fixed objects on the landscape, urban swiftlet farms act as physical conduits or ‘metabolic vehicles’ for the facilitation of capital circulation between Malaysia, China and markets elsewhere (Cooke & Lewis, 2013; Harvey, 2007: 233; Swyngedouw & Heynen, 2003; Virilio, 1986). This reflects David Harvey’s point that the built environment ‘functions as a vast, humanly created resource system, comprising use values embedded in the physical landscape, which can be utilized for production, consumption, and exchange’ (2007: 233). Moreover, swiftlet farms act as crucial nodes enabling a set of socio-spatial processes that are simultaneously local and global, human and non-human, cultural and natural.

The political implications of Smith’s now famous thesis are made explicit in one particular line in his book: ‘*how we* produce and *who* controls this production of nature’ (1984: 397, emphasis in original). This is a question that I have aimed to tackle in this thesis in an

attempt to deconstruct not only how nature is (re)produced in the city, and who controls this production, but also how these processes are contested and resisted (see also Kirsch & Mitchell, 2004). Recognition of the political meaning of nature is essential to reach a just and empowering form of urban development, i.e. one that returns the city and its environments back to its citizens (Swyngedouw, 2009). This ambition takes up Castree's call to 'translate the abstract logics' put forth by Smith into micro-level, empirical studies of 'particular productions of nature in particular places' (Castree, 2000: 286). Furthermore, a focus on relations of production and the struggles inherent within them not only allow for a more complete analysis of the production of nature(s), but also the production of landscape (Mitchell, 2008: 34).

As Swyngedouw (2006b) has noted, it is rare that the idea of cities as sites of environmental production, sustained by deeply integrated socio-metabolic processes, capture widespread attention. Yet, as Robbins and Sharp (2006: 111) point out, urban political ecologies are an enigma, partly because they are 'so remarkably unspectacular', but also 'so dangerously far-reaching'. Indeed, what could be more 'mundane' or 'everyday' than the (re)production and maintenance of the American lawnscape, as insightfully explored by Robbins (2007); or the California agricultural landscape analyzed by Mitchell (1996; 2003). Landscapes are thus very much like urban political ecologies in this sense, given their simultaneous complexity and banality (Mitchell, 1996: 4). LPE then seems inherently well suited for analyzing urban swiftlet farming, which for many people lays largely 'below the radar', while nonetheless posing considerable implications and challenges for rapidly emerging Southeast Asian cities. LPE is therefore useful in considering the mechanics through which 'the city' is embedded within networked relations between other 'agricultural' or 'natural' spaces.

In precisely such a fashion, William Cronon's (1991) book *Nature's Metropolis* paved the way for an examination of the socio-natural processes that have transformed both the city and countryside through urbanization. Cronon's work in this regard takes forward Raymond Williams' writings in *The Country and the City* (1973), where he notes that the transformation of nature and the social relations that they contain are intimately connected to processes of urbanization. Indeed, Cronon's work points to the way in which cities are built out of natural resources, which are then converted into commodities through metabolic processes under capitalist relations. In such a way, the development of swiftlet farming has significantly influ-

enced patterns of urban and regional development in Malaysia, as well as other Southeast Asian nations. Thus, in order to understand the ecological consequences of the industry, it is necessary to tease out the linkages between commodities and natural resources (as will be explicated in Chapter 4).

In undertaking such analyses, urban political ecologists use the concepts *metabolism* and *circulation* to understand the production of nature in a way that is more sensitive to change, process, conflict and flow, thereby enriching our understanding of the dynamic internal relationships between humans and nature (Thorburn, 2014). *Metabolism* refers to the totality of biochemical reactions between different organisms within a particular urban environment. Though the notion of metabolism within UPE originated within the past decade and a half, the use of the concept itself in social theory originates back to the writings of Marx. The original German term for metabolism is *Stoffwechsel*, literally ‘change of matter’, and was a central metaphor used by Marx in analyzing the relationship between human and nature. For Marx, it is not about understanding the interaction between nature and society, but rather the way in which the two are inextricably intertwined. This is because of his assertion that nature is necessarily mediated by social labour. As he writes, ‘laboring is therefore nothing other than engaging the ‘natural’ physical and mental forces and capabilities of humans in a metabolic physical-material process with other human and non-human actants and conditions’ (Marx, 1976: 323). In other words, socially organized labour forms a ‘metabolism’ between humans and nature, which thereby (re)produces a socialized nature, landscapes and transforms the land (see Gandy, 2002; 2005; 2013; Mitchell, 1996; Sauer, 1963).

In the work of urban political ecologists, metabolism denotes the exchange of energy and substances between organisms and the environment, and ‘the totality of biochemical reactions in a living thing’ (Swyngedouw, 2006a: 107)—the ‘living thing’, in this case, being the city. Swyngedouw’s concept of the urbanization of nature contrasts sharply with more conventional approaches that consider urbanization as a process whereby the natural environment is taken over by a built environment. The boundaries between the social and the biological become blurred in a process of interrelated transmutation of forms that denies absolute distinctions, i.e. of co-evolution. As Foster writes, ‘organisms in general do not simply adapt to their environment, they also affect that environment in various ways by affecting change in it’ (Foster 2000: 16).

A political ecological understanding of *circulation*, on the other hand, broadens the concept beyond its original metaphor for the flow of money, ideas, goods, and so on to link with *metabolism* in describing change, growth and accumulation in urban capitalist societies. *Metabolic circulation*, then, refers to the circulation of people, commodities, information and capital which continues to evolve as new socio-ecological assemblages emerge and old ones decay.¹⁹ Through such ‘metabolic vehicles’, the boundaries between the ‘social’ and ‘biological’ become blurred by a process of transformations which deny absolute distinctions between one or the other (Arboleda, 2015; Swyngedouw, 2006b). Moreover, these various materials, which can be simultaneously cultural, material, discursive or organic, transform the city and produce the urban as a continuously changing socio-ecological landscape (ibid).

The concept of circulation is originally taken from the biological sciences, which used it to look at the transportation of blood through the human body. However, social theorists soon began making use of the term as a metaphor for the flow of capital, ideas, and commodities in societies, perhaps most famously in Marx’s *Capital*. By the mid-nineteenth century, the circulation of water became a prominent theme among architects and city planners concerned with urban hygiene. UPE broadens the concept, linking it to metabolism to describe change, growth and accumulation in capitalist societies—nowhere more elaborate and evident than in their cities.

The metabolic circulation of people, commodities, information and capital - which has been described by Swyngedouw (2006a: 112) as ‘the choreography of the city’ - continues to evolve as new socio-ecological assemblages emerge and old ones transform or decay. In such a way, the urban farming of EBNs has been one form of circulation, which has resulted in the transformation of city and townscapes, skylines, and soundscapes across Malaysia and other Southeast Asian nations. These conceptual lenses are important because of their ability to integrate material and discursive elements of socio-environmental conflicts with their political-economic dimensions. Discourses are manifestations of power in various forms (e.g. political, economic, symbolic), and thereby express power relations which are heterogeneous and complex (Foucault, 1980; Harvey, 1996). They are important to study, as Gabriel (2014) has noted, because environmental discourses can have a significant effect on processes of collec-

¹⁹ See Swyngedouw, 2006b for a review of these concepts, and their use in urban political ecology.

tive imagining in cities, and the construction of particular types of landscapes, subjects and practices (see also Desfor & Keil, 2004).

As such, urban political ecologists have begun to look at the dialectical relationship between geographical imaginations, discourses and material practices in contemporary cities (Ekers, 2009; Gabriel, 2014; Gandy, 2002; Kaika, 2006; see also McCann, 1997). In order to understand how landscape is produced in contemporary society, therefore, it is necessary to tease out the ways in which discourse is bound up with materiality. As Harvey (1996: 79) writes, material practices ‘instantiate and objectify human desires in the material world...through modifications of surrounding environments’; which, he points out, results in everything from the ‘built forms and created environments of cities’ to ‘agrarian landscapes and globally modified ecosystems’; such as those created through urban swiftlet farming in Malaysia. The next section will now discuss the synergies between UPE and landscape, focusing on both shared conceptual foundations and themes between the two. Given the vast literature that has emerged on landscape over the past century, I will discuss the particular understanding of landscape adopted in this dissertation.

2.3 An Urban Political Ecology of Landscape

The preceding section has discussed how UPE has been an important foundation for examining the political and ecological dynamics of urban swiftlet farming. It has also introduced how some urban political ecologists have begun to look at the material and discursive aspects of socio-ecological transformations. In this section, I will discuss how particular aspects of the literature on landscape, originating in cultural geography, can help to further explore the way in which representations of the swiftlet farming industry have been enrolled in the (re)shaping the material and moral landscapes of Malaysian cities. According to Brown (2015: 43), this involves addressing ‘how particular symbolic and material landscapes both shape and reflect notions of ‘right/wrong’, ‘good/bad’ ‘appropriate/inappropriate’ and ‘natural/unnatural’ in relation to particular people, practices, and things’.²⁰ As Neumann (2011) has noted, such questions have been one way in which political ecologists have engaged with landscape research in cultural geography. However, there has to date not been a large corpus of empirical work

²⁰ Moore (2006) has used the term, ‘the urban normative’, to refer to the institutions, policies and spatial practices that reinforce such meanings in the landscape of a particular place.

which has explicitly adopted this framing. This is what I aim to do in this dissertation, and the remainder of this chapter will thus set up the conceptual foundations for embarking on such a project. In particular, I discuss more Marxian understandings of landscape, many of which have rightly focused on the role of labor in constructing the landscape. However, I adopt a more relational and discursive understanding of landscape for this dissertation, which focuses on the everyday practices, experiences, and ideologies that have been enrolled in representing and (re)shaping the landscape in Malaysian cities. As several scholars have shown, the term 'landscape' refers to both a material space ('land') and various ways of seeing ('scapes') (see Blomley, 2008; Bunnell & Nah, 2004). In this sense, landscape is treated as both a form of enquiry and ontological position for researching nature-culture relations.

The term 'landscape' has been used in cultural geography to refer to the appearance or physical characteristics of a certain place, with particular reference to the social, cultural, and political processes that shape these places (Cosgrove, 1998; Mitchell, 1996; 2008; Wylie, 2009; Zukin, 1991). In such ways, as Batterbury (2001: 439-440) has pointed out, landscapes are well suited for political ecological analysis because they have both an environmental history and a nested political ecology - they are simultaneously cultural and natural. Moreover, some scholars have noted that modern theorization of capitalist landscapes requires a theory of culture, as well as a fine-grained analysis of landscape 'morphology' (see Cosgrove, 1998; Mitchell, 2008: 31). Relatedly, moral landscapes refer to the 'moral-spatial dialectic' which positions certain landscapes within schemes of normative value and understandings of (in)appropriate behavior (Matless, 1997; 2009).

The new material landscapes created through the swiftlet farming boom in Malaysia are thus important to study because they bring to light the normative values and ideologies associated with particular urban landscapes in the country (see Ghertner, 2011; McCann, 1997). Acts of 'transgression', such as the establishment of urban swiftlet farms, go against the 'normative codes' imbued in the landscape, and point out which activities are considered to be 'out of place' (Matless, 1997). Cresswell (1992: 53-54) defines transgression as not being an intentional action, but one that is noticed by a particular group as 'crossing a line' i.e. social boundaries, conventions, or expectations. Territorial conflicts over urban space often result from ideological differences, which is well captured by his notion of being 'in place' as opposed to 'out of place' (Cresswell, 1996). According to Cresswell, certain individuals or types

of activities are labeled ‘out of place’ when they transgress or deviate from the rules and regulations governing particular places in society. Practices of urban birds’ nest harvesting are thus bound up with social and spatial ‘dividing practices’ which imply new social landscapes of division and exclusion, and questioning the possibilities for co-inhabitation (Bunnell, 2002; Cresswell, 1996). However, these rules or social codes often differ from place, which means that something (or someone) can be ‘out of place’ in one location, yet ‘in place’ in another (see Douglas, 1970).

While Cresswell’s work does not fit neatly within the landscape tradition with cultural geography, it has been utilized within similar approaches to conceptualizing ‘moral landscapes’ (e.g. Bunnell, 2002; Brown, 2015). Some of these studies have demonstrated how ‘out of place’ individuals or activities are often depicted by the media and other popular accounts through disparaging metaphors which invoke themes of pollution or disease (Cresswell, 1992; Gandy, 2002; Neo, 2011; see also Chapter 7). Moral geographies of landscape thus emerge whereby various forms of pollution from the birds in cities (droppings, noise, etc.) are held to denote an immoral geography (see Driver, 1988; Matless, 1997; Valentine *et al.*, 2013). Furthermore, Cresswell contends that there is considerable disagreement over what behaviors or qualities are to be considered ‘out of place’ in a given locale, because ‘different groups of people have different ideas about what is and is not appropriate, and these different ideas get translated into different normative geographies’ (1996: 10). In other words, there are multiple normative geographies existing within any given place, which leads to the types of territorial conflict investigated in this dissertation. These concepts will be drawn on most explicitly in Chapters 5 through 7, where I discuss the perception of swiftlets and swiftlet farms as ‘out of place’ in the city (Chapter 5), particularly due to their perceived incompatibility with the heritage landscapes of George Town and Malacca (Chapter 6) and as potential sources of disease (Chapter 7).

Landscape approaches within cultural geography have traditionally tended to divide landscapes into two broad categories: one of consumption, and one of production (see Williams, 1973). However, more recent landscape scholars have attempted to overcome this binary by demonstrating that landscapes often function as both. For instance, as Paul Robbins’ insightful book on the American lawnscape concluded, ‘production and consumption are enmeshed in the lawn and made difficult to distinguish’ (Robbins & Sharp, 2003: 444; see also

Robbins, 2007). Similarly, Walker and Fortmann's research on a case of rapid 'exurban' immigration and gentrification in the rural Sierra Nevada region of the U.S. noted that landscapes often combine elements of production and consumption, making it difficult to distinguish between one or the other. Indeed, as Mitchell (2003) has pointed out, landscapes often develop as a product of and a means for guiding the social and spatial practices of production and consumption in an area. This dissertation supports such a view of landscapes as sites of simultaneous production and consumption, which is a theme explored most acutely in Chapter 6.

Some of the most stimulating writings of recent years on landscape have come from a broadly Marxist standpoint, highlighting questions of power relations and geographical imaginaries built into the landscape (Kaika, 2006). For example, Don Mitchell's (1996; 2003; 2008) materialist analyses aim to re-invigorate Marxist understandings of landscape not only in terms of production or consumption, but also to understand the meaning and functioning of representations, and to show how such representations are 'essential for structuring social relations in particular places' (1996: 3). For Mitchell, the production of actual, material landscapes such as mining towns or agricultural areas is a matter of ongoing struggle and conflict between different social and economic groups within unequal and contested networks of capitalist relations. What is at stake in these struggles, as I demonstrate in Chapter 6, is precisely the issue of people's livelihoods in place, which are often dependent upon the construction or maintenance of particular landscape forms. As such, given that landscape often reflects a (dominant) mode of production or way of seeing, it thus typifies a contentious, compromised product of society (Blomley, 1998; Matless, 1998; Mitchell, 1996; 2000; Zukin, 1991; 1995).

The idea that the urban environment is socially produced and contested is a central theme in writings on urban political ecology (Cooke & Lewis, 2013; Njeru, 2006; Swyngedouw, 2004; 2006). As David Ley commented in his classic text *A Social Geography of the City* (1983), the city is a 'place of conflict' and its changing material landscape is a result of the 'negotiated outcome' between different groups with asymmetrical power relations. Taken this way, the key questions here become 'who has the right to the city?', and whose natures [and landscapes], are we talking about? (Swyngedouw, 2004: 176; Fairhead & Leach, 1996). Answering these questions involves exploring the ways in which different people struggle to make sense of and transform the socio-natural production of their urban spaces (see Batter-

bury, 2001). As Matless (1998: 12-13) has suggested, landscape seems to be an appropriate concept for such an endeavor due to the 'relational hybridity' of the term, which is both natural and cultural, thus making it impossible to place on either side of the nature-society dualism. Therefore, it also accounts for the everyday agency of people living in local communities, which is often an important factor in configuring the landscape (Batterbury 2001; Loftus, 2012).

One of the key contributions of work on landscape has been to demonstrate that landscapes and the discourses built into them are 'both a work and *do work*' in reproducing the dominant normative values necessary to reproduce ideas of landscape and particular forms of economic activity (Mitchell, 2000: 94; Schein, 1997). The production of landscape is thus not unlike Neil Smith's conceptualization of the 'production of nature', in that landscape is a largely mystified, socially constructed, and ideological entity 'which seeks to erase the very facts of its (very social) production' (Mitchell, 1996: 6). Despite important differences between the two terms, they both have origins in Marxist understandings of capitalist uses of nature.

For instance, while not specifically mentioning the concept, Marx may have been referring to the production of landscape when he argued that '[Man] opposes himself to Nature...setting in motion arms and legs, head and hands, the natural forces of his own body, in order to appropriate Nature's production in a form adapted to his own wants. By thus acting on the external world and changing it, he at the same time changes his own nature' (Marx, 1976: 173). This is a Marxian insight, which recognizes the dialectical relationship between landscape (shaped through human activity), and humans (influenced by their environment) (Harvey, 2007; Mitchell, 1996; 2008). Likewise, Carl Sauer, one of the pioneers of cultural geographical studies of landscape, understood this process as landscape morphology, by which he described landscape to be 'fashioned from a natural landscape by a culture group' (in Mitchell, 2000: 102). Therefore, comprehending the landscape and political ecologies of a place first requires an understanding of how and why the landscape is made the way it is, why it functions the way it does, and why it looks the way it does (see Mitchell, 1996). For instance, Don Mitchell has in his work asserted the importance of examining processes of landscape morphology, which he views to be rooted in processes of labor and exploitation, yet also pointing to how this intersects with the representation of landscape.

These insights underlie the rationale for the participatory, ethnographic approach that I have employed to comprehend how the landscape is organized, lived and experienced on an everyday basis, as detailed in the following chapter. This is influenced by the aforementioned work on landscape morphology and representation, but employs a rather different method for explicating the importance of landscape and its grounding in contested political ecologies. Rather, it follows Batterbury's (2001: 440) insight that there is much insight to be gleaned from a 'grounded' view of landscapes, which are nested within power relations and regimes of governance, but also deeply embedded in the everyday experience of local people. Yet, the meaning of landscape is thus also bound up with its function, which is a vehicle of social identity, a generator of profit, or a space of everyday life (Matless, 1998: 12; Mitchell, 1994; 2001; 2008). Therefore, I contend that the representation and contestation of landscape are best understood through an analysis of everyday use of the landscape and associated struggles over livelihood (Batterbury, 2001).

As Henri Lefebvre (1991) argued, landscapes are made to be *lived* by people in their own particular context. Landscape thereby allows us to glimpse how, in Lefebvre's terms 'representations of space', always and everywhere articulate with the lived spaces of everyday life (de Certeau, 1984; Jackson, 1986; Lefebvre, 1991 see also Chapter 3).²¹ The term 'everyday life' can be traced back to de Certeau's theorization of the concept, explicated in *The Practice of Everyday Life* (de Certeau, 1984), in which he foregrounds the repetitive and unconscious practices of everyday life. Scholars such as Cresswell (2003: 280) and Scott (2006: 484) have sought to apply this concept specifically to landscape research by illustrating how 'the everyday and unexceptional' may offer richer and more nuanced ways of understanding the various workings of landscape, and the practices that constitute it (see also Bolaños, 2011; Rose, 2002: 457). Scott, for instance, does this through a historical analysis of the colonial landscape in Peru, which looks beyond the agency of Spanish settlers and the representation of the place by early explorers and travel writers by considering the mundane and ongoing struggles that were constitutive of (post)colonial life. The role of colonialism in influencing and shaping landscape and the ongoing struggles over its meaning are also something considered in this dissertation, which I will focus on in Chapter 6.

²¹ Influential geographer J.B. Jackson used the term 'vernacular landscape' to refer to the material, everyday aspects of landscape, particularly in the U.S. context (Jackson, 1986; see also Cresswell, 2003).

Relatedly, Alex Loftus' recent book on urban political ecology and everyday life (Loftus, 2012), considered how practical experience can form the basis of everyday resistances to hegemonic power relations and unequal urban environments. Likewise, scholars such as Dunn (2001) have argued that everyday, local spaces are key sites for the symbolic contestation of unequal power relations. In his study of opposition to mosque development in Sydney, for example, Dunn (2001) interrogates how the everyday becomes a critical site for the reproduction and contestation of religious and racial stereotypes. These works demonstrate how particular 'strategies and tactics' of everyday life are useful for considering the 'elements of creative resistance' to dominant power relations in society, employed by people such as city residents, urban activists, and even researchers (de Certeau, 1984; Loftus, 2012). The approach in this dissertation thus aims to extend this work, by considering how the socio-environmental challenges posed by swiftlet farming in Malaysia is discursively framed and contested in an everyday, quotidian manner.

Landscapes and landscape representations can, therefore, be seen very much as a product of everyday social struggle, whether engaged over form or function (see Hung, 2015; Mitchell, 2000: Chapter 6; McCann, 2002; Rose, 2002). Indeed, as Batterbury (2001) has demonstrated, the everyday agency of people living in local communities is a strong force in shaping the physical form and social dynamics built into and reflected by the landscape (see also Scott, 2006). He goes on to argue that the idea of landscape as 'discursive, narrative and rhetorical' goes hand in hand with political ecological analysis and description of land use. This is because political ecology is well suited to consider the driving forces of change involved in (re)producing and contesting landscape form. However, some political ecological analyses of landscape change have been criticized for being overly focused on human forces of change, while ignoring non-human factors (see Hinchliffe, 2003; Gandy, 2013; Neumann, 2011). For instance, Batterbury (2001: 439) focuses on the role of 'the power of human agency' and 'social relations' in producing particular landscape outcomes in Southwestern Niger; while Fairhead and Leach's (1996) account of deforestation in West Africa is centered on the Eurocentric visions of colonial officials there. This is an omission that I shall address in this dissertation, by looking at the integration of human and non-human forces in producing contested urban environments, as I discuss most explicitly in Chapters 5 and 7.

Landscape and political ecology also share an interest in class, gender, and race relations in a certain place, and LPE is thus an appropriate framework for examining the social dynamics and power relations embedded in ecological transformations (Boland, 2008; Bolaños, 2011; Bunnell, 2002). For instance, Bolaños' (2011) paper on land disputes and forest conflicts in the Amazon region illustrates how emerging socio-cultural dynamics and power struggles between indigenous and non-indigenous groups have reshaped the Central Amazonian landscape. Yet, as Don Mitchell (2007; 2008) has convincingly argued, landscapes are not (only) formed through local social relations and power dynamics. Just as birds' nests are commodities that are made of social relations of production spanning from individual swiftlet farms in Malaysia to importers in Hong Kong - so too are landscapes.²² He suggests that we should therefore look to such places to understand how the landscape we see has come to be, and, specifically, what it means for those 'belonging to it' (Mitchell, 2003: 243).

In similar fashion, Bruce Braun's (2002) work on the production of British Columbia's forested landscapes on Canada's West coast sought to move environmental thinking away from the notion that landscapes can be understood as discrete, bounded places. By moving across different sites, and drawing on different histories and practices, he shows how nature and culture, place and identity are continuously (de)stabilized on Canada's West Coast. Landscapes can thus be seen as key moments in trans-local networks that stretch across time and space, creating what Massey terms as a 'progressive sense of place' (Massey, 1993: 66; Schein, 1997: 662). Social (i.e. material/discursive, economic/political or cultural) power relations are therefore highly important in (re)producing landscapes, given that such 'power geometries' often shape the particular social, environmental and political landscapes in which we inhabit (Massey, 1999; Heynen *et al.*, 2006). Going back to Don Mitchell, it is clear then that we need to understand that 'while the landscape is always physically *somewhere*, it is also socially constituted both there and *elsewhere*. We need to slice open the landscape...to see what it embodies, what it internalizes- and to locate the other places to which it is linked' (2003: 243). This is a task that I take up in Chapter 4, and revisit again in the conclusion of this dissertation.

²² See Chapter 4 which traces how the swiftlet farming industry in Malaysia is shaped by the political and economic dynamics of the market for birds' nests in consumption sites such as China.

Many urban political ecologists have also investigated how landscape dynamics are often bound up with property relations (Blomley, 2008; Mitchell, 1996; Prudham 2015). As Neumann (2011) has pointed out, this relationship between property and landscape also forms part of the shared analytical foci between landscape studies and (urban) political ecology. Property, like landscape, is a form of representation; a set of lived relationships materialized in the landscape; a site of struggle; and also simultaneously material and representational (Blomley, 1998). The importance of these relationships, as Mitchell (2008; 2010) notes, is that of rights and particularly those of ownership. Yet, as indicated above, the landscape is also a lived space, which is crucial for processes of social reproduction. Indeed, for Blomley (1998: 580), in order to understand discursive conflicts over landscape, geographers must interrogate 'landscapes of property that are consciously grounded in local lived experience'. After all, cities belong to their inhabitants, but the property of which they consist may not (Mitchell, 2001).

Mitchell (2008) argues that the landscape, particularly as a form of property, is a highly complex site of investment and speculation. But, because of the speculative nature of investment, there is no guarantee that capital invested in the landscape will ever show returns (see Chapters 4 and 8 on this point). In the empirical case of swiftlet farming, this constitutes one of the primary sources of tension in generating the controversies examined in this dissertation. As I will demonstrate, the contingent and speculative nature of swiftlet farming has frequently been invoked as justification for swiftlet farmers to maintain their urban swiftlet farms - particularly the more successful ones - despite their illegal status. As they point out, relocating to a new site involves considerable financial risk in that the new farm(s) have no guarantee of attracting enough swiftlets to be financially successful and offset the considerable investments put into them.

Furthermore, landscape and political ecology have also enjoyed a considerable amount of engagement considering how postcolonial narratives have been bound up with nature-society relations (e.g. Njeru, 2006; Richmond *et al.*, 2005; Suchet, 2002; Wolch, 2002). Such studies have also viewed narratives and invocations of colonial histories as having a strong role in the production and contestation of landscape. For instance, Sluyter (2001) and Scott (2006), as discussed above, have shown how Western idea(l)s of appropriate landscape form have shaped the construction of landscapes in the postcolonial cities of Africa and Latin

America. In a similar way, the empirical chapters of this dissertation illustrate how landscapes of swiftlet farming are enveloped in changing property relations, legislation, and legacies of colonialism. In particular, Chapter 6 demonstrates how UNESCO's ideals of Asian World Heritage Landscapes have informed discourses concerning appropriate landscape forms in George Town, Malaysia, and how these have been employed in local struggles against swiftlet farming (see also Connolly, forthcoming).

In such a way, landscapes are also often the site of cultural politics, whereby 'common sense' is constructed and contested through the discursive and material practices of everyday life (Mitchell, 2000: Chapter 6; McCann, 2002). In Don Mitchell's words, 'the very form of landscape incorporates the give-and-take of these struggles', first becoming solidified one way, then another. Moreover, these struggles are of course, always ongoing and recurring. In this way, landscape can be seen as both thing and a process, given that it is always constantly struggled over and in a process of flux and reconstruction (Cresswell, 1996; Mitchell, 1994; Rose, 2002; Scott, 2006). As Schein (1997: 662) has put it, landscapes are always in the process of 'becoming', in that they are highly malleable and continually subject to change. This is a view that I adopt and develop empirically in this dissertation, which challenges alternative descriptions of landscape as already fixed by certain powerful actors in society (e.g. Mitchell, 1996).

In Bruno Latour's terminology, landscapes may therefore be regarded as 'quasi-objects', or entities that not only contain an inherent material reality, but also embody the social relations and struggles that go into their making (Latour, 1996). For Latour, quasi-objects are thus impossible to place on either side of a dualism of nature and culture, in that they 'shuttle' between these two categories of reference (Latour, 1993). In this sense, landscapes are hybrid objects, which are both material and discursive, natural and cultural (Cater & Keeling, 2014; Cosgrove, 1998; Demeritt, 1994; Gandy, 2013; Hung, 2015; Matless, 1998; Mitchell, 1994; 1996; Scott, 2006). They therefore contain the potential to reconfigure the relationship between nature and society in urban settings, which is a central aim of the struggles presented in this dissertation.

In such ways, landscapes can also be seen as 'cyborgs' which is a term originally used in science fiction, but taken up in the social sciences by post-structural scholars, most notably Donna Haraway (Haraway 1991; 1996). Subsequently, the term was adopted by the UPE lit-

erature to discuss patterns on ‘cyborg urbanization’, which extended the work on urban metabolism discussed above (Gandy, 2002; 2005; Swyngedouw, 2006a; 2006b). Gandy (2005), for example, uses the term as a spatial metaphor to explore different aspects of the relationship between the city, including its urban infrastructure, and human subjects. Moreover, it has also aided neo-Marxist studies of urban politics examining new forms of commodification and their production in urban spaces, as well as networked relationships between humans and non-humans.

The term ‘cyborg’ is also useful for theorizing the landscapes discussed in this dissertation, as it also connects with work on ‘post-humanism’ that will be discussed in Chapter 5. The concept of the cyborg was used by animal geographers such as Jennifer Wolch to further develop her work on the ‘zoopolis’ (Wolch, 1996; 2002), which is further connected to related research on animals and food ecologies in the city (e.g. Heynen, *et al.*, 2006). Moreover, writing on urbanization and infectious diseases has also utilized the cyborg metaphor to discuss the ‘rapid evolution of viruses and their promiscuous passage from one species to another’ (Davis, 1991 in Keil, 2005: 644). This informs my discussion of the perceived and contested relationship between swiftlet farming and urban health and disease in Chapter 7. Taken together, work on cyborg urbanization has had an important impact on the ontological and epistemological foundations of critical urban political ecology in its conceptualization of the circulatory dynamics between bodies, nature and space in contemporary cities.²³

2.4 Conclusion: Towards a Landscape Political Ecology

As I have demonstrated in this chapter, writings on landscape within cultural geography and the UPE literatures share many common assumptions. While both sets of literature have diverse theoretical roots, including relational and post-structural ontologies and epistemologies, both are also heavily influenced by Marxian political economy. Moreover, they also share fundamental assumptions regarding the production and maintenance of urban environments. For instance, as Kenneth Olwig (2002) has argued, the landscape is a key site for the formation of socio-political identity and community action, which are a main focus in recent work on urban political ecology (see also Njeru, 2006; Swyngedouw, 2004; Watts, 2000). Moreo-

²³ See Gandy (2004; 2005) for a more complete review and discussion of this literature.

ver, political ecology has been developed to explore the myriad ways in which concerns over the environmental are politicized. What LPE adds to this is the assertion that the landscape is a key site in which controversies over the environment are played out. As we will see in the following chapters, the landscape is the primary terrain over which the conflict over swiftlet farming takes place, and as such, political ecology and landscape are two important conceptual tools for examining these controversies.

However, given the traditional focus of political ecology on the nexus of political economy and ecology, it has devoted less attention to the ways that both of these factors are always culturally embedded. For instance, As Neumann (2011: 848) notes, landscape in political ecology tends to be seen as 'applications or expressions of power that have significant material consequences for people's everyday lives', including individual and collective livelihoods, and are 'therefore subject to contestation and competing representations' (see Fairhead and Leach, 1996; Robbins and Sharp, 2003). Yet, meanings, lived experiences and ideologies, which are both informed by and shape the landscape are central in informing concerns regarding environmental change. This is where political ecology can be best enhanced through a systematic incorporation of landscape. As Peet and Watts have argued, environmental imaginaries (ideologies or moral values regarding appropriate uses of the environment), are rooted in place, and become 'prime sites of contestations between normative visions'. As pointed out above, some recent work in urban political ecology has already begun to do this, but I argue that much can be gained from a systematic incorporation of the ideas of landscape and political ecology.

Understanding the making of landscapes and urban political ecologies is thus a vital aspect of urban socio-ecological transformation, especially since it is such a highly contested terrain. Equally, a focus on the process by which landscapes come to be made, and what they represent, is of great importance for what it tells us about how societies function in everyday life (Mitchell, 1996; Loftus, 2012). Despite this, Neumann (2011) has lamented that there have been a series of significant but unacknowledged convergences in theorization between the landscape and political ecology literatures. This lack of engagement is problematic, he argues, because of the missed opportunities for cross-fertilization between the two, which would be mutually beneficial. I have thereby reviewed some of these convergences, which I hope will spark further development of the LPE approach.

The next chapter will focus on the methodological approach used in this thesis to explore how urban swiftlet farming is perceived and experienced on an everyday basis. As I aim to demonstrate, LPE is a necessary conceptual framework for this task, and has the potential to open up new ways of thinking about the environmental politics inherent within the city. The following empirical chapters will then demonstrate the unique insights of this framework as gleaned from the empirical case of swiftlet farming in Malaysian cities.

Chapter 3 - Tracing the Controversies Over Swiftlet Farming in Malaysian Cities

3.1 Introduction

This chapter details and justifies the combination of methods that I have used, based on a mixed methodology and array of different sources in order to trace the controversies over swiftlet farming in Malaysian cities. One of the central goals of my fieldwork was to identify a methodological approach that would not only allow me to answer my research questions, but also to engage with local CSOs in addressing their needs. As such, the research was developed in collaboration with the CSOs that I worked with during my research - primarily the PHT, with whom I conducted a brief research internship (three months).

The particular approach here is therefore intended to contribute to literature on the co-production of knowledge by addressing how academics can engage with civil society organizations to address socio-ecological issues in everyday life. In particular, this chapter demonstrates that focusing on ways in which urban residents experience their everyday socio-natural environments - and how they might engage in reshaping them - can become the basis for a performative politics of embodied struggle in urban environments (see Loftus, 2012). In achieving this goals, I have employed a range of participatory ethnographic methods, which have been used to provide unique insights into ‘the processes and meanings that sustain and motivate social groups’ (Herbert, 2000: 550). Through such a focus, it is possible to bring to light the ways in which different people might challenge unequal power relations and injustices through everyday, place-based practices.

Given that there have as yet been no sustained attempts to utilize an explicit LPE approach in empirical work, this research has also involved developing a suitable methodological approach for this framework. In doing so, I have utilized the principal qualitative methods used in previous work on landscape and political ecology. Ethnography is central here, given that it is ‘the study of daily life’ and has been important to cultural geographic research since the formative years of the discipline (Billo & Mountz, 2015). As Billo and Mountz (2015) contend, Carl Sauer’s early work on landscape in cultural geography (see Chapters 2 and 5), can be considered a form of ethnographic research given the range of

embodied research methods that he used (see also Ley, 1974). The focus on everyday life has been crucial to this project in order to explore the more quotidian ways in which ‘swiftlet farms’ have been perceived and contested in Malaysia.

What an attention to the ‘everydayness’ of landscapes brings to my overall theoretical and methodological approach here is its ability to ‘demonstrate the centrality of nature-society relations to the making of everyday life’ (Loftus, 2012: 134). Brenda Yeoh (1996) has asserted that, while most urban landscapes can be interrogated as terrains of quotidian conflict and negotiation, this is particularly true of colonial cities given the divergence in perceptions of the urban environment. All of the cities visited for this research are indeed former colonial cities, and this history has - particularly in the case of George Town and Malacca - created culturally diverse societies with divergent cultural and economic interests, which have resulted in the conflicts at hand.

For political ecologists, ethnographic analysis involves considering the importance of cultural context in shaping the perceptions of stakeholders on the issue(s) being studied. For instance, Moore (1996: 126) has shown how ethnography can provide ‘a critical medium for exploring the dynamics of cultural politics which animate environmental conflicts’. Following this framing, symbolic struggles over the nature of the urban built environment are at the core of material struggles over the environment (see Neumann, 2005). Moreover, as Erik Swyngedouw has written, the ecological nature of socio-environmental conflicts are also important. As he argues, ‘the politics of socio-ecological transformations tease out who (or what) gains from and who pays for, who (or what) benefits from and who suffers (and in what ways) from particular processes of metabolic circulatory change’, which, he suggests, ‘requires unravelling the nature of the social relationships that unfold between individuals and social groups and how these, in turn, are mediated by and structured through processes of ecological change’ (Swyngedouw, 2006a: 119). This chapter thus details how the particular methods used were selected based on their potential to capture the more complex meanings of place in everyday lived experience and praxis, and the positionalities of different actors.

Due to the secrecy and informality which surrounds the trade, in addition to the dearth of research on the topic, it was often not possible for me to get reliable quantitative data on the information needed. For instance, how does one get accurate information in an industry where secrecy is an integral element, and some of the actors worry about publicity of any sort

due to the ambiguous legal (or outright illegal) status of the actors involved. Indeed, this partly explains the hesitance of some swiftlet farmers to participate fully in this research. This was also an issue affecting interviews with state and municipal officers, as George Town and Penang were the only city and state governments that were willing to participate. As will be discussed in Section 8.5, this ‘culture of secrecy’ is characteristic of amongst civil servants in Malaysia, which stems from a desire to project a positive image of Malaysia as a ‘fully developed’ country, and downplay any sensitive issues to reduce any potential negative media coverage.

Nonetheless, my experience of not being able to rely on quantitative ‘facts’ actually served as a way of entry into the type of ethnographic fieldwork conducted here. Indeed, the elusiveness, rumors and stories that I encountered in this research assumed a significant role in articulating ‘symbolic discontent’ with both urban swiftlet farms and the enforcement actions employed to control them (Pred, in Bunnell, 1999: 14; see also Cook 2006; Peterson 2010; Tsing 2005). This is based on Kirsten Peterson’s approach of ‘phantom epistemologies’, which is a concept proposed for studying parts of the economy where data is somewhat limited or murky, particularly the informal or illicit sectors. The aim is to make data about these realms just as significant as the more formal ones, which is partially enabled through the recognition that realities and elusiveness exist in the same space. In doing so, as Louise White has argued, rumors and anecdotes need to be taken at ‘face value, as everyday descriptions or ordinary occurrences’ (2000: 5). Rumors are especially important because they can bring to light important insights about political cultures, which is expressed most acutely in Section 4.4. Moreover, as I demonstrate, the circulation of rumors also have important and sometimes tangible effects on ongoing political-economic struggles.

Though this is an ethnographic approach in which some information has been derived from a few key informants, I have used the plethora of newspaper clippings collected (100+), to help triangulate the information recorded in interviews.²⁴ This process of triangulation was also helpful in interpreting quantitative data on, for example, the number of swiftlet farms in Malaysia at a given time, or the financial contribution to the economy, which were often at best simply estimates. Triangulation was also useful in cases where I experienced difficulties

²⁴ For this research, I have regarded all statements coming from informants as valid information. Whether or not it is entirely true, it still constitutes a viable narrative which allows me to piece together different versions of how the swiftlet farming industry is discursively constructed.

gaining access to certain key informants, as I could often glean information about them from other sources. For instance, if I was unable to interview a key stakeholder, I was able to glean information about them from secondary reports in newspaper clippings, or through interviews with other informants. This was especially important given the highly controversial nature of the industry and the competing accounts invoked by various stakeholders. Thus, if I only encountered a particular fact once, I did not give it as much weight as one that was repeated in various different sources. These insights will be fleshed out with empirical examples in Section 4.4, which examines the significance of rumors surrounding the Chinese embargo placed on Malaysian birds' nests in 2011.

The next section will now discuss the primary field sites used in the research, before moving on to a discussion of the particular methodological approach used in this thesis. This consisted of 'tracing the controversies', which was useful in choosing and delimiting the particular sites of research visited for the study, and the key stakeholders to be included. This is a mobile, multi-sited, ethnographic approach, which draws on a number of participatory methods in attempting to understand the nature of controversies over swiftlet farming in Malaysia and possible solutions to them. The following sub-sections discuss the specific methods used in the field, and how they were implemented, before reflecting on some challenges that were faced. Finally, I conclude with a consideration of how a mobile ethnographic approach to tracing the controversies can shed important light on the role of praxis and everyday lived experience in shaping contemporary environmental politics.

3.2 Selection and description of field sites

Place is always different. Each is unique, and constantly productive of the new. The negotiation will always be an invention...there will be no simply portable rules. Rather it is the unique, the emergence of the conflictual new, which throws up the necessity for the political (Massey, 2005: 162).

To trace the shifting discourses and politics of swiftlet farming in Malaysia, field research was conducted in the country for a total of six months from September 2013 through May 2014. My decision to carry out research in this geographic context was based on a number of conceptual and practical reasons. First, based on my preliminary research, conflicts surrounding urban birds' nest harvesting are significantly more prominent there than in neighboring coun-

tries, such as Indonesia. Although urban swiftlet farming originated in Indonesia and the country is currently the world's largest supplier of birds' nests, the Director of the Indonesia Heritage Trust put it, swiftlet farming in Indonesia 'is a big business but not a big issue' (interview, 25 February 2014). Additionally, I was more familiar with Malaysia, having conducted research there in the past and language was not likely to be a barrier, as English is more commonly spoken than in Indonesia.

Following the decision to carry out work in Malaysia, three primary field sites were chosen within the country: Malacca, Penang, and Perak states. Perak state was chosen because the Manjung region was the origin of swiftlet farming in

Malaysia, and has historically contained the highest number of farms (see Section 1.5.2). Penang and Malacca were chosen primarily because of the relatively high level of social controversy over swiftlet farming operations in the key cities of George Town and Malacca Town (see Section 1.5.1). Additionally, fieldwork was also conducted in Kuala Lumpur and Kuching, which were chosen based on important research contacts being based there.²⁵ Ultimately, George Town emerged as

Figure 3.1 - Map of field sites within peninsular Malaysia (adapted from travelportal.info).



²⁵ One swiftlet farm consultant, and the office of BWM, were located in KL, while Kuching was the site of the Wallace Conference in November 2013, which attracted a number of swiftlet farming experts, including Lim Chan Koon and Gathorne Cranbrook - the authors of *Swiftlets of Borneo*.

the focus for my fieldwork, due to the intensity of controversies there, and the three month internship that I conducted with the Penang Heritage Trust (PHT), which had been one of the central actors advocating for the removal of swiftlet farms from the city since 2008. I will now provide a brief description of the three primary field sites to better situate them within the context of the research.

3.2.1 Malacca and Penang

The first site chosen was Malacca (see Figure 3.1 for Malacca's position in Malaysia, and Figure 3.2 for a view of the world heritage site and central area of the town) a UNESCO World Heritage City about 150 km Southwest of Kuala Lumpur. Malacca was chosen as an important location for research because of the city's decade long struggle over swiftlet farming in the city, which was argued to threaten its current UNESCO World Heritage listing. Moreover, it contains Malaysia's only 'swiftlet farming museum', the creatively named

Figure 3.2: View of the Malacca World Heritage Site and the Malacca River (author's photo).



‘Jonker Bird House: Swiftlet Eco-Heritage Museum’ (see Figure 6.3). I thus visited Malacca first, due to its proximity to Singapore (where I did some preliminary consultations with academics at the National University of Singapore), and on the assumption that it would at least give me some useful starting points for the remainder of my fieldwork. Research was also conducted in George Town, Penang, which, along with Malacca, was my most important research site in terms of the amount and quality of material collected there. In George Town, research was focused on the inner city area containing the World Heritage Site, as the contestation over the areas heritage (and consequently swiftlet farming) have been the most intense, given that the area contains the island’s oldest buildings and richest historical sites (Tan, 2009).

Malacca and Penang are both small states on the west coast of Peninsular Malaysia. Malacca is centered upon the banks of the Malacca River, while Penang consists of an island and an adjacent sliver of the Malaysian Peninsula. They were both territories of the former Straits Settlements, controlled by the British East India Company from 1826 - 1946 (Cartier,

Figure 3.3: View of George Town World Heritage Site (author’s photo).



1998; Turnbull, 2009). Malacca City and George Town - the respective state capitals - were also joint applicants for UNESCO World Heritage Status, which was granted in July 2008. Penang's population is nearly double that of Malacca's, with 1.6 million in Penang state, and 530,000 in George Town (Penang Institute, 2012). George Town is located on the Northeastern most part of Penang Island, and is connected to the mainland by two large bridges spanning the Malacca Strait. As the vast majority of the controversy surrounding swiftlet farming in both sites was focused on the World Heritage Sites of both cities, fieldwork was centered on those areas, rather than the broader metropolitan regions.

3.2.2 Perak

Fieldwork was primarily conducted in two cities within Perak: Sitiawan and Taiping (太平). Taiping is the larger of the two cities, with a population over 200,000, and is the second largest city in Perak after the state capital of Ipoh. Sitiawan is part of the broader Manjung region in Perak, which was also known as Dinding prior to 1973, when it was also a part of the British settlements, along with Malacca, Penang and Singapore. Perak and especially the two main cities of Ipoh and Taiping also have a rich Chinese cultural history as the majority of settlers in the State came from the Chinese province of Fujian to work on the tin mines that were located there. Because swiftlet farming is a Chinese dominated industry and trade, it is perhaps no coincidence that each of the three states in which I collected the majority of my data have a high Chinese population.²⁶

Sitiawan's importance for my research lies in the fact that it is the birthplace of urban swiftlet farming in Malaysia, and the town is now dominated by the industry. As mentioned above, swiftlet farming premises started emerging in Sitiawan in the early 1990s and now most buildings along the town's main road have been converted to swiftlet farms (see Figure 1.3). As of 2006, Sitiawan had the highest concentration of swiftlet farms in the country, with about 300 buildings being used for swiftlet rearing (Tan, 2006).²⁷ At the time of research in 2013, one informant reported that there are now an estimated 500-600 swiftlet

²⁶ Nonetheless, swiftlet farming can be found nearly everywhere in Malaysia, and is by no means confined to these few states.

²⁷ The city has an area of approximately 331 km².

Figure 3.4: A row of swiftlet farms on the main road through Sitiawan, Perak (author's photo).



farms in the city. According to the Malaysia Birds' Nest Merchants Association, the state of Perak also contains the highest number of swiftlet breeders in the country (ibid). In fact, as Harry Pak, a swiftlet farming consultant in Kuala Lumpur (KL) told me that (at the time of research), 'almost everyone in Sitiawan has a birdhouse', and that approximately 80% of the shophouses in the town were swiftlet farms (Pak, interview, 30 September, 2013). However, the once vibrant industry is now declining in the region, and many of the buildings have been abandoned or sold for other purposes (see Chapter 4).

3.3 Tracing the Controversies

The primary methodological and analytical method I have put forth in this thesis is a mobile approach to ‘tracing the controversies’. This involved conducting a multi-sited, ethnographic methodology in order to capture the different experiences, meanings and contexts related to swiftlet farming throughout Malaysia (see Blok 2010; Marcus, 1995; Neumann, 2005). However, since urban swiftlet farming exists in nearly every city and town within Malaysia and since each of these towns have had different histories and experiences with the industry, it was difficult to determine how many and which sites to use, or the amount of time that I should spend there. This approach to tracing the controversies was important in resolving this problem, as I allowed my research participants to point out which areas were most significant for investigating the questions I was asking, and by introducing me to other relevant stakeholders within their networks (see Cook, 2006; Crang & Cook, 2007).

As Neumann (2005) has demonstrated, it is important to conduct analysis in several geographical sites in order to link place-specific conflicts and struggles to regional, national and global political-economic processes. In forming comparisons between different (related) sites, I have also sought to trace the ‘routine interweavings’ between different people, places, and non-humans operating in and through different places (Whatmore, 1999: 33). As discussed in Chapter 1, this involved conducting research in a number of different sites throughout Malaysia, some of which were determined in advance, while others were selected more spontaneously based on the need to access key informants. For instance, in George Town, Rebecca Duckett-Wilkinson introduced me to Mr. Ding (T.H.), who runs a swiftlet farm in a rural area of mainland Penang state, primarily as a hobby. We conducted two interviews together, one of which was at his swiftlet farm in Kepala Batas, which was useful for giving me more perspective from a (responsible) swiftlet farmer’s perspective. Similarly, given Mr. Pak’s role as a consultant, he took me on a trip to Sitiawan to visit a friend, also a Mr. Ding (D.H.), who owned five swiftlet farms in the town.²⁸ Mr. Ding (D.H.) then hosted me for an additional day, which was useful for understanding the nature of swiftlet farming in towns like Sitiawan, which differs considerably from George Town and Malacca, as mentioned above.

²⁸ To avoid confusion between these two individuals throughout the thesis, I have included their initials when making reference to them, as they both went by their surname, Ding.

In particular, I adopted a mobile approach to ‘tracing the controversies’ (Latour, 2005; Yaneva, 2012; Yaneva and Heaphey, 2012), which as Yaneva and Heaphey (2012) point out, involves three primary steps: First, to *follow* controversies requires being able to trace the dynamics of the controversy in time: including the relevant stakeholders, their arguments, differing positions, and how these change or progress over time. Though my fieldwork was only a total of six months in duration, this was achieved in this project through analysis of the various documents outlined in Section 3.3.1b which dated back to 2001. Yaneva and Heaphey’s approach to following the controversies also involves contextualizing the spaces in which these controversies develop and the extent of public involvement and participation in them. This was accomplished through the grounded, participatory ethnographic fieldwork that I conducted, as detailed in Section 3.3. In addition, many of the buildings that I stayed in throughout the course of the research were next door to swiftlet farms, and the primary place that I stayed in in George Town was formerly a swiftlet farm, as described in Section 7.3.4. The strategy of focusing on the quotidian ways in which swiftlet farms have been perceived and contested was designed to demonstrate the diverse and sometimes contradictory aspects of the controversies over the urban swiftlet farming industry in Malaysia (see Loftus, 2012).

Second, to *document* the controversy involves collecting a variety of materials including press clippings, images, government documents and reports as well as key informant interviews with industry operators and consultants, NGOs and concerned citizens (see Section 3.3.1). This was the first section of research that I did prior to entering ‘the field’ in a physical sense, which involved searching and analyzing online blogs or news articles related to swiftlet farming in Malaysia, and the comments made by online readers. Yet, this continued throughout my fieldwork, as I was able to compile other documents from the PHT and BWM resource libraries and also directly from key informants. These materials dated from 2001 - 2014, which allowed for tracing the controversies over swiftlet farming in a temporal sense, as outlined above.

Finally, to *map* the controversies involves visualizing and analyzing the spacial dynamics of the conflict, and indicating their implications for urban health and well-being. The idea here was to literally map the location of swiftlet farms within a particular area to identify clusters of swiftlet farms and their proximity to residences, hotels, and other dense human popula-

tions. This was done for the case of George Town (as seen in Section 6.3.1; Figure 6.2), as this is the only field site where the requisite temporal and spatial data was available.²⁹

As various scholars have pointed out, these three steps are also integral to participatory research approaches (see Evans & Jones, 2011; Jones *et al.*, 2008; Pain, 2004). For example, the material used for mapping the swiftlet farms in George Town was only available through collaboration with the PHT, and in turn, their collaboration with the State and City Government and local researchers. This was also the data that was the most useful to them in carrying out future action on the remaining swiftlet farms in the city. As Neumann (2005) thus rightly points out, participatory ethnographic research can play an important role in approaches to political ecology which seek to highlight the conflicting perspectives on different forms of socio-environmental transformation. Moreover, controversies such as urban swiftlet farming are important to study in this manner because they point to the series of uncertainties that buildings and urban developments undergo, and are frequent symptoms of socio-ecological transformations in cities (Yaneva and Heaphey, 2012). In the following subsections, I will discuss the particular methods used in conducting these different steps, and how they were developed in close consultation with key research participants.

3.3.1 Narrative Analysis

Narratives are social products, which are produced in particular social, historical and cultural locations (Lawler, 2002), and have thus commonly been studied through a broader analysis of cultural landscapes within human geography (see Bunnell, 2002; Mitchell, 2008; Schein, 1997), in addition to other disciplines such as anthropology, linguistics and cultural studies. It has been a useful method in this project, because of its focus on how people represent and evaluate places, and their lived experiences in those places (Wiles *et al.*, 2005). Narrative analysis has also been an important tool to connect the particular details of that lived experience to broader socio-environmental relations within and beyond the sites of research (Kearns, 1997).

²⁹ However, it was not possible to obtain data on locations of dengue fever cases or other incidences of disease for George Town to correlate the relationship of these cases with the swiftlet farms, despite a formal request to the State Ministry of Health (MOH).

Narrative analysis is the primary method of interpreting narratives, and has been used widely in combination with ethnographic approaches (see Berger, 1997). It can also be used to analyze narratives produced through a variety of different mediums, as I have done in this research, as will be explained in the following sub-sections.³⁰ First, I used internet ethnography, which involved collecting narratives from blogs, newspaper articles, and online comments to such articles (see Section 3.3.1a). Newspapers included were English dailies in Malaysia, including *The New Straits Times*, *The Star* and *The Sun*. These newspapers were examined as they contained the most articles concerning swiftlet farming in the country, as compared to Chinese, Tamil or Malay dailies. Second, I used document analysis for materials collected in NGO resource libraries in Malaysia, which included specific sources such as NGO and government reports, letters and emails between different stakeholders, as well as photos and even quantitative data pertaining to swiftlet farming in Melaka and Penang (see Section 3.3.1b). Finally, I used narrative analysis to interpret the different types of interviews used for the research, including traditional and focus group interviews (see Section 3.3.1c).

3.3.1a Internet Ethnography

With the internet now increasingly being used as an ‘everyday’ platform for communication and the dissemination of information, the use of internet ethnography is a useful tool to study the competing discourses surrounding a given issue (Beneito-Montagut, 2011; Liew & Pang, 2015). In this research, I often found online news articles to be considerably more useful than physical newspaper reports for digging into narratives surrounding public issues because of the visibility of user comments posted in response to them. This type of internet ethnography was additionally useful in that I was able to pull out a number of key contacts and possible locations for field research through the various articles and user comments. Moreover, Liew and Pang (2015) argue that ethnographies of Asian cities must consider and include (inter)actions taking place within the digital realm as part of their work, given the range of languages, dialects and cultures that may otherwise not intermingle in physical spaces within the city.

³⁰ David Ley’s (1995) landmark study of residential landscape changes in suburban Vancouver is another example of this, whereby Ley uses a range of sources for the narratives that he cites in the paper, including residents’ letters to the city, municipal court testimonies, and key-informant interviews. He then demonstrates how these individual narratives combined to create ‘a hybrid national narrative’, which, like discourses, can have the effect of limiting human action within a particular landscape.

I also surveyed blog postings, which were also useful. In particular, I found two blogs which were both dedicated to swiftlet farming in Malaysia. First is the popular blog ‘Swiftlet Farming: Million Dollars A Year Potential Income’ (swiftletfarming.blogspot.co.uk). This site is run by Harry Pak, who posts regularly about his experience of visiting under-performing swiftlet farms across the country. Second is the provocative ‘No Swiftlet Houses in George Town’ (noswiftlethousesingeorgetown.blogspot.com). This site contains a number of posts containing links to relevant news articles, videos, and Slideshare presentations with photos and other information regarding swiftlet farming in George Town. Each of these posts received a number (between 1 and 26) of comments from online viewers, who either remained anonymous or indicated their names.

One post in particular generated a very interesting debate between a George Town resident and swiftlet farmer, which rendered visible numerous socio-political dimensions pertaining to swiftlet farming in urban areas more generally.³¹ This post contained a video of ‘Swiftlets taking over George Town’, which led to one user by the name of ‘tuckfook’ commenting that the ‘conditions are just right for the swiftlets to nest’. Though, as the video featured Rebecca Duckett-Wilkinson’s (former) home, she responded at length with the user name ‘rebecca’, stating that the swiftlets were only there because of the illegal proliferation of swiftlet farms in the area. One interesting aspect of this particular exchange is that the individuals’ identity was explicitly raised midway through. Addressing tuckfook, rebecca asked ‘is this really your real name? Or are you hiding behind it?’. By this point, it was clear that tuckfook knew rebecca’s identity, and was familiar with her and her family, but not the other way around.³² Tuckfook did not directly answer the question, apart from mentioning that s/he does not own a swiftlet farm in George Town. This seemed to have an impact on the debate, as tuckfook’s tone was (initially) more polite, even in response to rebecca’s more aggressive style of argument.

Such online interactions echo Liew and Pang’s (2015) reflection on the now widespread use of online platforms by citizens to engage in collective action by expressing discontent with and contesting the city. In this sense, internet ethnography is very ethnographic in

³¹ See Section 7.3.3 for extracts from this dialogue and their importance in the wider debate surrounding the impact of swiftlet farming on issues of health and safety in George Town.

³² I have not capitalized names here as I refer to the individuals’ usernames, which were not capitalized.

that it is able to probe the lived experiences, viewpoints, and positionalities of key informants. Yet, the issue of online identity raises an important limitation for internet ethnography, as traditional ethnographies are premised on the basis of knowing the identity and background of informants, which is often not possible online. In this case, it was possible to identify Rebecca's identity through the other qualitative methods used, yet tuckfook's was still mostly concealed. The implications of this is that researchers using online ethnographic methods should attempt to compliment their studies through other forms of qualitative research to understand more about the actors involved. This would also help to address Liew and Pang's lament of the potential lack of presence and visibility on behalf of the researcher in internet ethnographies.

3.3.1b Document Analysis

In addition to the array of online material collected, I also utilized archived resources in various NGO resource libraries in Malaysia, including the Badan Warisan Malaysia (BWM) office in Kuala Lumpur in addition to the Penang Heritage Trust (PHT) and Friends of the Earth: Malaysia (*Sahabat Alam* - SAM)'s resources in George Town. These archives gave me access to various documents related to those organizations' involvement with the swiftlet farming industry, including emails, letters, reports, presentations and newspaper clippings. The emails and letters were mostly internal to the CSOs, to and from government agencies or representatives, the press, as well as international bodies such as UNESCO. These and other documents, such as government reports or press releases, were instrumental in identifying the diverse issues at stake in swiftlet farming, and to construct a timeline of the key events pertaining to the industry's development. They also enabled tracing the webs of connections between the various actors involved in the conflict, and the various hierarchies at play. Similarly, these documents also allowed me to identify the key actors involved - including, often, their contact information - which allowed me to further follow up with them directly.

The newspaper articles gathered from the resource libraries were particularly useful in that they highlighted the key narratives circulating within Malaysia regarding swiftlet farms. In the over 100 articles that I collected, ranging back to the early 2000s, there was a diversity of sides represented, including that of swiftlet farmers themselves, the government's perspectives and, of course, residents affected by swiftlet farms. By piecing together the various sto-

ries in the articles, the key moments of conflict and contestation between these different groups began to emerge, which allowed me to piece together an overarching narrative of the key tensions over time. For this reason, narrative analysis has been described by Wiles *et al.* (2005: 90) as a tool for examining ‘the dynamics of everyday life’, since it allows a glimpse into the lived experience of our informants. The articles thus made it possible to identify the various discourses circulating in my research sites, and also contained articles from a myriad of cities and towns across Malaysia which I was unable to visit.

However, there are of course limitations with using a pure narrative or discourse analysis strategy for researching environmental conflicts, which I will briefly point out here. First, one problem with using newspapers or other document-based sources is that they do not cover the full range of voices or information that one may need in researching a particular case. Through interviews, I was able to speak to individuals that did not appear in the media but nonetheless had important perspectives. Second, it is difficult to get enough depth of information from such documents, particularly newspaper articles, as they can be fragmentary and leave out important details. Moreover, they do not allow for an embodied understanding of *why* people make the claims that appear in such documents. For example, through my fieldwork and participant observation in my key field sites, I was able to gain more firsthand experience of the issues at stake, and how people have come to see the industry in a particular way. Therefore, it is important to be cognizant of such limitations when using narrative analysis, to allow for a deeper understanding of the issues being contested.

The second limitation with narrative analysis as a methodology is that it only concerns what informants are saying about an issue - and in the case of interviews - *how* they say it. This is an issue that I was able to get around using the complementary methodology of ‘go along’ or mobile ethnographic methods (Kusenbach, 2003), which I will discuss in later in this chapter (Section 3.3.2), following a description of my traditional interviews.

3.3.1c. Interviews (focus group, and traditional)

Over 40 formal and informal interviews were conducted with 25 different stakeholders amongst four research sites visited. Semi-structured interviews were conducted in Malacca and Kuala Lumpur, while both interviews and focus groups were conducted in Perak and Penang. Most interviews and focus groups lasted for approximately one hour on average and

were conducted with swiftlet farmers, heritage activists, municipal officers and government officials. Interviews were conducted in a location that was convenient for the participant, which was usually their office or a ‘third place’ such as restaurant or coffee shop. Therefore, some interviews were recorded, while others were not, depending on both the location and duration of the interview. In cases where it was not suitable to record the conversation, I took detailed notes instead, either during or immediately following the interview. The specific questions that I asked depended on the role of the particular informant. All interviews were conducted in English, as all of the participants spoke the language fluently. Most participants seemed to be eager to meet with me, in order to express their views on swiftlet farming, and discuss the challenges that the industry has posed for them.

Many of the interviews in George Town were made possible through my secondment with the Penang Heritage Trust, which was a crucial reason for my gaining access to specific individuals in Penang and elsewhere. Of course, with swiftlet farming being such a highly contentious issue in Malaysia, I had to be quite careful with how I positioned myself and framed my research. My mentors at the PHT were crucial in this process, knowing all of the individuals in Penang that I would need to consult for my research and knowing the politics and sensitivities surrounding the industry there. However, most interviews were arranged via the ‘snowball method’ whereby contacts were recruited from an initial list of potential participants that I had identified from my preliminary research of news reports and online materials (see Valentine, 2005). For instance, through attending one of Mr. Pak’s seminars on swiftlet farming in Kuala Lumpur, I was able to meet several swiftlet farmers from across Malaysia and even other Southeast Asian nations including Vietnam and the Philippines. This was useful for meeting a wider subset of swiftlet farmers, and to understand the ins and outs of the industry in these different geographical contexts.

In addition to several individual and focus group interviews with members of different government departments at the state and municipal level, I have also incorporated the positions articulated by other key stakeholders, such as NGOs, swiftlet associations, as well as the voices of residents and business owners reflected in the media and in personal conversations. The goal was to demonstrate empirically how swiftlets and their representations by humans (accurate or not) have the potential to underlie social conflict in cities. This type of work has already been started within the political ecology literature (see Philo, 1995; Griffiths *et al.*,

2000; Griffith *et al.* 2002), but there is still a clear need for further work such as this, which links analyses of human-animal interactions to the evolution of changing socio-ecological relations in the city.

3.3.2 ‘Go along’ and mobile methods

The mobile component of this methodological framework used ‘go along’ interviews (Kusenbach, 2003) which are a form of ethnographic methods developed in anthropology and geography, which necessitates the researcher to get more involved in the lives of their informants than a typical interview would allow (Kusenbach 2003; Anderson 2004). These involve walking or driving with informants through the spaces in which they live and work on a daily basis. As such, they are intended to capture the socio-spatial character of lived experience ‘in situ’, that might not come out in traditional interview settings (Carpiano, 2009; Evans and Jones, 2012; Kusenbach, 2003). Moreover, Carpiano (2009) has demonstrated how go-alongs - and walk alongs in particular - are useful methods for studying urban health issues and how these are shaped by the local area. As several authors have pointed out, go-alongs are essentially a hybrid between interviewing and participant observation, which makes them highly compatible with the participatory methodology applied for this project (Jones *et al.*, 2008; Kusenbach, 2003).

Like mobile methods in general, walking interviews have become more widely used in cultural geography and cognate disciplines over the past decade or so (see Anderson, 2004; Evans & Jones, 2012; Ingold & Vergunst, 2008; Jones *et al.*, 2008). They were also formed around the idea that a focus on notions of ‘practice’ are important in making sense of landscapes and exploring embodied experiences of everyday life (Cater & Keeling, 2014; Cresswell, 2003). The walking interview approach also allowed me to build considerable rapport with key participants, which facilitated access to other key stakeholders and enabled future collaborations, in this case, the research secondment conducted with the PHT. In this way, as Carpiano (2009) has argued, go-alongs are most useful when used in combination with other methods, as they facilitate trust-reciprocity, which enhances the effectiveness of other qualitative methods.

Walking interviews have therefore been useful for this research through exploring the everyday, quotidian ways in which ‘swiftlet farms’ have been perceived and contested in Malaysian cities. As Anderson (2004) has demonstrated, walking interviews are also highly suited to work with environmental activists, in that their focus on ‘praxis’ and ‘lived-experience’ help with understanding concrete political struggles of various kinds. Indeed, as Billo and Mountz (2015) have demonstrated, methods that consist of ‘following’ participants

(including go-alongs) constitute a central typology of institutional ethnographic methods in geography, which I will discuss in the next section. Moreover, what an understanding of praxis as situated in time and space contributes is its ability to ‘demonstrate the centrality of nature-society relations to the making of everyday life’ (Loftus, 2012: 134). Given this importance of the relationship between knowledge, place and environment, I have thus mapped the route taken on one of the primary walking tours discussed in this thesis (see Figure 3.5), which is also an important step in analyzing the information received from go alongs, as outlined in the introduction to this section.

Figure 3.5: Walking tour through swiftlet farming areas in central George Town



This walking tour, in particular, took place within the central city of George Town, which has historically had a high concentration of (illegal) swiftlet farms. This walk was ‘guided’ by Rebecca Duckett-Wilkinson, who was able to point out features of the landscape that would have otherwise been invisible to me if I had just been walking around by myself

and making observations. For instance, she told me which buildings had formerly been swiftlet farms, or about buildings owned by friends of hers who had been negatively impacted by the nearby farms. She was also able to tell me about the (often illegal) changes that the buildings had undertaken in their conversion into swiftlet farms, and how this has modified their current appearance (see Connolly, forthcoming).

Relatedly, I also used ‘ride alongs’ with one swiftlet farming ‘consultant’ and three swiftlet farmers who drove me around various towns in Malaysia which were dominated by swiftlet farms. These interviews also involved entering active swiftlet farms that they owned or were otherwise involved with. In some cases, I spent several hours with these individuals, and was able to gain a much closer connection with them than would have otherwise been possible. It also gave me a much deeper understanding of how the swiftlet farming industry works, its development over the past two decades, and the challenges faced by operators. Without these experiences, it would be impossible to reach the level of understanding that I did with only ‘static’ interviews. On one of these trips, I ended up staying over night in a town that was literally dominated by swiftlet farming, which gave me a very firsthand experience of living in such a town - albeit only for a short while.

All of the go-alongs employed in this study were participant-led go-alongs, wherein the researcher follows informants on journeys, rather than ‘contrived’ go-alongs where the researchers direct the route. This type of arrangement, Kusenbach argues, greatly enhances our understanding of the subjects’ authentic practices and interpretations, thereby increasing the richness of the data collected (see also Carpiano, 2009). However, it is important to note that this method often still requires the initial use of traditional interviews to build trust with the informants before it is possible to carry out a ‘go along’ interview. Nonetheless, by taking the time to do this, it allowed for insights into the more subtle and complex contextual information which shape socio-ecological disputes and individuals’ perceptions of them. Indeed, Anderson (2004) notes that go-alongs are particularly appropriate in politicized landscapes, and are therefore useful for studies of environmental activism. The next section will discuss the institutional ethnographic approach that I have used, which is an embodied form of action oriented, participatory research.

3.3.3 Institutional and action oriented ethnographic research

One of the most important ethnographic methods used in this research centered around a three-month secondment period undertaken with the PHT. This is a form of ‘institutional ethnography’, in which the researcher actively works with those whom (s)he is studying (Billo & Mountz, 2015; Chung, 2009; Yaneva, 2009). Institutional ethnography has become increasingly used in geography over recent years, and is pertinent for this project for the following reasons: First, institutional ethnography is well-suited to using a range of methodological approaches, and especially in conducting critical research. Given that this research also employed mobile ethnographic methods, and various forms of narrative analysis, this was quite important. Much like the political ecology framework that I am using in theorizing this research, institutional ethnography is also rooted in Marxist scholarship, and is particularly fitting for research encompassing an integrated theoretical approach. Moreover, institutional ethnography is also useful for researchers examining socio-spatial relations and quotidian aspects of life within and between research sites, while also potentially contributing to social movements (Billo & Mountz, 2015; Campbell & Gregor, 2004).

The idea behind this type of method is, as sociologist Monika Buscher has put it, working with people ‘involves sustained engagement with their world view[s]...and can reveal the emplacement of professional judgements’ (Buscher & Urry, 2009: 105; see also Buscher, 2006). Working with the PHT not only put me in daily contact with many of the key actors in the conflicts surrounding swiftlet farming in George Town, but also gave me personal experience of engaging in negotiating with other stakeholders such as city and state government officials. Moreover, I got to know the people I was working with on a deeper level, and came to understand their perceptions of swiftlet farming in relation to the local environment.

One of the roles that I had with the PHT was to negotiate with the various government agencies involved in regulating the swiftlet farming premises in George Town. This allowed for an understanding of the positionality of the key government actors who have been involved in regulating the swiftlet farms in the city for the past six years, as well as the challenges that they face in doing this job. Through these different meetings, I also came to understand the architecture of the different government agencies which were responsible for regulating swiftlet farming not only in George Town and Penang, but also at the federal level. This helped me to understand the standpoint of the various government agencies, how the policies

on swiftlet farming were developed and carried out, as well as the cracks between these different levels of government. Ultimately, my correspondence with the government - which was enabled through my association with the PHT - allowed me to answer one of my primary research questions which asks why swiftlet farming still exists in Malaysian cities, despite the large public outcry against the industry, and the amount of resources put into their removal.

The key to working with the local authorities required trying to pitch my work in a way that would also be useful to them. For instance, it came to my attention that one of the municipal officers actually saw me as an 'expert' who would be able to help them to better manage the industry. This was a point of misunderstanding, as I had understood our relationship as being the other way around. However, once I understood this, we were then able to engage more productively, through discussing the challenges that the officers faced in carrying out their enforcement work on the swiftlet farms in the city, and how these could potentially be overcome.

Nonetheless, I still sensed a large sense of distrust or reservation on the part of city authorities and, as mentioned above, Penang was the only state or city in which I could get any access, following failed attempts in Malacca. A reason for this is that most officials were worried about negative publicity of any sort. As Cardoso of BWM put it, 'I think it's just suspicion and fear...that someone might find out that they were the ones that talked, and then they would get in trouble, or may be unsure of how you intend to use the information. That's just the way people are here' (interview, 8 October 2013). Furthermore, most officials understandably wanted to portray their governments in a positive light, so would often conceal or otherwise misrepresent information (see Mulligan *et al.*, 2012), which I later found out about through other interviews or personal observations .

This problem is hardly unique in ethnographic research, but underscores why the mixed methodological approach and use of a wide range of actors used were indispensable for this project (see Crang & Cook, 2007). Nonetheless, I still faced considerable difficulties in dealing with the resulting contradictions and ambiguities, especially given the contentious nature of the research topic. The more important question for me then became not whether the accounts I received were completely factual, but rather, why their accounts employed specific discourses and why their accounts differed or agreed with those of other actors.

One of the most challenging parts of my work with the PHT - which is likely common to many institutional ethnographies used to study conflicts - was negotiating the different stakeholders that have an interest in my research area. For instance, there were the swiftlet farmers on one hand, the government on another, and heritage advocates/residents of George Town on yet another. Though I have been trying to maintain a sense of neutrality for the work that I am doing, this was complicated by my close association with the PHT, which is a heritage NGO with a very clear agenda, and an equally clear position on the swiftlet farming issue. Therefore, I found it at times to be a difficult balancing act in aligning myself with this organization, yet also trying to maintain a sense of neutrality with other parties that I was working with - particularly swiftlet farmers.

One particularly explanatory event that stands out is a meeting that I had at the George Town World Heritage Incorporated (GTWHI) Office in Penang - which is a government operated agency - where I was called in very urgently to 'follow up' on our discussion of the 'swiftlets issue' in George Town. I had tried asking for more information to clarify the purpose of the meeting but was not given any. Upon my arrival, I was confronted by four representatives from the Penang Department of Heritage (*Jabatan Warisan*), MBPP, and State Government, interrogating me on the report I had sent to the regional UNESCO office in Jakarta (which I had copied them on, in the interests of transparency). In this report, I had detailed the findings of my research on the swiftlet farming industry in George Town, and asked for UNESCO's revised standpoint on the issue.

As I discuss in more detail in Chapter 6, it was important to understand UNESCO's position on the issue, because they had previously adopted a rather neutral stance to the legitimacy of swiftlet farming in the UNESCO World Heritage sites of Malacca and George Town, and simply advised the relevant stakeholders to reach a 'mutually beneficial outcome' (Nagaoka, correspondence, 11 May 2011). Nonetheless, all of the stakeholders in Penang, including ASNI, the State Government, and the PHT used UNESCO as an authority figure in seeking legitimacy to support their various positions. Therefore, the PHT suggested that I update UNESCO on the status of swiftlet farming in George Town, based on my research, and seek to clarify their position on the matter. In my letter to the UNESCO representatives, I mentioned that there were at least 37 active (and illegal) swiftlet houses in George Town, despite the State Government declaring at the end of 2013 that they had all been removed (see

Chapters 6 and 8). The UNESCO responded by stating that all swiftlet farms within the WHS should be removed by December 2013, in light of the Malaysian Government's High Impact Assessment (HIA) of the industry, which found that the industry 'impacted severely the fabric of historic buildings' (correspondence, 17 April 2014). Nonetheless, in my meeting at the World Heritage Office, the head of the agency said that they, including the State Government officers, were very upset that I had written such a letter to UNESCO because it (in their opinion) belied the active enforcement efforts that they had been carrying out in George Town.

This meeting was very emotionally stressful and difficult for me to deal with because I felt that I had done something 'wrong' as a researcher, despite having the letter approved by my mentors at the PHT. After discussing this meeting with Duckett-Wilkinson and others, they said that this has always been their experience with the authorities in Penang and that it is completely normal. In fact, they suggested that this was a good experience for me to have because it shed some light on how the government operates, and their positionality regarding the swiftlet farming industry. Furthermore, they pointed out that it also sparked the local government into action by putting pressure on them and bringing in the attention of external agencies, like UNESCO, who were clearly quite interested in the current status of swiftlet farming in George Town.

Finally, this issue brings up my positionality and situatedness in relation to the research. As mentioned above, I wanted to avoid taking an *a priori* normative stance in relation to the controversies at hand. I.e. Swiftlet farming in cities is 'good' or 'bad' - particularly because swiftlet farming is such a hotly contested issue. For instance, the actions of some urban swiftlet farmers could be considered 'immoral' or 'greedy' in seeking profit at the expense of others. On the other hand, critics of the swiftlet farming industry, such as heritage activists, could be criticized for unduly imposing their personal beliefs and expectations on others. I thus tried to counterpose the competing claims and allow the reader to decide for his or herself. Nonetheless, by the end of the research, I found compelled to act in favor of the public interest, which at least in George Town in Malacca, was to strictly control the presence of swiftlet farms in urban centers. This explains why I allowed some actors to influence the direction of research more than others, such as my colleagues at the Penang Heritage Trust, as opposed to swiftlet farmers, consultants, or government officers. Moreover, this was a collaboration that was made official through my commitments for the European research network

of which I was a part (ENTITLE), which required me to undertake a research internship (secondment) with a local civil society organization.

Similarly, I also had to make some active decisions as to what information to illuminate and which to conceal in the interest of space and concision. The research questions and particular topics that I explored in this thesis were those that I deemed to be most interesting from a landscape political ecology framework, which explains why some aspects, like the political economy of the swiftlet farming industry and global trade in edible birds' nest was not given as much consideration. Furthermore, the inspiration for at least two of the chapters (6 & 7) were derived from collaborations with colleagues at conferences and workshops, and directly resulted in publications. In other cases, I faced external barriers in gathering and presenting information, such as interrogating possible links between dengue fever and swiftlet farms, which was an avenue foreclosed by the Penang Health Department (MOH).

3.3.4 Surveying active swiftlet farms in George Town and Malacca

Although the heart of this research is structured around the qualitative data generated from interviews and document analysis, it is also complemented with some quantitative data collected personally or by other researchers in Penang. This material mostly concerns the number of swiftlet farms in George Town from 2008 to 2014, with surveys taken at three-year intervals, and is presented in Chapter 6, (see Figure 6.1). This data was compiled from previous research conducted by various MBPP (Penang Island City Council) officers, Universiti Sains Malaysia (USM) researchers and PHT staff in 2008 and 2011, in addition to a follow-up count that I conducted personally in March 2014 (see Chapter 8). Unfortunately, such detailed data was not available for Malacca, but there is a (non-exhaustive) record from 2001, conducted by Badan Warisan Malaysia (BWM). Nonetheless, for comparison purposes, I conducted a revised count in December 2014. However, neither of these two counts would have caught the numbers of swiftlet houses in Malacca at their peak, which was around 2007-2008, based on information from my interviews (see Section 6.3.2).

The collection of this particular data served several purposes: first, it updated the data that the PHT had from their previous surveys, which gave some continuity to their records. More importantly, it could be used in assessing the State Government's claim that they had achieved zero swiftlet farms in George Town by the end of 2013, which was a target an-

nounced in 2010 (see Chapter 1). Furthermore, it complimented the qualitative data that I had collected, by demonstrating the scope of swiftlet farming in George Town and Malacca.

Conducting these surveys involved walking around the heritage zones of George Town and Malacca every morning and evening for approximately two weeks in each city. However, there were a number of limitations related to conducting this data. First of all, the number of active swiftlet farms in both cities is always in flux, and changes from month to month. This is due to the MBPP's ongoing enforcement action in Penang, and also declining profitability of the farms in light of the Chinese ban on edible nest imports from Malaysia in 2011, which reduced the price to a fraction of what it once was (see Chapter 4).

In addition to this challenge, it was in some cases difficult to determine whether or not a particular building was active or not. Many of the farms operate as discreetly as possible given their illegal nature and, as a result, are difficult to detect from their appearance. On the other hand, many buildings which had structural modifications consistent with swift houses were no longer active. Therefore, I had to visually detect swiftlets entering or leaving a particular building, or hear them chirping inside. Because the buildings in central George Town and Malacca are comprised of shop houses, which are all adjoined and of similar height, it was often difficult to detect which building the swiftlets were flying into (or out of) from ground level. As a result, the figures arrived are conservative estimates which may not reflect the true number of active swiftlet farms at a given point in time.

3.4 Conclusion

This mobile methodological approach to tracing the controversies was selected for two primary reasons. First, for its potential to capture the more subtle forms of activism inherent in everyday lived experience and praxis. Relatedly, to demonstrate how everyday experience can become the basis for a performative politics of embodied struggle and resistance to unjust socio-environmental transformations in cities. Second, these methods emphasize the usefulness of making deep connections between academics, NGOs and other stakeholders in order to tackle multi-scalar, socio-ecological issues such as urban swift farming. I would argue that the open-ended nature of methods used in conducting this research - in particular the semi-structured nature of the interviews and informant-led 'go-along' ethnographies - allowed for the research to be driven as much by the concerns, perceptions, struggles and

understandings of the participants as it was by myself. As such, the combination of research methods and sensibilities outlined in this chapter can make an important contribution to the literature on co-production, in terms of how researchers can use a combination of quantitative and participatory ethnographic methods in tackling both research questions and activist goals. These insights will now be fleshed out through the empirical material presented in the following chapters.

Chapter 4: The Political Ecology of Swiftlet Farming: Capitalism and Commensalism³³

4.1 Introduction

Many geographers and political ecologists in recent years have drawn attention to the increasing number of ways in which natures - and indeed entire landscapes - are now being (re)made, or 'enterprised up' into commodity forms (Castree, 1995; Harvey, 2007: 233; Luke, 1999; Peluso, 2012; Strathern, 1992; Watts *et al.*, 2010). The same can be said to have taken place with the swiftlet farming industry, which has altered the nesting behaviors of swiftlets, and the means through which their nests are harvested for human consumption. It is this general process which I aim to expatiate in this chapter, building on the general framework and concepts set out in Chapter 2. The importance of studying this transformation within a LPE framework is to consider the changing ways in which human societies interact with nature - broadly defined. Moreover, it also aims to examine how processes of globalization have the capacity to transform urban environments through new modes of production and socio-ecological interventions (Neo & Pow, 2015). Furthermore, it demonstrates how the 'production of nature' is transforming not only natural ecosystems and animal ecologies, but also urban landscapes (Smith, 1984).

This chapter analyzes the transformation of the *means* and *conditions* of production of EBNs from cave-harvesting regimes to the more recent *farming* of edible nests in cities has important implications for considering how the production and urbanization of nature are constituted by specific socio-natural metabolisms. For instance, there are considerable ecological implications associated with the increased concentration and scale of swiftlet farming in urban areas, and these factors are bound up with various social, political and economic considerations such as the government promotion and regulation of the swiftlet farming industry. These various elements combined to bring about the rapid boom and eventual crash of the Malaysian swiftlet farming industry within a very short period of time. The role of property is also important here, in that it has played a central role in propelling the socio-environmental transformations brought about with the rise of swiftlet farming.

³³ The term commensalism refers to an association between two organisms in which one species benefits without harming the other (see Thorburn, 2014).

Finally, this chapter also looks at the ways in which the localized socio-natural transformations associated with the Malaysian swiftlet farming industry articulate with broader networks of commodity production, exchange and regulation. In Section 4.4, I consider how regulatory mechanisms put in place by the Chinese state - the primary consumer of Malaysian birds' nests - led to a sharp and unexpected crash of the Malaysian birds' nest industry, and, thereafter a landscape of largely abandoned swiftlet farms across the country. This section powerfully indicates that the socio-ecological changes that have occurred within particular cities must be understood within the context of the economic, political and social relations that have produced such outcomes (Heynen *et al.*, 2006). The case of urban swiftlet farming thus unfolds at the intersection of economic globalization, ecological modernization and conspicuous consumption, wherein accelerating land use change, ancient trade networks, culinary traditions, rising incomes and consumerism come together in unprecedented ways. I conclude by discussing the implications of the chapter, and how they situate the remaining chapters in this thesis.

4.2 Ecological Implications of (Urban) Swiftlet Farming

It's not their fault that people want their nests. If we don't protect them this way, they'll die out (PERHILITAN Director Siti Hawa Yatim in Henry, 2005: 4).

Concern with the interconnections between commodification - in particular the commercial appropriation of natural resources - and the metabolic dynamics of socio-environmental change has been a constant feature of writing on urban political ecology over the past few decades (see Castree, 2003; Gandy, 2002; 2006; Loftus, 2006; Smith, 1984; Swyngedouw, 2006a; 2006b;). The transition during the 1990s from the harvesting of birds' nests in the limestone caves of Borneo to swiftlet farming in cities across peninsular Malaysia is one example of this relationship. As I will discuss in this section, the ecological dynamics and collection patterns of cave nest harvesting are quite different to those of urban swiftlet farming, which have raised some important implications for the sustainability of the industry. Lau and Melville (1994: 19) for instance, observed that at the time of research, some swiftlet farming activities had already begun, but that 'the output by farming is small and most trade will continue to be in nests obtained from the wild'. Moreover, they feared that the sharp rise in de-

mand for birds' nests would put increasing pressure on the birds, which could lead to their potential collapse. Contrary to their predictions, however, the rising demand in EBNs eventually became met by an equally increasing rise in swiftlet farming, and less by over-exploitation of swiftlets.

In Malaysia's relatively short history of swiftlet farming, the two species of edible-nest swiftlet (*Aerodramus fuciphagus* and *Aerodramus maximus*) have been moved on to and back off of Malaysia's protected species list, maintained by the Department of Wildlife and National Parks (PERHILITAN - *Jabatan Perlindungan Hibupan Liar dan Taman Negara*). At first, swiftlets were added to this list due to widespread concerns about over-exploitation of the birds' nests in the caves of Malaysian Borneo, which at one time threatened the population of swiftlets. For instance, the famous Niah Caves in Sarawak experienced a 50% reduction in the number of swiftlets between 1991-2001 (*New Straits Times*, 29 September 2004). Lim and Cranbrook attribute this over-exploitation to the decline of rigorous control of harvesting and trade in the Malaysian post-colonial era of the 1960s and 70s. This resulted in increasing informality of the trade, which consisted of large numbers of stolen or otherwise illicitly harvested nests. This had severe economic implications for Malaysia, as cave-nest production in the country fell from US\$1.7 million in 1935 to less than \$65,000 by the end of the 2000s (Chin, 2009a).

As a result, it was proposed at the Ninth Conference of the Parties (COP) to the Convention on the International Trade and Endangered Species of Wild Flora and Fauna (CITES) in 1994 that swiftlets should be added to CITES Appendix II, which is for species that are 'not necessarily now threatened with extinction but may become so unless trade...is subject to strict regulation' (CITES, 1983: 2; see also Lim & Cranbrook, 2002: Chapter 6). This would mean that trade on swiftlets and their produce would be mostly banned, unless done with special permits. However, exporting countries, including Malaysia and representatives of the birds' nest industry, contested this proposal because it was argued that 'the trade...is not endangering the survival of swiftlets. Management of birds' nests is good' (CITES Malaysia Officer, in Madi, 2003: np). In the Malaysian case, it is true that cave harvesting regimes improved greatly following an extensive study conducted by Lim Chan Koon and the Earl of Cranbrook in the latter part of the 1990s, which studied the reproductive biology of swiftlets and suggested appropriate harvesting regimes (Lim, 1999; Lim & Cranbrook, 2002). As a re-

sult, swiftlets were reclassified domestically in Malaysia in 2000 from, ‘totally protected’ to ‘protected’ under the Wildlife Protection Act (*The Star*, 15 June 2003). The new status made swiftlet farming legal, though special licenses were still required by operators (see Chapter 8).

Nonetheless, PERHILITAN saw swiftlet farming as a much more sustainable industry than the traditional cave harvesting of swiftlet nests, even with the improved harvesting regimes. The swiftlet farming industry in Malaysia thus has the full support of PERHILITAN, as they recognized early on that ‘commercial farming [was] the best way to bring the dwindling numbers of white-nest swiftlets back up’ and that ‘the activity is...the only thing that could possibly save them’ (Henry, 2005: 4). As PERHILITAN Director Siti Hawa Yatim explained, ‘in cave harvesting, where farmers bid huge sums of money to secure the right to harvest the bird’s nest, they need to harvest as many nests as possible’ (in Henry, 2005: 3). The difference between cave harvesting and swiftlet farming is ultimately to do with ownership. While the system that Yatim mentions may be true in some cases, the majority of caves in Malaysian Borneo use patterns of ancestral rights to control who has the right to harvest the nests within the caves. In these cases, individuals, families, or whole communities may share such rights (see Lim & Cranbrook, 2014). As Hobbs (2003: 2211) has written, ‘it is a zero sum game; every actor involved is seeking to maximize his capital - beginning with the harvester who takes as many nests as possible - whenever possible; while avoiding any loss to other actors’. In contrast, as Yatim added, ‘the [house farmers] want to increase nest production in their shophouses, so they make sure the baby birds are fully mature before removing the nests’ (ibid). Though, I would argue that another significant problem challenging cave swiftlets is that of theft, which is harder to control than in swiftlet farms.³⁴ For instance, Lord Cranbrook, (see Table 1.2) and I visited some sea caves off Mantanani Island in Malaysian Borneo in early 2014 where the swiftlet populations had been almost obliterated due to frequent theft of the nests. The caves’ ‘caretaker’ lamented that he would often find broken eggs and dead baby birds on the cave floors, and that some nests were taken before they were even fully formed.

Nonetheless, as swiftlet farming became more widespread and swiftlet populations began to swell, swiftlet farmers and producers generally lobbied to get swiftlets off of the pro-

³⁴ The issue of theft has therefore led to the militarization of some caves throughout Malaysia and particularly Indonesia. Urban swiftlet farms often also have sophisticated security measures in place, but a full discussion of this topic is beyond the scope of this dissertation.

tected list entirely, in order to avoid special licenses which would otherwise limit the harvesting and trade of their nests. Both species of swiftlets were later taken off of the list in early 2011, as swiftlet farming had by then resulted in record high populations of swiftlets in Malaysia (Duckett-Wilkinson, 2011b). However, Lim and Cranbrook (2002) argue that swiftlet farming will not eliminate the pressure off wild cave populations of swiftlets, because the cave nests are cheaper to harvest, in terms of cost-effectiveness.³⁵ Thus, this move may have been short-sighted on behalf of the government.³⁶

Moreover, some have argued that the mass farming of swiftlets has created other ecological problems related to over-population and other issues related the farming of the birds. For instance, recent studies in Malaysia have found a lack of genetic variation among swiftlet house colonies, with most birds being of the white-nest variety (Thorburn, 2014; Lim & Rahman, 2005). Though it is still unclear whether this lack of differentiation represents a threat to the health and reproductive success of swiftlet populations in farmed populations (see Thorburn, 2014), there are still other concerns. Situated at the porous boundary between ‘domesticated’ and ‘wild’, the urban farming of swiftlets can be seen to share some characteristics with various forms of aquaculture, such as salmon and shrimp farming (Fougeres, 2008; Vandergeest, 2008).³⁷ For instance, Vandergeest (2008: 214) notes that ‘farmed shrimp are susceptible to a series of viruses that can wipe out entire crop areas’, which affects the profitability, sustainability and spatial dynamics of the shrimp farming industry. Similarly, avian biologists such as Cranbrook (2010) have also raised concerns about competition for food and chronic disease or parasitism amongst farmed populations if the swiftlet population is artificially increased. Lim and Cranbrook thus argue that it is important to maintain wild populations of swiftlets in order to preserve the genetic resources and viable gene pools which are not as robust amongst house-farmed populations.

In particular, Cranbrook (2010) pointed to one example in Southern Thailand where poor breeding performance suggests that the environmental resources have been stressed by

³⁵ For instance, cave nests are often worth more money than farmed nests, and typically do not require any capital investment upfront (i.e. construction of swiftlet farm, purchase of land, etc).

³⁶ As I will discuss in Chapter 8, there was an irony of this de-listing of swiftlets, in that it was then easier for local governments to implement the removal of swiftlet farms from residential areas. In effect, swiftlets could then be treated as other common bird pests, such as pigeons or crows.

³⁷ See the following chapter for an extended discussion of the domestication of swiftlets, and how it relates to other forms of animal domestication in the city.

the increase in population. Relatedly, Mr. Ding told me that swiftlet numbers are reducing in most cities in Perak because of an over abundance of swiftlet farms. Furthermore, Lim and Cranbrook (2014) raise concern about potential indirect impacts of swiftlet farming such as reducing the incentive to protect natural caves (and resident swiftlet populations) from expanding quarry operations. This is equally important, as they point out, because limestone caves also harbor a myriad of other flora and fauna endemic to cave ecosystems, such as countless species of bats.

4.3 Boom and bust in the Malaysian Swiftlet Farming Industry

The main problem with swiftlet farming arises because of ignorance and a general lack of knowledge, people are selfish, and want to make profits at any cost (Clement Liang, interview, 11 November 2013).

Much of the social controversy that has arisen over urban swiftlet farming in Malaysia has been a result of misunderstandings of swiftlet ecology, and the concrete knowledge needed to run successful and socio-ecologically responsible swiftlet farms. Cartier (1998) has suggested the increasing (real and imagined) distance between urban centers and forested areas in the country has resulted in reduced knowledge of the natural environment. This may be one reason for the lack of knowledge amongst swiftlet farm operators, but as I demonstrate here, it is also because of the way that the industry has been represented and promoted as being ‘easy money’ and not requiring much knowledge or specific skills. Specifically, I introduce the different ecological discourses that have circulated, and briefly analyze their effects, as well as their role in (re)shaping the industry.

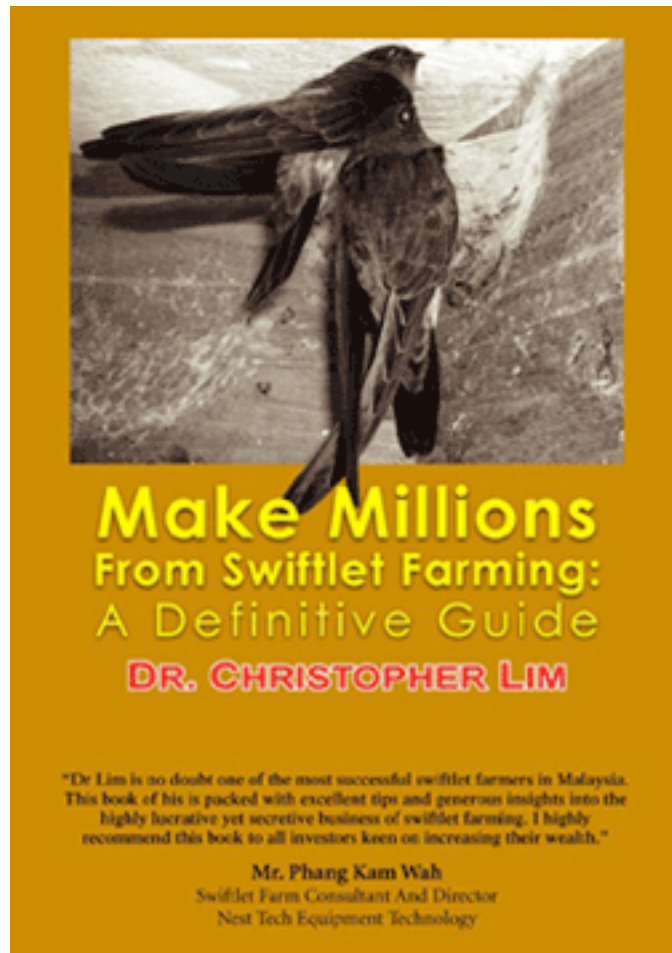
Given the extremely high prices for birds’ nests, and demand from China, the industry was proclaimed to generate significant revenues for harvesters with minimal input required. The industry was thus extremely attractive to a number of urban and rural investors to venture into the business, many of whom were influenced by widely circulated rumors of ‘instant profit’ arising from the birds nest industry, which at its peak was estimated to be as high as 20,000 RM (US\$4,700) per month - with minimal capital input required (Chin, 2009a; Alias *et al.*, 2013). For instance, even a small, single story (6m x 20m) swiftlet farm could produce about 2-4kg of nests every month, worth up to 10,000RM per month (\$2,350), depending on

the swiftlet population at the particular house (Chin, 2009a).³⁸

Many swiftlet farmers thus got started in the industry due to popularized accounts of the (potential) lucrative economic return stemming from the business, advocated by books such as the fancifully titled *Make Millions From Swiftlet Farming: A Definitive Guide* (see Figure 4.2), by physician *cum* swiftlet farmer Dr. Christopher Lim.³⁹ As one consultant from Swiftlets Venture International boasted, ‘it’s a gold mine...You put in RM500,000 (\$121,000) and if your location is good, you can net RM1 million (\$242,000) a year within four

years. Where else in the world can you find such a business?’ (in Oh, 2008: np). Such rhetoric emphasized that the returns to be made from swiftlet farming were potentially exponential, as the swiftlets, and numbers of nests, would multiply over a very short period of time. Another birds’ nest consultant agreed: ‘swiftlet farming is currently the best investment opportunity in Malaysia. You invest only once. If the farm is successful, you can collect thousands of ringgit every month’ (ibid). Moreover, some industry supporters claimed that there was very little work involved, suggesting that the swiftlet farms essentially run themselves. As Mr. Chen, a

Figure 4.1: Cover of the popular book: *Make Millions From Swiftlet Farming*, by Dr. Lim.



³⁸ Until the market crash in 2011, this figure would easily be double. However, usually at least 1,000 birds would be needed to produce such a figure, which can take several years for some swiftlet farms to develop such a large population.

³⁹ Indeed, the circulation of such accounts around the country has, according to my informants, become one of the factors leading to the unsustainability of the industry by 2008.

swiftlet farmer in Sitiawan succinctly put it, ‘it’s quite easy. Nature does the work for you’ (in *Financial Gazette*, 2001: np).

Interestingly, Mr. Pak, told me that many Chinese people in particular, during the 1990s and 2000s would face familial or community pressure to start a swiftlet farm, because everyone was doing it (interview, 30 September, 2013). In his case, he got into the industry through an old friend of his wife, who encouraged him to try his luck in the business. Pak claimed that it was also seen as a very respectable thing to do, but now has lost that esteem somewhat, due to the subsequent crash of the industry, which I will discuss below.

The lucrative nature of the market for edible birds’ nests and profitability of urban swiftlet farming ventures, also provided significant economic boosts to towns which had developed a strong and successful urban swiftlet farming industry. In fact, swiftlet farming was cited as one of the main drivers resulting in the increase of inner-city land prices following the 1997/98 Asian Financial Crisis (Pak, interview, 30 September 2013; Ding D.H., interview, 2 October 2013). In the immediate aftermath of the crisis, a two-story shophouse in places like Sitiawan would have sold for between 90,000-200,000 MYR (\$21,000-46,840) (*Shanghai Star*, 10 May 2001). As the industry developed further, it created a ‘property boom’ in many Malaysian cities as prices doubled by 2000 (ibid).

By 2011, shophouses in cities like Sitiawan and Taiping would sell for up to RM1 million (\$235,000), and those that are already converted as successful swift houses could go for even more money, depending on the ‘success’ (i.e. number of birds) of the particular building (Pak, interview, 30 September, 2013). Harry Pak, a swiftlet farm consultant in KL, suggested that having a strong swiftlet farming industry could be a benefit to town councils, as they could enforce a tax on swiftlet farms and thus take a cut of the profit that they generate (interview, 30 September 2015). In fact, he pointed out that the local government in Sitiawan was friendly to swiftlet farms for this reason, and was able to benefit considerably from the industry. Contrary to many swiftlet farms in other cities, most premises in Sitiawan were licensed, which meant a significant income for the Municipal Council and relevant state agencies (see Chapter 8). Rates differed based on the size of the premise and the number of swiftlets inside, so as to not harm unsuccessful operators. The council also carried out inspections prior to

granting licenses for the farms, which also carried a charge.⁴⁰ For these reasons, Mr. Ding (D.H.), a local swiftlet farmer in Sitiawan, claimed that the industry actually had a positive impact on such cities, contrary to what many detractors of the industry claimed (see Chapters 5 - 7).⁴¹

The industry was also very attractive to investors, given that the price for converting an existing shophouse or commercial building in cities like George Town and Melaka into a swiftlet farm was relatively cheap, costing on average RM40-50,000 (\$9,800-12,000-) for renovations, on top of the building cost (*The Star*, 24 August 2010; *Financial Gazette*, 2001). This made for a significant return on investment, as double story swiftlet houses in inner city areas could harvest up to RM150,000 (\$35,000) worth of birds' nests per month, before the market crash in 2011 (see below). On the other hand, newly constructed swiftlet farms in rural areas would usually cost about RM500,000 (\$117,000) to build from scratch, if one already owns the land. In addition, consultancy fees, if needed, could often add considerably to this amount.⁴² This signals how swiftlet farming contributed to rapid socio-environmental transformation of urban landscapes across the country as it was more cost efficient for swiftlet farms to locate in existing urban buildings, rather than rural areas.

4.3.1 Swift Boom for Malaysia

In the 1980s, the Malaysian Government began to develop new export-based industries in the wake of a declining economy, which had been fundamentally dependent upon the rubber plantations and tin mines introduced during British Colonial rule in the late 19th and early 20th centuries (Fawzi & Lim, 2002). By 2010, the Federal Government introduced the Economic Transformation Programme (ETP) to transition from a primarily agricultural based economy to one that was more diversified. The goal was to double GDP per capita in the country by 2020, which would require more people to be employed in middle and high income sectors.

⁴⁰ However, by the time of research, Ding noted that the city council stopped enforcing licenses and registration of swiftlet farms because most were no longer making money, so they did not want to burden the operators even further (Ding, D.H., interview, 1 October 2013). Ding admitted that he also did not maintain most of his premises anymore because of the market crash.

⁴¹ Indeed, Ding told me that the local people see it as 'God's blessing that the birds came to the town' (Ding, D.H., interview, 2 October 2013).

⁴² See Section 4.3.2 on the issue of swiftlet farm consultancy.

Though swiftlet farming was categorized as an agricultural industry, it was also seen as a lucrative business opportunity which could help to lift many people out of unemployment and lower income agricultural jobs. For instance, the Economic Transformation Programme Roadmap (Government of Malaysia, 2010) told the story of one rural farmer in Sarawak, Malaysia, who increased his income 20-fold by transitioning to swiftlet farming. The report stated that the farmer was able to earn RM3,000 (\$700) per month through swiftlet farming, based on an initial investment of RM10,000 (\$2,350) for a very small swiftlet house (5x8 meters), which he had gathered from relatives.

Through such examples, the ETP Roadmap thus anticipated that the industry would have a GNI impact of 4.5 billion by 2020, and generate 20,800 jobs, which would ‘establish Malaysia as the primary recognized supplier of raw and processed swiftlet nests globally’ (Government of Malaysia, 2010: 529). The swiftlet farming industry was therefore established as a National Key Economic Area (NKEA) and provided with a number of incentives and loan schemes established to encourage Malaysians to get more Malaysians involved in the business. The Ministry of Agriculture and Agro-based Industries (MOA) was the primary loan-grantor for swiftlet farming operations,⁴³ which provided grants of up to RM5.8 million (\$1.4mil) for companies to get started in the business (Chong, 2011). Agrobank, which manage a number of agriculture-related business projects, was the first private company in Malaysia to offer loans to set up swiftlet farming ventures and actively promoted individuals to apply for them. Their loan scheme, worth RM68 million (\$16m) was launched in 2010, through which applicants could borrow as little as RM10,000 (\$2370) to build a low-cost shophouse or up to 600,000 RM (\$14,250) for a rural bungalow to be used for swiftlet farming (Isham Ismail, 2010). Agrobank was also prepared to match their loan clients with buyers for the nests, so they would not have to worry about marketing costs.

This type of loan scheme was quite common in the swiftlet farming industry, as many different stakeholders developed numerous schemes to profit from the industry’s success. The Federal Veterinary Department (JPV - *Jabatan Perkhidmatan Veterinar*) for instance, identified over 500 low-income families as recipients of RM10,000-30,000 (\$2,370-\$7,100) loans

⁴³ The Ministry of Agriculture is the same department that is in charge of regulating the swiftlet farming industry, which some stakeholders would view as a conflict of interest (see Chapter 8).

to set up swiftlet premises.⁴⁴ These loans were intended to ‘encourage the participation of *bumiputera* (ethnic Malays) in this industry as they currently only make up 20% of swiftlet farmers in the country’ (*The Star*, 31 October, 2010).⁴⁵ This was in line with the state’s major long term economic planning policy, the NDP (National Development Policy), which intended to enhance the welfare of Malays(ians), and continued to pursue the affirmative action policies for *bumiputera*, set out in the precedent NEP (New Economic Policy) (see Cartier, 1998).

However, such schemes did not prove overly successful, as the Malaysian swiftlet farming industry is the quintessential ‘ethnic economy’ (see Kaplan & Li, 2006; Neo, 2009) where ownership, employment and consumption are all dominated by ethnic Chinese. As a result, the industry is also spatially concentrated in areas with high Chinese populations, such as the states of Perak and Penang. Moreover, the loan schemes also failed because there were no checks in place to ensure that the funds were actually being spent as they were meant to. As Duckett-Wilkinson suggested, ‘people would misuse the money, or they would build a structure in their backyard which is supposed to house swifts, but in actual fact they would never use it for that’ (interview, 22 October 2013). This meant that not only did they fail to increase productivity in the swiftlet farming industry, but they also failed to reduce unemployment and increase incomes amongst loan recipients. Duckett-Wilkinson also suggested that people would often lack the knowledge needed to set up a swift farm, which has been one of the underlying problems confronting the Malaysian swiftlet farming industry, as will be discussed in the next section. Moreover, following the collapse in price for Malaysian birds’ nests in 2011, (see Section 4.4) the industry was no longer ‘bankable’, meaning that it was no longer financially feasible for banks to distribute loans for swiftlet farming (Pak, interview, 30 September 2013).

4.3.2 Swiftlet Farming Industry ‘In the Soup’

Despite the claims made in the previous section advocating the ‘easy money’ promised by swiftlet farming, the industry is not such an easy business, and has consequently experienced

⁴⁴ Paradoxically, the JPV is also the same department in charge of regulating the industry, a contradiction discussed in Chapter 8.

⁴⁵ Indeed, during my fieldwork in Malaysia, I only came across one Malay swiftlet farmer, which means that the actual figure could actually be less than 20%.

failure rates of 70-80% (Henry, 2005: 4). These failure rates have been a result of the sharp increase in competition that took place with the rapid proliferation of swiftlet farms throughout the country, but also due to the general lack of knowledge on behalf of many farmers. For instance, there is much detailed knowledge about swiftlet biology, farming techniques - and often simple luck - that needs to be obtained before one can become successful at the business, but this has not been as widely promoted as the potential financial returns. As one avid swiftlet farmer in Sitiawan explained, even he has been unable to recreate his own initial success in subsequent swiftlet farms that he has established, which has discouraged him from teaching others the trade (Ding, D.H., interview, 2 October, 2013). Similarly, he told me that the most successful swiftlet farm in the town was filled up 'naturally', without requiring much effort on behalf of the farmer, yet the premise could still harvest 400-500 kg of nests per year at the time of research.

As Lim and Cranbrook have stated, 'most nest-farming ventures are undertaken by amateur entrepreneurs lured by the lucrative aspects of this industry. The expectation of instant profit gives a false sense of perception, yet is extremely seductive. This represents the core of all underlying problems associated with swiftlet houses in urban areas' (2002: 149). For this reason, as mentioned above, many swiftlet farmers will opt to buy already established swiftlet farms, because they were safer investments. Mr. Ding, told me that he only purchased swiftlet farms with at least 1000 nests so that he could immediately get a return on his investment. In contrast, other swiftlet farmers who start from scratch often need to wait one year or more and still only get two or three swiftlets (Ding, D.H., interview, 2 October 2013). According to research by the Small Medium Industries (SMI) Association of Penang, it was estimated that, as of 2007, 67% of the swiftlet farming industry consisted of a 'self-build' group of farmers who personally establish their swiftlet farm(s) through their own self-education, but that '92% of respondents in this group experienced failure in harvesting edible birds nests' from their farms' (Merican, 2007: 6).

These high failure rates have recently sparked a vast amount of research on the swiftlet farming business in order to understand how to turn these statistics around. Several universities in Malaysia became involved in conducting research on various aspects of the swiftlet farming industry. The Faculty of Veterinary Medicine at Universiti Putra Malaysia (UPM) was a hub for such research, with several departments that have been involved in studying the

birds. For instance, the Wildlife Research and Conservation Center and the Genetic and Breeding Animal Science Departments have conducted research on swiftlet ecology and breeding behavior; the Departments of Veterinary Clinical Studies and Veterinary Public Health have been involved in testing the birds for various diseases, and their potential to act as disease vectors (see Chapter 7). Additionally, the Nutrition Animal Science Cluster has carried out research on the diet of swiftlets and the feasibility of breeding swiftlets (in captivity). This research was developed in partnership with the JPV and Aeroswift, a company based in Kedah state, which allegedly developed a method for raising swiftlets in an artificial environment (Kaur, 2010b: np). The method involved raising swiftlet chicks in plastic nests, before transferring them to ‘huge’ cages (ibid). The company also bred a type of fruit fly to feed the chicks, and it was argued that the method would help to stabilize the lucrative industry in the future. Some of the swiftlet farmers that I spoke with were in contact with *Universiti Teknologi Malaysia* (UTM) and the JPV about this issue, but were not able to get the method to work on a larger scale (Ding, T.H. interview, 11 November 2013; Pak, interview, 30 September 2013). It was thus suggested that swiftlets were perhaps simply not conducive to being bred in captivity, and could only survive if allowed to live ‘naturally’ in the wild (ibid).

UPM’s research on swiftlets led to a conference on the EBN Industry in 2012, co-organized a conference with JPV and Agrobank which focused on ‘enhancing the industry’s competitiveness and sustainability’ (UPM, 2012). The conference thus invited presentations focusing on the business aspects of the industry, as well as the ecological and animal husbandry aspects of swiftlet farming. As a result of this research activity, UPM was elected as the ‘Center of Excellence on Swiftlets’ in 2011 by the MOA and was committed to the enhancement of the industry and its contribution to Malaysia’s economy (UPM, 2015). The Universiti Teknologi Malaysia (UTM) also offered courses which aimed to educate potential swiftlet farmers on birds’ nests cultivation, processing, regulation, and licensing requirements (see Section 8.2.2). These courses were certified by SME Corp Malaysia, which would hence entitle qualified operators to grants for establishing swiftlet farms (UTM, 2008; 2011).

In addition, there were also hundreds of ‘consultants’ who would offer their services to improve under-performing swift houses, as well as swiftlet farming seminars and workshops to encourage participation in the industry and train potential farmers. Dr. Lim, the author of the aforementioned book, also ran a series of popular seminars on swiftlet farming through to

2011. These initiatives were purportedly launched to enhance the public image of birds' nest farmers, so as to maintain the legitimacy of the industry (Merican, 2007; Nathan, 2003). Another example is Harry Pak, who also runs a successful blog on swiftlet farming (mentioned in the previous chapter), titled, 'Swiftlet Farming: Million Dollars a Year Potential Income' (swiftletfarming.blogspot.co.uk). Pak visits two to three under-performing swiftlet farms per month and blogs about the problems with them, in order to help improve success rates in swiftlet farming around the country. Mr. Ding (D.H) was a former customer of Pak's and said that he helped him to increase the number of nests in his primary swiftlet farm by four-fold in a short period of time.

However, to many of my respondents, swiftlet farming consultants are actually a significant reason for the high failure rate in the industry. As Clement Liang, a PHT council member, told me: 'the whole swiftlet farming business is just based on greed. You get these 'eco-farm consultants' which sounds nice, doesn't it? But it is really just a scam' (interview, 14 November 2014). This comment was echoed in another interview with Lim Chan Koon, the co-author of *Swiftlets of Borneo*, and a swiftlet farmer himself: 'most of them are just businessmen who don't actually know anything about swiftlet farming and are just out to make a quick buck' (interview, 7 November 2013). A recent article published on the swiftlet farming industry made similar conclusions, finding that many consultants in the industry 'are not skilled at designing a swiftlet hotel' (Alias *et al.*, 2013: 3943). In fact, Lim postulated that most people who are really knowledgeable about the industry (like himself) don't help others since it would be against their own interests.⁴⁶ This would seem to fit with one of my contacts in Kepala Batas, who got into the business after attending one of Dr. Lim's seminars. However, he told me that, in retrospect, Lim's seminars 'were not actually that good' (Ding T.H., interview, 11 November 2013). In other words, Ding felt that Lim was not actually giving very good advice, but was rather just doing the seminars to make money. Ding told me that he bought the book as well, but that also did not seem to be very helpful, and was rather just full of superficial information (ibid).

Similarly, it has also been pointed out that many of these problems could be avoided in the first place through the support of swiftlet farmers' associations. Yet, as Mr. Ding, lamented, 'the industry doesn't help people' (Ding D.H., interview, 2 October 2013). Sitiawan

⁴⁶ Lim Chan Koon also has a PhD in swiftlet biology and conservation, from the University of Kent (1999).

has a very active swiftlet farmers' association, but Mr. Ding is not a member, because they do not share information about swiftlet farming with all of the members. As he put it, 'they just take money for membership and go to Indonesia for tour and to learn about birds' nest harvesting. But then they don't even share the info with anyone. Unlike Mr. Harry, who helps people. If it doesn't help, why join? Swiftlet farmers associations do not help people in the way that they should [sic]' (ibid). Indeed, it seems that it is this combination of secrecy and false truths circulating within the industry that has resulted in many of its current problems, as there is a lot of misinformation regarding the proper establishment and management of swiftlet farms.

4.3.3 The Swiftlet 'Eco-Park' Phenomenon

One solution that was developed to address some of the above problems with the Malaysian swiftlet farming industry was the establishment of large swiftlet farming complexes referred to as 'swiftlet eco-parks'. Such eco-parks were built in locations pre-determined to have a large population of swiftlets, and contained a number of smaller units which were sold or leased to prospective farmers. These developments were thought to encourage swiftlet house owners to properly plan and manage their farms in order to improve the quality of nests produced. Moreover, they were also favored by state governments keen to find new ways of regulating the rapidly growing swiftlet farming industry. Moreover, as the eco-parks were situated away from residential areas, the externalities posed to residents would be minimal (see *The Star*, 22 August 2009: M50). Some eco-parks were also advertised to serve a dual purpose as eco-tourism destinations, where visitors would engage in swiftlet watching, house visits, learning more about swiftlet habitat and even feeding swiftlet chicks (Gunaratnam, 2011). As the founder of Eco-Park@Manjung claimed, 'since we construct and custom make swiftlet farms, we are in a position to show them how they are produced' (ibid).

Such developments were quite popular when they first started emerging in the late 2000s, notably Swiftlet Eco-Park@Manjung, launched in 2008, which sold all 36 units within the first year. Most lots had an area of 8x24m, and were priced at RM428,000 (\$120,000); while others were 60% larger for an additional RM250,000 (\$70,000) (Phoon, 2008). These were marketed on the basis that each of the units would be filled with swiftlets within a short time, of say two to three years or even less. In making these claims, developers employed the

rhetoric that the number of nests would grow exponentially over time, as each new bird that the owner attracted would produce two new offspring, which would later nest in the same place they were born. As Mr. Ding (D.H) explained, the operators would broadcast swiftlet calls at the site for a period of time, and film the cluster of birds that would eventually come to investigate. These films would then be shown to potential investors as ‘proof’ of the number of swiftlets nearby that site. Another development, which planned to open in Penang State in 2011, boasted that all investors would earn an average annual return of over 75%, or RM 270,000 (\$100,000) over 35 years, from an RM10,000 (\$35,000) initial investment (*The Star*, 30 May 2011). However, the scheme never went through due to the impact of the Chinese embargo on Malaysian birds’ nests that year. Nonetheless, by 2011, there were a total of 14 swiftlet eco-parks across Peninsular Malaysia.

Ultimately, a majority of Malaysia’s eco-parks sooner or later resulted in failure, as they were never nearly as successful as the developers portrayed them to be. As Mr. Ding lamented in an interview, such developers are ‘con-men’ who sell the lots for up to RM500,000 (\$118,000), ‘then run away and close the company and start a new one under a new name’ (Ding D.H., interview, 2 October 2013; *The Star*, 11 May 2010). As Ding further explained, the developers would use the argument that they never guaranteed that the investors would make a certain amount of money, just that there is the potential for a certain amount of profit over the first year, and increasing after that. Lim Chan Koon similarly remarked that ‘the whole concept of an eco park is illogical’, simply a greedy ‘marketing scheme’ designed to make quick profits’ (interview, 7 November 2013; see also *The Star*, 13 July 2009; 11 May 2010).

Furthermore, there was also an ecological reason that the eco-parks were unsuccessful. In particular, there were concerns about the ecological sustainability of such developments, and whether or not they could actually support such large populations of one species at all. Many of the sites were just set up as a money-making scheme by the developers, and the location chosen was not actually suitable to sustaining large populations of swiftlets. As Lim (2011) has argued, food sources and environmental capacity are the primary limiting factors controlling the growth of the swiftlet farming industry. ‘there is only so much birds’ nests one region can produce [sic]. Nothing can change this fact and law of nature’ (2011: 12; see also Cranbrook, 2010). Such swiftlet ‘eco-park’ schemes thus eventually began to be treated with

skepticism in Malaysia, as one anonymous editorial in *The Star* newspaper commented, ‘it is very unlikely that such huge bird houses of hundreds of units can be filled within a short time. It will take 10 to 20 years or more...due to the slow natural population growth of swiftlets in that particular locality’ (*The Star*, 3 September, 2009). Moreover, as various interviewees explained, it is possible for operators to ‘poach’ (attract) birds from nearby farms, meaning that not all the swiftlets born in a particular farm will necessarily go on to nest there (Ding D.H., interview, 2 October 2013; Duckett-Wilkinson, 2011a). Thus, it is important for potential swiftlet farm investors to conduct their own research and consult various experts prior to investing (see also Alias *et al.*, 2013: 3943).

Nonetheless, the widespread perception that swiftlet farming is ‘easy money’ as discussed above, has been one of the primary factors leading to the industry’s high failure rates and many of the nuisance problems that have emerged. The combination of books, blogs, and media reports emphasizing the rapid and substantial earnings that can be made from swiftlet farming have not equally underscored the difficulty of establishing a successful swiftlet farm. Yet, as I have discussed, swiftlet farming often entails a very low initial return of one to five years, peaking only in the seventh to tenth year (*ibid*), which has led to numerous farmers losing their initial investments.

The following section will now discuss the market crash that devastated the Malaysian swiftlet farming industry in 2011, and the reasons for this. As I discuss, it was the result of an embargo placed on imports of Malaysian birds’ nests into China, which lasted for two years. Though this move was (allegedly) triggered by the actions of errant swiftlet farmers in Malaysia, it demonstrates how the physical landscape form in one place can be dramatically influenced by occurrences elsewhere. Moreover, given the conflicting stories permeating the ‘official’ narrative of events, it emphasizes the usefulness of the ‘phantom epistemologies’ approach introduced in the previous chapter in understanding the various tensions inherent in political-economic issues.

4.4 ‘No Landscape is Local’

Until 2011, Malaysia was the only legal, direct importer of birds’ nests into China (Kaur, 2010b). As a consequence, Malaysian birds’ nest imports amounted to 100 tons in 2010, comprising 83.2% of China’s total imports, worth some RM220 million (US\$52 mil-

lion) (Chow, 2011a; *The Star*, 9 September 2010; Lim, 2011). This situation arose because of long-term restrictions on Indonesian birds' nests, which China had initially implemented due to the prevalence of avian influenza in Indonesia, and a fear that birds' nests could possibly become contaminated (Tariq, 2011; Thorburn, 2014). The tables turned rapidly in July 2011, a controversy emerged regarding the import of fake red 'blood' nests into China, which were reported to have originated in Malaysia. Ordinary white birds' nests can command up to 10,000 RM per kilo (\$2,350) on the Chinese market, while the blood nests can sell for double that price due to their relative rarity and the widely held (but mistaken) belief that the red color comes from the birds' blood (Thorburn, 2015). However, blood nests can only be produced in caves, where the reddish color is caused by nitrifying bacteria present in the strands of saliva making up the nests, which reacts to ammonia vapors from decaying guano on the floor (ibid). As such, real or artificial white nests were said to have been treated with ammonium gas to give them a uniform bright-red color (and thus higher price), and were therefore potentially dangerous to health if consumed (Peng & Tan, 2010).

China discovered these tainted nests during food quality testing, which determined that the nests had a dangerously high nitrite content of 200 ppm (parts per million), and as a result banned imports of birds' nests from Malaysia.⁴⁷ This announcement initially resulted in mass recalls in China, and increased product inspection, resulting in many retailers not selling either red or white nests, and hence leading to a rapid decrease in price. Since China has always been the primary market for Malaysian birds' nests the ban consequently led to a substantial decrease in the domestic price of birds' nests within just six months, from RM 4,400/kg (\$1050) to less than 1,000 (\$240). This resulted in a number of swiftlet farmers leaving the business, because it was difficult for them to make ends meet. Meanwhile, many farmers that had other sources of income built up stockpiles of their nests to sell at another date, as they could last for up to two years in their raw, unprocessed state.

However, since Indonesia is by far the largest producer of birds' nests globally, many Indonesian nests have historically been transshipped to China via Malaysia, Hong Kong or Singapore, in order to meet the remaining demand in China, or smuggled (Thorburn, 2011). This configuration means that many retailers in China are often unaware of the actual origin of the nests that they sell. Rumors thus began circulating that the tainted nests could have ac-

⁴⁷ Nitrite is a toxic substance that may lead to chronic poisoning if consumed (Chow, 2011a: 38)

tually been from Indonesia, or that Malaysia was sabotaged by jealous Indonesian birds' nests traders, or corrupt government officials (Cardosa, interview, 23 September 2013). While not contesting that the ban was caused by birds' nests from Malaysia, Rebecca Duckett-Wilkinson recounted rumors that the tainted nests could have been originally produced in Indonesia and simply repackaged in Malaysia and sold as Malaysian nests (interview, 22 October 2013). According to *The Star Online* (5 September 2011), the JPV director Dr. Abdul Aziz claimed that this must have been the case because 'Malaysia does not produce [red-colored] birds' nests'. Yet, this statement is curious, because, while red nests are not produced in Peninsular Malaysia, they are quite prevalent in Malaysian Borneo, due to the abundance of limestone caves there, which naturally produce the red colored nests.⁴⁸

Due to the high price of birds' nests, and the relative ease of faking them, counterfeit birds' nests are actually nothing new in the edible birds' nest industry. In fact, a 2011 *China Press* article exposed that one-day classes are commonly available in parts of Indonesia and Malaysia which charge only 76RM (\$18) to learn how to produce fake birds' nests (cited in *The Star*, 20 August 2011). Such fake nests are typically made from combining real birds' nests with a type of mucilage (gelatinous substance) that is easily available on the Chinese market for only RM19 (\$4.50) per bottle, which can make up to 100 nests (ibid). Most consumers are unable to differentiate between genuine and fake birds' nests, and on the contrary, it is said that the counterfeits often look more appealing than genuine birds' nests due to their purer colors, and more perfect shape (Sim, 2008). As a result, it was reported in 2008 that a number of traders sell fake red and white birds' nests at A-Grade prices (\$3,000) at various exhibitions and conventions in China, claiming that the nests are from Malaysia (ibid). However, according to a 2011 *China Press* report, many of these nests are actually produced in China, as investigators uncovered an abandoned birds' nests reprocessing factory in Hangzhou, China, where fake nests had been produced (Kong, 2011).

The devastating impact on swiftlet farmers in Malaysia - and indeed the Malaysian economy as a whole - soon resulted in negotiations between the two countries to resolve the dispute. Initially, China asked for a zero nitrite content in the nests before they would lift the

⁴⁸ This was acknowledged by Abdul Aziz in another quote from *The Sun*: 'there may be some colored nests from the caves in Sabah, Sarawak and the Peninsula, but that is natural coloring because they are naturally harvested' (in Azril, 2011). Yet, what the difference is, between 'colored' and 'naturally colored' is unclear.

embargo. However, this sparked criticism from the Malaysia Federation of Birds' Nest Merchant Associations (BNM), which argued that the requirement was 'as good as a ban' (Tan, C., 2011: 24). As they pointed out, 'the World Health Organization (WHO) allows a nitrite level of 30 part per million in food products', indicating that the Chinese ban of zero nitrites was impractical (ibid). Moreover, the BNM pointed out that birds' nests naturally have high nitrite content, and that it was thus 'impossible to meet China's requirement of zero nitrite' (ibid). For instance, Chinese tests on the red nests showed that almost all samples tested contained nitrite levels up to 350 times more than the standards set by the government (Chow, 2011b: 8). Yet, the BMN argued that the nests are not normally dangerous to human health because nests are typically soaked in water before consumption, which dissolves most of the nitrites (*The Star*, 28 October, 2011).

Subsequently, the resulting frustration and increasing desperation on behalf of Malaysian swiftlet farmers resulted in a further deterioration of the situation. In August of 2011, it was reported in the Chinese Malaysian newspaper *Xinhua Daily* that bogus Malaysian officials purportedly representing non-existent government departments held a non-sanctioned press briefing in Hangzhou, China in an attempt to reconcile the Chinese state's concerns over the 'blood nest' issue (Kong, 2011). The three allegedly presented themselves as representing the Malaysia Export Veterinary Inspection Agency and Malaysian Endangered Species Import and Export Administration - neither of which exist (Ng, 2011). Interestingly, some reports initially noted that the two impostors were actually from Indonesia, which further highlights the complex geopolitics embedded in the edible birds nest trade, and contributed to speculation over the original cause of the embargo. However, a report in *The Star* (Chow, 2011b: 8) later revealed that the three were actually representatives of a Penang based company, which, Duckett-Wilkinson asserted, 'must mean that the red blood nests probably came from Malaysia, if not directly from Penang' (Duckett-Wilkinson, 2011b).

Nonetheless, towards the end of 2011, the Chinese food safety authorities and relevant stakeholders in Malaysia negotiated towards an increased nitrite level of 70ppm for processed nests, which eventually opened the door to a small number of approved exporters (*The Sun*, 20 October 2011). The JPV also sent official officers to China to help remedy the situation caused by the impostors, and Malaysia's embattled reputation over the matter. Another requirement imposed by the JPV was a Radio Frequency Identification (RFID) tracking system

to track birds' nest products to the original source of production. This would prevent nests produced outside of Malaysia being labelled as Malaysian products, and could trace nests to authorized producers (*The Star*, 14 Aug 2011). Prior to this, many retailers in China did not know which country their nests were sourced from (Chow, 2011a). However, the RFID requirement was again criticized by Malaysian swiftlet farmers, arguing that such a requirement would add too much to their production cost, particularly given the lower price that they were receiving for the nests following the market crash.

Swiftlet farmers associations thus lobbied for a compromise with China, which led to increased registration of swiftlet farmers and processing companies to protect food quality in birds' nests products. For instance, the Malaysian Ministry of Health (MOH) required producers to register with the Food Premises Registration System, and comply with their Food Hygiene Regulations. This was important as only 3,000 of 50,000 bird's nest producers in the country had been registered with the JPV as of January 2012 (*New Straits Times*, 17 January 2012).⁴⁹ The MOH also introduced the '1 Malaysia Food Safety Scheme' (SK1M), which aimed to assist SMEs (small-medium enterprises) to carry out their own food safety control program (*The Star*, 5 August 2011). These steps were reportedly inline with the government's aspiration to make the domestic swiftlet industry a 'high-impact' industry, and recover from the effects of the fake blood-nest controversy. Furthermore, the MOA announced that all birds' nest exporters needed to have a veterinary health mark and a health certificate from the JPV. However, Carol Loh in 2012 estimated that less than 1% of birds' nest exporters had all of these licenses, due to the financial and bureaucratic difficulties involved in applying and receiving all of them (see Section 8.2.2).

Following continued negotiations and pressure between the Chinese and Malaysian governments, it was announced in mid-2013 that eleven Malaysian companies would be given special approval to export bird's nest to China, following a lengthy approval process (*New Straits Times*, 17 July 2013). This was later reduced to eight companies, which is the current number. These eight companies now effectively have an oligopoly on the industry in Malaysia, as they are the only legal exporters to China, and can control the price they get from producers. Therefore, BNM President, Beh Heng Song, argued that this restriction was not fair,

⁴⁹ Though registration was a formal requirement for swiftlet farmers, many did not comply, and the regulations were not enforced, as will be discussed in Chapter 8.

as ‘the market should be open to all and anyone who complies with the regulations’ (in See, 2011). Though this demand was not met, the regulations imposed by China only affect the processing and cleaning facilities of the companies - and not the actual source of the nests - so companies are free to purchase the nests from other smaller-scale producers.

Yet, as suggested above, this official narrative of events, as reported in the mainstream media, is not the only story accounting for the Chinese embargo on Malaysian birds’ nests. Given the limited extent of stakeholder participation in the negotiations between the Chinese and Malaysian states on this issue, popular stories, gossip and rumor have assumed a significant role in articulating and criticizing the rationale behind this decision. For instance, Elizabeth Cardoso elaborated on a possible alternative reason for the ban which was not reported in the mainstream press: simply that ‘Indonesia was jealous’ (interview, 28 September 2013). As she recounted, back in 2005, Malaysia was known to have the highest quality nests due to the fact that most companies cleaned and processed them prior to sale. Moreover, as mentioned above, there were concerns about impurities, and even bird flu, being found in the nests imported from Indonesia. In fact, as Craig Thorburn, a researcher at Monash University, put it, ‘most of the tainted nests come from Indonesia. Indonesia is far less trustworthy than Malaysia, as a rule’ (personal communication, 2 February 2015). According to this account of events, an influential group of Indonesian businessmen started to spread the rumor that Malaysian nests had high levels of nitrites, and these rumors worked their way to China, thereby causing the implementation of the ban. However, Cardoso added that there must be some truth to the claims about the tainted Malaysian nests, because ‘the Chinese are not stupid - foolish maybe, but not stupid!’ (interview, 28 September 2013).

These competing and contradictory accounts thus underscore the usefulness of the ‘phantom epistemologies’ approach adopted in this dissertation, which allows for an examination of the realities and elusiveness that are often inherent in globalized commodity chains. The series of events described here, and the various representations of them have been mobilized to highlight the rather contingent nature of commodity markets, produced through ‘frictions’, or ‘zones of awkward engagement’, that Anna Tsing uses as a metaphor to refer to the diverse and conflicting social interactions that constitute the contemporary world (Tsing, 2005). In particular, this section demonstrates that the embargo was the primary reason for the collapse of the Malaysian swiftlet farming industry, despite the numerous problems that the industry

faced, as discussed in the foregoing section. Given the resultant landscapes of abandoned swiftlet farms throughout the country, this transformation supports Don Mitchell's argument, discussed in Chapter 2, that 'no landscape is local'. In other words, it illustrates how the physical form and function of a landscape is intricately tied to and dependent upon places elsewhere.

4.6 Conclusion

Significant landscape transformations, such as those witnessed through the emergence and subsequent decline of swiftlet farming in Malaysian cities, is highly related to the pattern of cyclical (dis)investment visible within the cityscapes of advanced capitalism (Harvey, 1996; Loftus, 2006). As Neil Smith's (1984) insights from his work on the 'production of nature' (discussed in Chapter 2) make clear, the dynamics of the accumulation process are also embodied within, and constitutive of, our socio-natural environment. This was seen in how the drive to escape the 'exigencies of nature' constraining the supply of EBNs in Malaysia transformed urban landscapes throughout the country through the development of the swiftlet farming industry (see Section 2.2; Boyd *et al.*, 2001). On the other hand, the contradictions of capital accumulation in relation to the urban landscape were also seen in the sudden crash of the price for birds' nests, which brought about landscapes of (largely) abandoned swiftlet farms throughout the country. Yet, whilst a Marxist reading of the capitalist reordering of space via urban swiftlet farms is undoubtedly one way of viewing the swiftlet farming boom in Malaysian cities, swiftlet farms cannot be fully understood merely as a function of capital accumulation.

Rather, it becomes useful to conceptualize the rise and fall of the Malaysian swiftlet farming industry in terms of the metabolic processes and circulatory mechanisms discussed by Swyngedouw and other urban political ecologists discussed in Chapter 2. First, there are the ecological considerations discussed earlier in the chapter, which are strongly connected to the economic aspects, thereby valorizing the use of the political ecology approach. Secondly, paying attention to the particular socio-ecological orders enacted through urban swiftlet farming not only allows for an exegesis of the *externalities* created by the rearing of birds in cities, but is also about the specific relations between the human and non-human worlds, which is a topic that I will now turn to in the following chapters (see also Prudham, 2015; Collard, 2015).

Furthermore, this chapter has demonstrated the usefulness of the LPE framework, in demonstrating how particular socio-economic and ecological discourses are always embedded in political-ecological struggles (Benjaminsen *et al.*, 2015; Kaika, 2006; Swyngedouw, 2015; Walker & Fortmann, 2003). As we have seen, (mis)understandings of swiftlet ecology and breeding patterns were a central reason for the high failure rates accompanying the industry,

and subsequent loss of investments on behalf of swiftlet farmers. In addition, the chapter demonstrated the discursive strategies that were used on behalf of industry stakeholders in contesting regulations imposed by the Malaysian and Chinese governments to regulate the industry. This was seen in both the attempts of swiftlet farmers to remove swiftlets from Malaysia's protected species list, which emphasized the inherent 'sustainability' of swiftlet farms; but also in the rumors and competing accounts regarding the origin of the tainted 'blood nests' that were shipped to China, and the reasons for the subsequent embargo on Malaysian birds nest imports to the country. Finally, as mentioned earlier, the chapter demonstrates how the physical form of landscapes are highly connected to places elsewhere, supporting Don Mitchell's assertion that 'no landscape is local' (Mitchell, 2007; 2008).

Chapter 5 - ‘Not in Towns Please!’: Liminal Landscapes of Urban Swiftlet Farming

5.1. Introduction

Although cities have long been hybrid spaces of human, animal and insect inhabitation, attempts are frequently made to expel the 'other' and particularly 'nonhuman' from 'civilized' urban spaces (Bingham & Hinchliffe 2008; Gaynor, 1999; Philo, 1995). In this chapter, I aim to explore how efforts to domesticate swiftlets in Malaysian cities has intruded upon ideas about the ‘proper’ place of animals in such areas (see also Philo, 1995). In doing so, I follow Jennifer Wolch and Chris Philo’s work in tracing ‘how and why attitudes and practices toward animals and patterns of urban human-animal interactions change over time and space’ (Wolch 2002, 735). This involves tracing the conflicts between animals and humans in the city by studying the particular discourses that circulate in a given community, from rhetorics of health and disease (see Chapter 7) to moral discourses, which are either hostile or supportive of animal presence in the city.

For instance, Brown’s study on the spatial control of dogs attends to how animals fit into ‘discursive and non-discursive spaces of the world’ (2015: 41). She argues that discourses used to delimit the mobility of dogs are very much based on humans’ expectations surrounding animals: how they should behave, where they should be, and how they should be used. Likewise, Wolch concludes that ‘the ability of animals to co-exist in the city is strongly shaped by powerful discourses around ecological science, environmentalism ... and urban property rights’ (2002, 735). By exploring such discourses, it is thus possible to draw out the spatial and political implications regarding how animals can be figured into conflicts over the use of urban space (see Brown, 2015).

In another example, Proctor’s (1998) study of spotted owls in the Pacific Northwest found that the birds were part of an ongoing debate regarding the region’s moral landscape, and ‘appropriate’ use of the old-growth forest landscape. Similar to the debates over swiftlet farming in George Town, environmentalists in the Pacific Northwest argued that old growth forests and wildlife predated and existed apart from people, and thus people had a moral obligation not to destroy them. On the other hand, pro-timber advocates in the region saw logging as a productive way of managing and sustaining the forest, while also providing employment

and the generation of income. Spotted owls, like swiftlets, were then caught between these two competing ideologies. The outcome of this case thus depended as much on the ideological production and consumption of moral landscapes as by the biology of the spotted owl and its habitat.

Similarly, Thomson's (2010) study of flying foxes at Melbourne's Botanic Gardens shows how authorities there deployed a series of accounts that portrayed the bodily characteristics of bats as simultaneously threatening human bodies and spaces, which ultimately led to forced relocation of the bats. Such studies attend to the placing of animals in particular spaces in both a material and discursive sense. For instance, the city is traditionally seen as a site for companion animals or pets such as dogs and cats; agricultural and industrial zones are seen as pertaining to livestock or productive animals; while uninhabited or 'natural' spaces are seen as the site of wild animals such as cougars and wolves (see Brown, 2015; Philo & Wilbert, 2000; Wong, 2015). These spatial orderings and categorizations of different animals often mobilize particular geographical imaginaries, which can be heavily contested due to the process of othering inherent in them. Moreover, Brown (2015: 42) argues that the spatial bounding of particular animals is also bound up with the ideological production of particular spaces, such as 'natural', 'wild', 'urban' or 'rural' (c.f. Kaika, 2005; 2006).

Building on such studies, Jennifer Wolch (and others) have argued for a 'trans-species urban theory' which can make sense not only of cities as spaces of political-economic power and cultural difference, but also as places characterized by diverse collectives of humans and animals (Wolch *et al.*, 2003). Wolch argues that within the trans-species urban context, markedly different attitudes towards animals are expressed and shaped in the form of human-animal relations which are played out within the city, and which contain significant consequences for both people and animals. Such an approach makes sense within an era of rapid urbanization which has triggered conflicts between animals and humans, due to a decreasing separation between traditionally human and animal territories. The harvesting of birds' nests in cities is thus viewed as a process of fusing together the social and the physical to produce a distinct and geographically specific form of 'hybrid' or 'cyborg' urbanization (Haraway, 1991; Whatmore 2005).

As Brown (2015) writes, it is increasingly clear that understanding such spatial and temporal configurations between animals and humans require foregrounding the complex

ways in which animals and humans become intertwined and are constituted in particular landscapes and environments. Anna Tsing suggests that one way to write a more nuanced account of interactions between human and nonhuman species is to take the landscape as an object of analysis (Tsing, 2005). However, rather than merely looking at the aesthetic or material arrangements of the physical landscape, Tsing also advocates investigating the sociocultural and non-human interventions involved in making a landscape how it is (see also Boland, 2008; Cosgrove, 1998; Lippard, 1997; Matless, 1998; Mitchell, 1996). In other words, considering the material and representational practices of making and maintaining the landscape, as discussed earlier in the thesis. This explains the LPE approach that I am using (see Chapter 2), which focuses more on the role of discourse in (re)shaping urban environments (see also Robbins, 2004: 108; Notzke, 2013). I argue that this line of inquiry can be aided by taking up Wolch's (2002: 735) provocation for more sophisticated urban political ecology approaches, which can study the 'powerful discourses' and 'political economic forces' influencing human-animal relations in the city. This framework is apt for exploring how ideologies surrounding urban animals are strongly shaped by particular discourses pertaining to ecological and avian science, environmental sustainability, and urban property rights, among others. In addition, I draw on work within the animal geographies literature which have highlighted the ways through which animals become bound up in debates over competing social and place-based identities, and associated power relations within the city (Neo, 2011; Proctor, 1998).

As I will demonstrate in this chapter, the spatial categorization of certain animals is intricately tied to the ideological construction of the landscape in particular places (see also Brown, 2015; Matless *et al.*, 2005). Moreover, these discourses are invoked differently by competing social groups, to define and challenge the 'urban(e) limits' of a given society (Bunnell, 2002). Urban(e) limits make it clear when certain practices transgress their predefined spatiotemporal containers, and thus incurring hostility from some members of society (Cresswell, 1996; Matless, 1997). Such imaginative divides have meant that animals are now often subjected to place-based forms of control that marginalized beings (including people) in the city often face. As Philo & Wilbert (2000), have pointed out, animals 'have their place' and are often placed on a gradient between inclusion and exclusion. Philo and Wilbert make reference here to anthropologist Mary Douglas' (1970) work *Purity and Danger*, and her concept 'matter out of place'. Though making reference largely to waste, Douglas' work contains

hints as to how animate beings might also become positioned within discursive frameworks such as profane, pure or polluting. Moreover, Douglas notes that invocations of purity are often attempts to create and sustain boundaries between two entities which are perceived to be separate, such as nature-culture, or humans-animals. Philo and Wilbert cite humanistic geographer Yi-Fu Tuan as one of the first scholars to apply such terms to animals, which were previously more commonly employed in studies of marginalized or ‘outsider’ social (human) groups (e.g. Sibley, 1981; 1988). Indeed, Tuan’s (1984) book *Dominance and Affection* posited animals as a ‘social’ group engaged in various struggles with humans. As Philo and Wilbert have recognized, such work has the potential to conceptualize how animals become discursively categorized and subsequently subjected to certain socio-spatial ‘dividing’ practices of inclusion or exclusion (Matless 1997; Cresswell 1996). Thus, a key question to ask is *how* certain animals are deemed appropriate or acceptable for urban life, while others are not. This is an important question because it also has social and economic implications for how humans live and work with different animals.

In this way, geographers have considered the role of animals in shaping the moral landscapes of particular places and regions, while also examining how animals can be politicized to achieve particular ends (e.g. Brown, 2015; Hinchliffe *et al.*, 2005; Neo, 2011; Notzke, 2013; Proctor, 1998; Thompson, 2010). As discussed in Section 2.3, the concept of the moral landscape concerns the ways in which certain moral boundaries are naturalized in, and through, landscapes, in the interplay of their material and representational forms and related significations (Setten & Brown, 2009: 191). The importance of the moral landscape is that it can lead to intense struggles over *whose* moral landscape will ultimately prevail, which in turn has significant consequences for how particular spaces are used (see Brown, 2015; Matless, 1997; Proctor, 1998).

In the following section, I will review the history of keeping productive animals in cities, and how mainstream attitudes towards these practices changed over the years in the modernist drive to separate cities from ‘nature’. I will also discuss the unique form of domestication used to rear swiftlets in cities, how it has developed over time, and how this differs from other forms of animal-based farming in cities. The rationale here is to historicize and contextualize attitudes towards urban swiftlet farming, given historic attitudes to the keeping of productive animals in urban areas. This sets up Section 5.3, which is a more empirical discussion

of how swiftlets and swiftlet farms have been perceived to be (in)compatible with life in Malaysian cities. It builds on the previous section in considering how various stakeholders have sought to compare swiftlet farms to other forms of farming, while also considering how others have sought to position swiftlets as ‘natural’ features of the urban environment. The final section concludes that the presence of swiftlets themselves in cities is a more or less ‘natural’ occurrence, but that efforts by swiftlet farmers to manipulate the house-seeking tendency of these birds has resulted in an ‘unnatural’ phenomena that has created implications for alternative uses of urban space and general social and ecological well-being in cities.

5.2. ‘Swiftlets Flock to Inner City’: A (Brief) History of Animals in the City⁵⁰

Bill Cronon (1991) and Raymond Williams (1973) have argued that spatial divides between humans and non-humans have resulted from the historical partitioning of the urban from the rural in Western societies. Such divides have involved the association over time of certain human activities with either rural or urban spaces (i.e. the civilized city vs. the agrarian countryside). What is going on here, is a somewhat complex imaginative geography of animals - which essentially maps different forms of animals onto a gradient of distance from cities, thus implying that some species should be proximate to cities, while others should be more remote. The concept of ‘imaginative geographies’ of course refers back to the work of Said (1978), who coined the term to suggest that many human discourses contain within them normative judgments serving to position ‘them’ versus ‘us’. Attention to imaginative geographies thus enables the linking of conceptual and geographical forms of othering, i.e. character traits and geographical placement, respectively. However, Philo and Wilbert (2000) take this concept further to suggest that there are at least three different types of imaginative geographies at work, depending on the place, human and non-human actors under consideration.

Scholars such as Elder *et al.* (1998); Notzke (2013); Philo (1995); Philo and Wilbert (2000) have pointed to the contextually specific ways in which animals have been categorized, raised and organized over time, and how this has had distinct spatial implications for them. While swiftlets and many productive animals are now seen as out of place in the city, this has not always been the case. In fact, Gathorne Cranbrook, an established expert on swiftlet ecology has argued that the contemporary urban farming of swiftlets is actually only the

⁵⁰ Title adapted from *The Star*, 20 April 2007.

most recent sequence in the ongoing history of the ‘domestication’ of these birds (Cranbrook, correspondence, 18 January 2010). As he pointed out, the first house colonies in Malaysia became known in Johor (the southernmost state of Peninsular Malaysia) in 1947, but the original colonization of the buildings must have happened much earlier, given the well-established nature of the colonies at that point. Furthermore, he noted that the same pattern of domestication already existed in the 1930s and even earlier in Java, before spreading to Taiping and Kuala Lumpur in the early 1950s (*ibid*). Thus, swiftlets were already a ‘natural’ part of Southeast Asian cities, significantly pre-dating the history of the swiftlet farming industry.⁵¹

Karl Marx (1976) was one of the first writers to recognize the ways in which the breeding methods for both plants and animals were being transformed by farmers in order to enhance the means of production. However, early cultural geographer, Carl Sauer, was skeptical of seeing animal-human relations, particularly the domestication of animals, in primarily economic terms. Rather, he argued that the first stage of domestication would have involved human-animal interactions that were not inspired by economic incentives (Sauer, 1963). This view is supported by Donkin (1989: ix), who later argued that ‘an originally economic motive is improbable...[as] economic benefits would have only become apparent after domestication had been achieved’. Indeed, the origins of the swiftlet farming industry also justify these claims, given that swiftlets initially started occupying vacant buildings or built structures without human encouragement. In these cases, derelict buildings come to mimic natural features - such as caves or cliffs - for urban swiftlets and other urban birds (see Gandy, 2013).⁵²

The Sauerian animal geography has arguably been fundamental to the current state of animal geographies due to its insistence on seeing human-animal relations as not necessarily reducible to mere economic factors. This work thus emphasized more cultural factors in influencing the shaping of various ‘contact points’ between humans and other animals (Haraway, 2008). For instance, certain species of birds have long shown their ability to thrive in urban habitats, but few such commensal relationships have evolved to the same scale as contemporary urban swiftlet farming (Thorburn, 2014). Unlike most cases of domestication, the domes-

⁵¹ The importance of this fact will be made clear in the following chapter, concerning the role of swiftlets as a form of ‘natural’ heritage, which has been used to legitimize their presence in the World Heritage Sites of George Town and Malacca.

⁵² The swiftlet occupation of abandoned World War II bunkers on Singapore’s Sentosa Island is an enduring example of this.

tication of swiftlets has been the result of a convergence of avian and human behaviors. Cranbrook (2010) has stressed that this initial phase of house-colonization happened spontaneously, and did not involve any human activity in attracting the birds, nor were there any movements to remove them. However, the human provisioning of increasing numbers of buildings for swiftlets to nest in, and efforts to attract the birds into them, has encouraged this behavior.

As Duckett-Wilkinson has written, birds are very instinctual animals, and chicks will be imprinted with the circumstances of the nest in which it has been reared, in turn seeking that sort of place to build its own nests later on (Duckett-Wilkinson, 2011b). The consequences of this, she notes, has been that ‘there is now a large (and growing) population of swiftlets behaviorally entrained to seek houses as nesting sites’, and that this behavior cannot be easily ‘regulated’ (ibid: np). As will be discussed in chapter 8, clearing swiftlet farms out of urban areas requires a considerable amount of time and effort because the birds will continue attempting to return to the buildings even after the entrances have been closed up - often for up to several weeks. For such reasons, the cultural animal geographies literature has introduced a consideration of the agency of animals, for instance, by noting their powers of resistance exhibited through acts of (e.g.) running away from human domestication.⁵³

Most significantly for my research, the Sauerian legacy in cultural animal geography can offer some useful insights regarding how the agency of animals can affect their perceived appropriateness for urban residential areas. For instance, some have argued that the house-seeking of behavior of swiftlets on its own would be acceptable, but the human role in enhancing the attractiveness of such buildings is what has created the problem at hand. In fact, some informants agreed that a majority of people in cities simply do not notice the birds (Cardosa, interview, 8 October 2013; Ding D.H., interview, 2 October 2013). As Elizabeth Cardosa of BWM explained, swiftlets have been in towns for a long time, so they have become a ‘natural’ part of the urban environment, and ‘they are fairly discreet animals, you will not notice them, unlike other animals which have a more obvious or threatening presence in cities, like pigeons or crows, for instance - which are more ‘threatening’. But swifts are quite small, so they don’t necessarily have a large impact on their own’ (interview, 8 October, 2013).

⁵³ Notable in this regard was the work of Bergmann (1983), who stressed the deeply cultural linkages between humans and animals displayed through marginal forms of co-habitation and co-existence.

This perceived ‘naturalness’ of swiftlets contrasts with Yeo and Neo’s (2010) study of conflicts between humans and long-tailed macaques in Singapore’s Bukit Timah Nature Reserve. In this case, macaques were perceived as threatening by residents living near the park, due to the ‘aggressive behavior’ of the monkeys, such as entering homes and stealing food (Yeo & Neo, 2010: 691). Critically, Yeo and Neo assert that humans must also be held responsible for causing ‘abnormal aggression’ in macaques, through practices such as feeding. Similarly, in the case of urban swiftlet farming, Cardosa has argued that the problem arises precisely because of the way in which the birds have been actively encouraged to breed in cities through urban swiftlet farming. To put things in context, she gave the example of bats that have taken up residence outside of her office in central Kuala Lumpur: ‘we don’t mind them staying there, and every few days we go out and clean up their droppings, but this is different than actively encouraging them to stay there and collecting their droppings for sale as fertilizer’ (ibid).

The more recent backlash against the farming of swiftlets in cities seems to echo movements against the rearing of productive animals from the city in the late 19th century, due to negative externalities posed by them, such as ‘odors, flies and unseemly sites associated with animal husbandry’ (Fielding, in Philo, 1995: 666). In these cases, animals became matter-out-of-place in the city, particularly because of their domestication and exploitation for human use. Such movements came about at a time of concern over sanitary and environmental cleansing, which resulted in the relocation of meat markets and slaughter-houses to rural areas (Cronon, 1991; Philo, 1995; see also Gandy, 2002; Thompson, 1979).

As Kaika (2006) has demonstrated, these sanitation projects were bound up with the quest to tame and control nature, which were central to the production, metabolism and expansion of modern cities. For instance, Cronon’s book, *Nature’s Metropolis*, sought to explicate the roles of animals in the production of space in 19th century Chicago (Cronon, 1991). It tells the story of how Chicago became an immaculate control center for the trade and distribution in fresh meat (mostly beef, bison and pork). At first, the system of slaughtering live animals in the city was widely celebrated for its efficiency and effectiveness, despite its negative externalities. However, once the strategic and geographical advantages of slaughtering and trading meat in the city were eventually diminished by the mid 20th century, Chicago’s packinghouses began to shut down and relocate elsewhere. Relatedly, Philo’s (1995) chapter on the

slaughtering and sale of livestock in late 19th century London also discusses the urban meat markets of the past, but tells a different story about their eventual displacement. Philo focuses on the more discursive elements that played a role in the eventual exclusion of livestock from the urban landscape, by demonstrating how animals began to be seen as ‘out of place’ in the city, through their stigmatization as being ‘wild’, ‘immoral’, or ‘unhygienic’ (see also Wong, 2015).

In a similar fashion, Gaynor’s (1999) article on productive animal keeping in Perth reviewed attempts by the municipal government to exclude chickens, goats and pigs, which were once commonly kept in backyards, not only in Perth, but throughout many of the world’s cities. She concurred that this was done in line with modernist attempts to sanitize the city, and - much like attempts to remove swiftlet farming in Malaysian cities - also created much controversy. For instance, a report by the Malaysian Association of Swiftlet House Owners attempted to embed the industry in Malaysia’s cultural history by relating swiftlet farming to ‘village’ (*kampung*) folk who have traditionally kept chickens in their back yard for personal consumption (Lim, 2008: 12). As Duckett-Wilkinson noted, this also ‘tried to present an idyllic picture’ of the industry, in their attempt to permit the continued presence of swiftlet farms in urban areas (Duckett-Wilkinson, correspondence, nd). Similarly, Gaynor found that working and middle-class householders in the city saw the keeping of productive animals in residential spaces as entirely legitimate, which conflicted with public assertions of negative externalities related to perceived health and nuisance aspects. However, Gaynor’s conclusions were somewhat different than mine in this thesis, in that she found that the exclusion of productive animals in the city constituted an ideological attack on working-class practices, while privileging other forms of animal domestication - such as the keeping of pets - which were common in more affluent households.

More recently, Van Patter’s (2015) study of human responses to feral cats in Southern Ontario, Canada explored the position of feral cats in relation to human ideas about the proper order of urban spaces and places. Here, feral cats are seen as a marginalized group existing on the peripheries of human society, and cross socially constructed boundaries between domestic and wild. While some residents viewed urban spaces associated with feral cats as sites of anxiety or aversion, others saw them as sanctuaries for an otherwise displaced ‘wild nature’ (see also Wolch *et al.*, 2003). Yet, they were still often seen as an artificial wild animal in that

they are seen as ‘unnatural’ and hence corrupting of ‘authentic nature’. Van Patter therefore argues that because there is no place for them in the natural or urban environments, they are often labeled ‘out of place’ and removed (put down). However, similarly to the swiftlet farming case, what to do about feral cat colonies generated considerable controversy between protectors of feral cats and those, particularly municipal officers, arguing for their removal.

Recognizing the recent encroachment of non-domesticated animals into the city, Gandy (2013) has recently suggested that cities are increasingly spaces of *ecological cosmopolitanism*, where an array of non-human life spontaneously inhabit the marginal spaces in and around towns and cities where humans live and work. Yeo and Neo (2010) similarly refer to such spaces as ‘borderlands’, or hybrid spaces of co-habitation between humans and animals. As Philo and Wilbert (2000) further point out, these are often spaces that humans avoid, because they are not aesthetically pleasing, and thus ‘hard on the eyes’, or are otherwise inaccessible. They can be either the biodiversity rich urban ‘wastelands’ discussed by Gandy (2013), or the exterior of large buildings, both of which are more or less distanced from the hustle and bustle of city life. Yet, as Philo and Wilbert (2000) argue, these spaces can still be close enough to homes, businesses and streets to bring about distaste, anger, fear and other concerns from the humans occupying them, thus incurring the label of ‘out of place’.

These are questions that will be explored in the next section. As I will demonstrate, the investigation of the unique form of domestication involved in the rapidly evolving swiftlet farming industry can provide new insights into the long and constantly changing relationship between humans and other animals which has been briefly recounted here. Since swiftlets are free-flying and forage food on their own, structural borders in place around swiftlet farms (such as fences, walls and gates) are highly porous, which has led to the controversy at hand. As Yeo and Neo (2010) have pointed out, choosing to live in such borderlands requires humans to adjust their living practices, or adapt to the presence of animals in order to prevent conflicts. Yet, in this case, many residents critical of swiftlet farms moved into their places of residence prior to the rise of swiftlet farms, thus arguing that they should not have to ‘adapt’ or modify their livelihoods. Therefore, the need to alter their homemaking practices, through keeping windows closed at all times, putting up window nettings, or covering open court yards has created some disdain towards swiftlet farms - particularly those operating illegally.

5.3 ‘A Place For Everything’: Contested Interpretations of Urban Swiftlets⁵⁴

The studies of human-animal interactions in the city, reviewed in the previous section suggests how to account for the variety of ways in which animals may be viewed unequally, both within the same site, and in different areas within a region. For instance, disparate stakeholders in Malaysia have attached considerably divergent meanings to swiftlets, and accordingly, swiftlets and swiftlet farms have been politicized by both the opponents and proponents of the industry in different ways. In the remainder of this chapter, I will consider what kind of landscape aesthetics are invoked when animals do not occupy such spaces spontaneously, but are rather actively encouraged to do so. Like the urban animals discussed in the preceding sections, swiftlets and especially swiftlet farms, are in some cases seen to be a threat to human morality. Yet, as I suggested, it is not merely the swiftlets themselves that people take issue with, but also the farmers attracting them to roost there. As one news article put it, ‘actually, the problem is not with the birds but with the people who convert buildings in urban areas into swiftlet ‘farms’ to harvest the nests’ (Henry, 2005: 4).

Table 5.1 shows the various terms and phrases used by residents to describe swiftlets, swiftlet farms, and their associated qualities. While most of the terms are unambiguous in their meanings and intent (in terms of whether they apply to swiftlets, swiftlet farms, or farmers), a few of the terms can be seen as one or the other, or both (i.e. noisy and an eyesore). In such cases, I have interpreted the context and tone of the article or interview to determine the way in which the description was meant. As can be seen, a majority of comments related to swiftlet farms, and the actions of swiftlet farmers, rather than swiftlets themselves, and most were negative, rather than positive or neutral.

These comments suggest some answers to the question of *why*, and in what ways, swiftlets and swiftlet farm(er)s are deemed to be incompatible with urban life, and the associated implications for them. Yet, this question contains an inherent geographical dimension, which also necessitates considering where swiftlet farms are seen to fit in society (urban, peri-urban or rural areas), and how and why they have transgressed the spatial orderings imposed on them. Swiftlets constitute an interesting case because they seem to be tolerable in urban areas (often unnoticed), yet not fully accepted, which contrasts to other animals such as chickens or pigs which, as Cardoso notes, would almost certainly invoke stronger reactions from urban

⁵⁴ Quote from Kanda Kumar (in PLGCF, 2010: 14)

Table 5.1: Terms and phrases used by stakeholders to describe urban swiftlet farms.	
Swiftlet farms/industry	Swiftlets
<p>Negative</p> <ul style="list-style-type: none"> - attract insects and infestations - emit foul smells - a health hazard - a threat to heritage buildings - affect living heritage - noisy and an eyesore - caused loss of sleep - worsened blood pressure - great social costs - left neighbors restless and frustrated - ‘make it a challenge for people to live’ - cruel <p>Positive</p> <ul style="list-style-type: none"> - a godsend - providing a lucrative trade to the country 	<p>Negative</p> <ul style="list-style-type: none"> -A living hell -‘leave their dung all over the place’ <p>Positive/neutral</p> <ul style="list-style-type: none"> -non-threatening -do not cause bird flu -Highly intelligent animals -Part of the ‘natural’ and ‘living heritage’ of Penang

residents. Indeed, as seen above, in examining how swiftlet farming has been criticized in popular discourse, most respondents took objection with swiftlet farmers, rather than the birds themselves. This is for reasons including: the use of sound systems playing artificial bird chirping (‘tweeters’); illegal modifications made to their shophouses which can cause negative externalities to neighbors; or the endangerment of the urban environment and public health through inappropriate swiftlet farming practices (see Chapters 6 and 7).

Such objections to swiftlets in George Town were not only made on a normative basis, but also appealed to legal frameworks in place to regulate the location of particular economic activities. Many stakeholders compared swiftlet farming to chicken farming and other forms of livestock rearing in contesting its appropriateness for the city. As one writer lamented, ‘it’s the same as wanting to operate a chicken farm next to your house or office. You will not get a license from the local authority for the farm’ (Henry, 2005: 4). This sentiment was echoed by a Penang resident who complained that ‘the breeding of poultry, cattle and other animals is strictly regulated and disallowed in town areas, so should it be any different for swiftlets?’ (Tan, 2009: 22). This comment reflects the widely held view of critics of the Malaysian swiftlet farming industry, including some municipal councillors, that regulations on the farming of

animals in the city should be consistent between different animals (PLGCF, 2010: 13-14). Furthermore, Duckett-Wilkinson, in a letter to the Malaysian Prime Minister Najib argued that the difference between the two ultimately lies in a problem of scale. As she stated, 290 chicken farms would not be tolerated anywhere in urban areas and neither should swiftlet farms. She thus suggested doing away with guidelines for swiftlet farming in urban areas all together, maintaining that ‘no one would agree to have guidelines about chicken farming in urban and residential areas and yet it is being considered for swiftlets’ (Duckett-Wilkinson, correspondence, undated).⁵⁵

In comparing swiftlet farming to other forms of farming, these comments also bring to light important nuances between the differences in farming practices for various animals. As noted in the introductory chapter, the proper term for what is popularly known as ‘swiftlet farming’ has been debated between various stakeholders who argue that it does not accurately describe the industry. Rather, many practitioners have argued that the industry would more accurately be considered as ‘ranching’, given that the birds are not fully domesticated, and are thus free to come and go as they please. Swiftlet aviculture can thus be seen not only to embody certain attributes of beekeeping (i.e. special structures for colonization by essentially wild populations of bees) but also the cattle feedlots described in the foregoing section (i.e. the noxious and unsanitary animal facilities in or near urban centers). The implications of this categorization are important because if swiftlet farming is considered farming, then it would not be allowed in the city, according to city zoning laws, as mentioned above. But if it is considered ranching, on the other hand, then it constitutes a different issue because operators are not keeping the birds confined on the premise as with other forms of livestock rearing. Therefore, some breeders have argued that swiftlet farming is, in fact, a ‘natural’ process, due to the agency of the birds in ‘choosing’ to construct their nests in these buildings.

Such claims about the supposed ‘naturalness’ of urban swiftlet farming echo the representation of the industry as part of George Town’s ‘natural heritage’, which will be discussed in Chapter 6. In attempting to naturalize the industry in this way, one advocate from Klang, southwest of Kuala Lumpur, posed that ‘if the swiftlet stays, it means as far as the swiftlet is concerned, it is its natural habitat’ (in *The Star*, 7 May 2010: np). Indeed, there is some his-

⁵⁵ See Chapter 8 for an in-depth discussion of the legislation developed to control the swiftlet farming industry, and the challenges that arose in enforcing them.

torical evidence demonstrating an inherent ‘house seeking behavior’ of swiftlets, as discussed in the previous section. As Duckett-Wilkinson recounted, ‘I do remember the swiftlets coming up under the roof awnings, against and behind signboards, into old houses, etc.’ (correspondence, 19 January 2010). This rationale was used by swiftlet farmers to justify the presence of their farms, and to resist both popular and state-led movements to evict them from urban areas. As such, Carol Loh was quoted in a 2010 newspaper article as asking ‘where the hundreds of swiftlets would go if their *natural* habitat was to be destroyed’ (in Kaur, 2010a: np, emphasis added).

In an attempt to gain scientific backing for these claims, the bird-nest farming community in Penang (including ASNI) attempted to utilize research by Cranbrook investigating whether or not ‘house swiftlets’ are in fact a new genetic sub-species of swiftlets. At the time, the research produced only anecdotal findings, such as the observation that ‘there are no instances anywhere in Peninsular Malaysia, of white-nest swiftlets colonizing caves’ (Cranbrook, 2010). However, a recent paper found that house farm birds of Sarawak (Malaysian Borneo) resembled neither of the wild species occurring naturally in the state, and had distinct genetic material (Cranbrook et al, 2013). More research is needed for these findings to be conclusive, but swiftlet farming associations could use this research to legitimize and indeed ‘naturalize’ urban swiftlet farming in Malaysian cities, and thus alter the legal situation of swiftlet farming in cities where it is currently banned. .

Nonetheless, the implications of this research has been a topic of debate, as some stakeholders have argued that the breeders actually manipulate swiftlets to construct their nests in swiftlet farms through forms of ‘sonic attraction’ and other measures discussed in the previous chapter. As Duckett-Wilkinson put it, the ‘house seeking’ tendency of swiftlets ‘has been aggressively stimulated by the use of constantly running CD’s which attract the birds in large numbers into the artificial caves/swift farms’. Therefore, such respondents would argue that the house seeking behavior of swiftlets is actually a result of the indiscriminate proliferation of swiftlet farms, conditioning the birds to be reliant upon built structures for their survival. In addition, the location of swiftlet farms in areas where there are no ‘natural’ spaces for habitation (such as caves) makes it impossible to relocate to such spaces in the future.

In addition to arguing that cities are the ‘natural’ home of swiftlets, the rhetoric used by swiftlet farming lobbyists also played on the agency of the birds in justifying their claim to

urban space, by arguing that the birds are ‘impossible to move’. As one operator based in George Town argued, ‘the birds are here because it is where they live. If they (the state) want to get rid of them, they will have to talk to [the birds] themselves’ (in Filmer & Chen, 2011: np). Underlying these claims was also a moral and ethical dimension, as Loh argued, ‘swiftlets are free flying and we cannot just put them into cages and move them’ (in *The Star*, 13 October 2010: N12); or that ‘removing these nests would kill countless swiftlets as they could not build nests in other areas’ [sic] (ibid). Such arguments were intended to enhance the sense of guilt associated with removing swiftlets from urban areas. By positioning the city as the ‘natural’ space of the birds, swiftlet farmers sought to make the case that forcibly displacing the birds would be too harsh, since swiftlets ‘belong’ in urban areas.

Ethical discourses not only meant to ‘naturalize’ swiftlet farming in cities, but also aimed to counter arguments that swiftlet farming is cruel to the birds. As one animal expert at the National University of Singapore put it, ‘if they didn’t like their nests being removed, they wouldn’t come back’ (Neo, interview, 18 September 2013). Similarly, PERHILITAN director Yatim stated, ‘I’m pretty sure the swiftlets aren’t exactly happy when their nests are taken away, but observation shows that they cope well with it...and we’re finding that as long as their babies survive, the parent birds are pretty okay with the deal’ (*New Straits Times*, 2005: np). Furthermore, one swiftlet farmer again invoked the reference to chicken farms, but in this case to defend the industry, as he argued, ‘personally, I think swiftlet farming is more humane than chicken farming. The hens are kept in cages with the sole purpose of laying eggs for human consumption, without once seeing any of the eggs hatch. And when their job is done, they are sent to the factories to be processed for meat!’ (*The Star*, 7 May 2010: np).

However, this issue was contested by one Kuala Lumpur resident who presented some concerns regarding swiftlet farming in an editorial in the *New Straits Times* from September, 2009 (Ganeshadeva, 2009: np). As (s)he noted, ‘it is rather sad that in the frenzied rush to make a fortune from swiftlet nests, the welfare and well-being of the birds are often neglected’ (ibid). The piece went on to argue that swiftlets ‘should be allowed to live as natural a life as possible, as they would in the wild, as...these are free living wild birds with strong brooding and mothering instincts’ (ibid). Moreover, the author argued ‘they are capable of feeling stress and anxiety when agitated’, and: ‘it is an offense under the Animal Protection Act 1960 to cause unnecessary pain or distress to an animal or bird’ (ibid). This piece did not

mean to advocate stopping the lucrative swiftlet farming industry, but rather sought to keep the trade as ‘natural’ as possible, by not breeding and domesticating the swiftlets, as is the case with other animals. Furthermore, this sensitivity was also present in the Penang Government officers’ enforcement work, as they had to be quite careful so as to not upset animal rights activists over their handling of the swiftlets and their eggs.⁵⁶

Interestingly, most critics of the swiftlet farming would not argue for stopping the industry altogether. Rather, such respondents argued that swiftlet farming activities should be placed ‘elsewhere’, where they *ought* to belong. As Chow Kon Yeow put it, ‘no one is against the industry, but it should be located in the right place’ (in Chua, 2010: 14). It is in such ways that discourses clearly contain inherent spatialities (Yeo & Neo, 2010). As I will discuss in Chapters 8 and 9, many stakeholders felt that swiftlet farms should be moved to light industrial or agricultural areas, where they would be less of a nuisance to humans. Yet, such in place/out of place dichotomies create a binary of inclusion and exclusion, which would thus require a solution either requiring residents to adapt to the presence of swiftlet farms, *or* to cement the city’s status as an entirely human space, where urban animals are moved elsewhere. As Duckett-Wilkinson has stated with reference to the George Town case, ‘I think 10 houses can be dealt with provided they do not effect nearby residents but 400 is a different issue, surely the industry has to be viewed in a different light?’ (in Chua, 2010: 12). A long-term solution is thus required, which would prioritize the protection of public health, animal welfare, and ecological sustainability, while also granting swiftlet farmers some respite.

5.4. Conclusions

Through the various discourses presented in this chapter, swiftlets have been constructed as liminal animals (Yeo & Neo, 2010); sometimes ambivalently perceived as a ‘natural’ part of the urban environment. However, human attempts to draw them to cities and encourage their reproduction in urban environments has been seen in a less favorable light. Swiftlets can thus be seen to straddle the boundary of inclusion and exclusion in Malaysian cities, given that they are acceptable insofar as they are not actively encouraged to breed in urban swiftlet

⁵⁶ In one meeting that I had with members of the Penang State Government and MBPP, a city official showed a slide of officers transporting swiftlet chicks and eggs, to which Chow lightly rebuked: ‘take those [photos] out, we wouldn’t want to upset any animal rights activists over the handling of the baby birds!’. See Section 8.4 for further discussion of this issue.

farms. What has emerged is a moral landscape shaped as much by the ideological production of the urban environment as by swiftlet ecology and their perceived ‘natural’ habitats. Yet, the very nature of swiftlet ‘farming’ has also been debated, which calls into question the use of the term farming as a stable categorization for the collection and use of all animal products, and the spatial regulation of such activities.

The LPE approach set out in Chapter 2 is thus a useful framework for analyzing these controversies given the entanglement of ecological, political and cultural framings involved in shaping public opinion on the issue (see Moore, 2006; Njeru, 2006). For instance, it is clear that landscape has played a central role in making urban swiftlet farming undesirable and hence untenable in the material and moral landscape of George Town, which is a point that will be further fleshed out in the following chapter. As such, it can be seen that controversies over swiftlet farming in Malaysian cities are not only a result of anxieties related to human-animal co-habitation (c.f. Yeo & Neo, 2010) but also due to the negative externalities associated with urban farming, and normative understandings of the ‘proper place’ for such activities. In this way, the controversies over swiftlet farming also suggest a perceived incompatibility between the domestication of animals for profit and alternative functions of the city. Swiftlet farms have thus been labelled ‘matter out of place’ as polluting, disruptive, and discomforting for inhabitants of the city (Cresswell, 1996; Douglas, 1970).

These are aspects that will be explored in more depth in the following two chapters. Moving beyond the general reactions to urban animals and the implications of co-habitation, I will focus on the specific medical, hygienic, economic, and cultural discourses governing the appropriateness of swiftlet farming for the urban landscape. As with the present chapter, I also consider the counter-narratives that swiftlet farmers have employed to justify the presence of swiftlet farms in urban areas. Nonetheless, the symbolic and economic importance of George Town and Malacca’s heritage landscapes, as well as legitimate concerns for public health and well-being in these cities ultimately prevailed over the potential economic benefits of swiftlet farming.

Chapter 6 - Whose Landscape, Whose Heritage? The Landscape Politics of Swiftlet Farming in George Town and Malacca

6.1 Introduction

Landscape change and notions of cultural heritage have been shown to be inextricably linked (Barber, 2013; Ishizawa, 2014). Such studies have demonstrated how social struggles over (in)tangible cultural heritage can provide valuable insights into societal responses to changing urban environments, with notions, discourses and representations of the past being crucial to our understanding of the present. Moreover, these understandings are often used in constructions and imaginations of anticipated and desired futures, politicized interpretations of the natural environment and the importance of community and national cultures (Cartier, 1998). However, little attention has been paid to critical intersections between urban heritage and landscape change. This chapter uses the controversies over urban ‘swiftlet farming’ to move beyond understandings of heritage and landscapes under threat, to examine landscape change as it is experienced and lived in everyday ways (Loftus, 2012).

The short history of swiftlet farming in Malaysia provides a rich account of the crucial role of both landscape and heritage in the process of urbanization. This chapter traces the controversies over swiftlet farming in George Town, by examining how different stakeholders perceive swiftlet farming to be (in)appropriate for the town’s heritage landscape. As mentioned in the introduction, swiftlet farming has become a key matter of concern in Malaysian cities over the past 12 years, drawing waves of complaints from the public and civil society organizations. The focus here is thus on how the industry has been perceived and contested by relevant stakeholders *vis-a-vis* notions of heritage, and the processes through which these meanings have been produced.⁵⁷ It is important to note, though, that such representations of landscape are clearly not neutral, nor can they be viewed as a ‘true reflection’ of the landscape. As such, I have been careful to point out the background and positionalities of most of the respondents quoted, which can be found in Chapter 3 (pp. 36-37).

⁵⁷ See Chapter 3 for an introduction of the key actors discussed in this chapter.

This focus on the lived experience of urban swiftlet farms, their impact on George Town's cultural landscape, and alternative forms of livelihood echoes existing research on landscape, which positions it as a vehicle of social identity, a generator of profit, and a space for different kinds of living (Matless, 1998; Mitchell, 2001). The chapter thereby builds on these studies this by illustrating how the urban landscape in George Town and Malacca have been shaped through cultural politics, power relations and competing ideologies operating at a range of scales (see also Kaika, 2006; McCann, 2002; Walker & Fortmann, 2003). Despite the range of issues that have emerged, from (perceived) health risks, to impacts on quality of life, heritage issues have become the primary factor resulting in the expulsion of swiftlet farming from the urban landscape in both cities. The reason for this, as I will discuss in section 6.5, ultimately has to do with the UNESCO World Heritage status that was 'awarded' to both sites in 2008.

The focus on heritage here, in both its tangible and intangible forms, is important, because as older urban areas come under redevelopment pressure, conflicts over built heritage are increasingly common (see Barber, 2013). Urbanization is therefore politicized because, as Tunbridge (1984: 174) observes, 'it is in truly plural societies that [the] question of "whose heritage" comes to a head...urban heritage conservation becomes a political exercise'. Indeed, throughout Malaysia, heritage landscapes have become hotspots of contention where conflicting cultural, economic, and environmental values contend for primacy in the context of rapid industrialization (Cartier, 1998). Yet, as Barber (2013) points out, most academic scholarship accords (in)tangible cultural heritage an ontological status (i.e. as actually existing). He writes, 'while heritage places may be very real for the communities that are invested in them, their meanings are nonetheless socially constructed' (Barber, 2013, p. 93). This chapter thus considers the construction of these meanings and the counter-meanings used to undermine them.

The remainder of this chapter is divided into the following sections: section 6.2 introduces the relevant literature on urban heritage landscapes, and how they are pertinent for analyzing the controversies over swiftlet farming in George Town and Malacca - particularly within the LPE framework utilized for this dissertation; section 6.3 provides some context related to the development of swiftlet farming in George Town and Malacca, and outlines the growth of the industry from 2003-2014; section 6.4 details general concerns with the 'farm-

ing' of swiftlets in urban residential areas, particularly in relation to its impact on heritage buildings; this sets up section 6.5 which considers how UNESCO has become one of the primary stakeholders in mitigating the swiftlet farming controversy, and consequently examines how the issue of heritage became the most important factor in influencing state policy on the issue. It also builds on the discussion in the previous chapter concerning attempts by swiftlet farming associations to 'naturalize' the activity by demonstrating the historical and ecological linkages between swiftlets and urban areas. Finally, I conclude the chapter with some reflections on the value of landscape and heritage as a specific lens for studying the political ecology of urbanization, and the cultural frictions bound up in such practices.

6.2 Landscape and Cultural Heritage

As noted in chapter 2, various critical landscape studies have demonstrated how landscapes have the power to act as material resources for the (re)production of particular ways of life (e.g. Cater & Keeling, 2013; Mitchell, 1996). As such, Mitchell (2007: 316) has suggested that the central motivation in conflicts over the form of urban landscapes is to increase the 'exchangability' of the urban landscape in a global economy marked by increasing competition for 'footloose' capital. As I argue in the penultimate section of this chapter, swiftlet farming has become such a hotly debated issue because the presence of swiftlet farms on the urban landscape necessarily impacts upon the viability of alternative uses of that space. As recent studies on landscape and heritage have demonstrated, the construction and maintenance of landscape identity necessarily excludes others who are not embraced by the meanings defining that identity (Barber, 2013; Stobbelaar & Pedroli, 2011). However, 'ideological struggles over the meaning and manner of such representations of place and identity abound' (Harvey, 1990: 419). Similarly, swiftlets and swiftlet farm(er)s have thus become symbolic pawns in the battle between competing landscape interests in George Town and Malacca.

Reactions to swiftlet farming are polemical because they involve meanings that people draw from their environment, personal background and cultural identity in making sense of the places they inhabit (see Stobbelaar & Pedroli, 2011). Like phenomena such as urban graffiti, all of these factors are crucial to how people attribute meaning to the presence of swiftlets and swiftlet farms in urban areas (Cresswell, 1992; Shobe & Banis, 2014). Statements which might at first appear to be merely directed at the architectural character of a place in fact rest

upon cultural judgements as to what and who belongs there. Indeed, aesthetic judgements have frequently acted as powerful triggers to political and social action on social issues (Harvey, 1990). As Harvey (1990) observes, appeals to notions of place, identity and tradition, particularly in an aesthetic sense, have long shaped political conflicts in cities (ibid).

As also discussed in Chapter 2, conflicts over what counts as ‘proper’ behavior are a common theme in studies on cultural landscapes (Brown 2015; Bunnell 2002; Cresswell 1992; Matless 1997; Nash 2006). Such approaches to landscape have long tried to explore the multiple ways in which people attempt to ‘fix’ the meaning of landscape, and what counts as appropriate activities for particular landscapes. Representations of landscape thus connote different ways of seeing. In this way, landscape is understood through normative ideologies, in which ideas about what is right and appropriate are ‘transmitted through space and place’ (Cresswell, 1996, 8). ‘Moral geographies’ of landscape thus emerge whereby externalities arising from the farming of birds in cities (droppings, noise, etc.) are held to denote an immoral geography (see Matless, 1997; Bunnell, 2002; Brown, 2015). This chapter builds on these approaches to landscape by considering the implications of reactions to swiftlet farming for urban landscape and heritage issues in culturally diverse and rapidly urbanizing cities.

As argued in the introduction to the chapter, landscape is also inextricably linked to notions of cultural heritage. As Maya Ishizawa (2014) has written, cultural landscapes have become categories of increasing use in the nominations to World Heritage designations, which assume an ontological division between nature and culture. In other words, the protection of built structures has been classified as ‘cultural heritage’, while what has been understood as belonging to the ‘natural’ environment, free from human intervention, has been classified as natural heritage. Indeed, this ontology has surfaced in the controversies over urban swiftlet farming in Penang. As I will discuss section 6.4, swiftlets are seen as belonging to ‘natural’ spaces, and unfit for the ‘cultural’ heritage site and urban environment of George Town. The next section will first provide some context related to the scale of swiftlet farming in George Town and Malacca, by outlining the growth of the industry from 2003-14.

6.3 Growth of swiftlet farms in George Town and Malacca, 2003-2014.

6.3.1 George Town

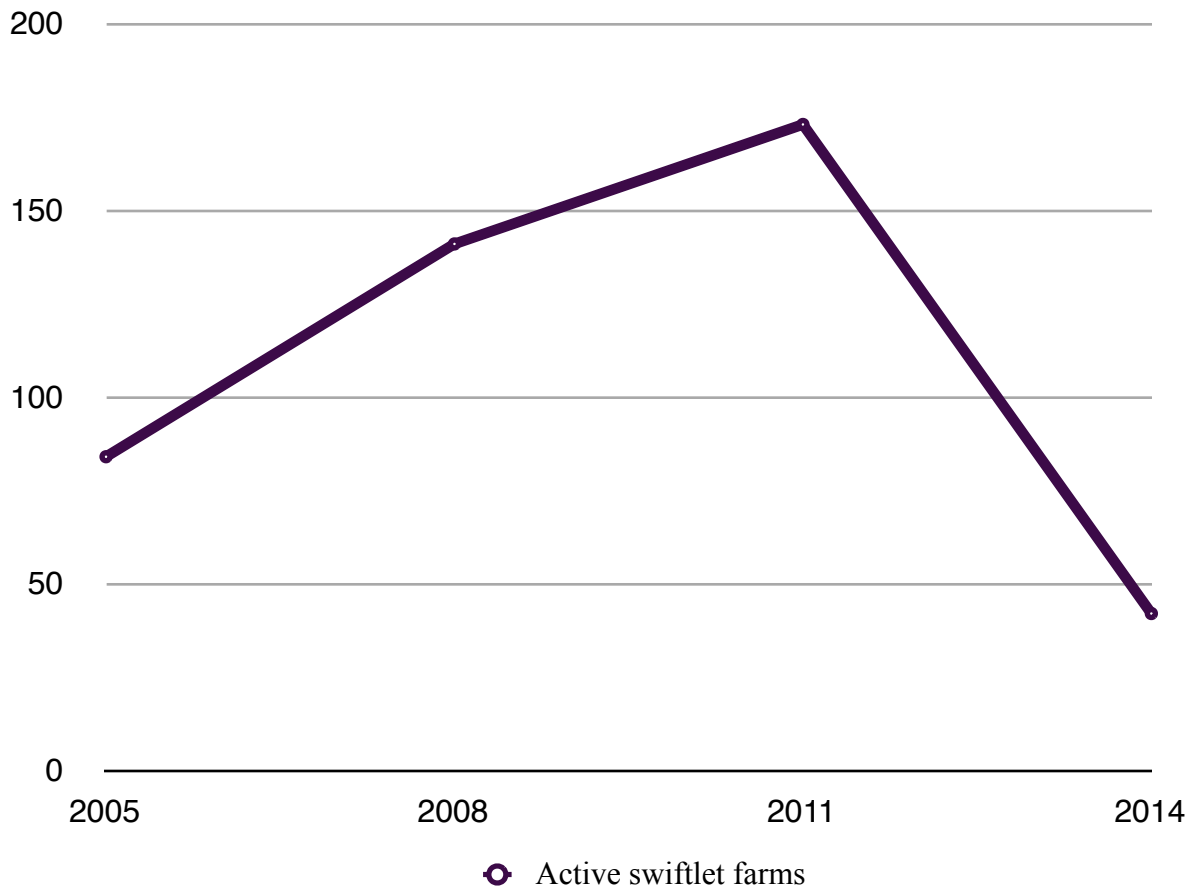
Swiftlet farms in George Town first starting receiving attention around 2003. According to a report at this time in *The Sun*, a local swiftlet house operator estimated that more than 100 old shophouses had already been converted into swift houses in central George Town alone (*The Sun*, 14 June 2003). Indeed, the years of 2003-2005 are when George Town and Penang more broadly experienced the most rapid growth in swiftlet farms. Towards the end of this period, the June 2005 newsletter of the Malaysian Swiftlet Farmers Association stated that over 10% of houses in George Town (400 in absolute figures) had been converted into swiftlet farms. Around the same time, a ‘casual count’ conducted by Penang Heritage Trust members indicated that the figure could actually have been closer to 20% of the total. However, these figures likely referred to the entire George Town municipal area, as opposed to the inner city heritage zone exclusively.

At this time (2005), the Penang State Government conducted a registration exercise, which required existing swiftlet farm operators to register with the Penang City Council (MBPP).⁵⁸ This was done in response to calls for the State Government to regulate the burgeoning industry in the wake of increasing complaints from residents. Following this exercise, the State declared that there were approximately 84 registered swiftlet premises in the city, with 78 of these located in the World Heritage Site (MPPP, 2013). The mainland side of Penang State, known as Seberang Perai, contained more swiftlet farms than George Town with an estimated 800 total operators, most of which were in the southern part of the region (Loone, 2005). By 2008, the total of registered operators in this area had grown to over 1,127 - 468 of which had their building plans approved for swiftlet farming activities (*The Star*, 8 December 2008). This was the peak number reached in Seberang Perai, as the Municipal Council at that time announced a ban on swiftlet farming activities in the urban area.⁵⁹

⁵⁸ Formerly known as MPPP (*Majlis Perbandaran Pulau Pinang*), due to Penang Island achieving city status in 2015.

⁵⁹ See chapter 8 for a discussion of the legislative and regulatory measures used to control the swiftlet farming industry in Malaysia.

Figure 6.1: Number of Active Swiftlet Farms in George Town, 2005-2014

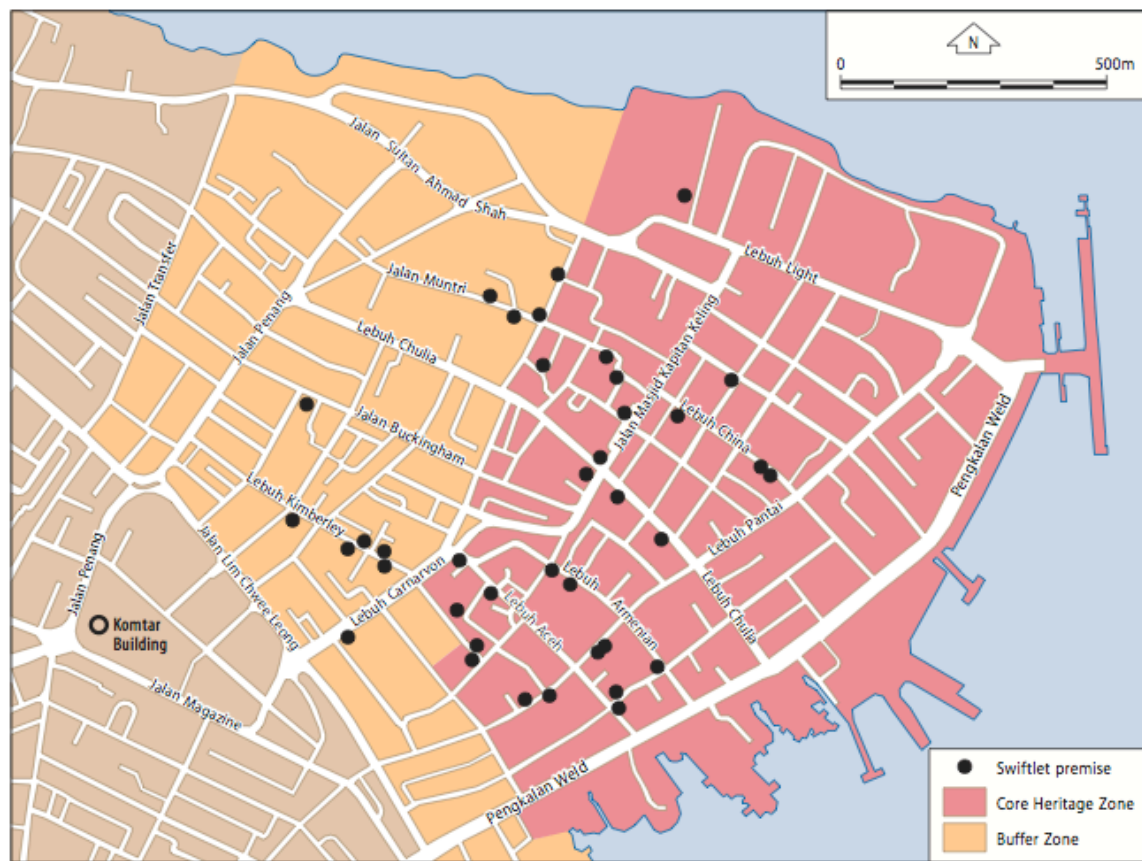


As of 2008, according to research conducted by University Sains Malaysia (USM), there were 141 swiftlet farms observed in George Town (including licensed/unlicensed operators). Of this total, 116 of the operators were in heritage shophouses, 23 in commercial buildings, and two ‘others’ (Duckett-Wilkinson, 2011a; Yeoh, 2009). By 2011, the above figure had grown to 173 total swiftlet farms operating within George Town’s WHS, of which only 32 were registered premises, and 11 were new premises since the 2008 audit. This indicates that the growth of swiftlet farms began to decline after 2011 - as illustrated in Figure 6.1 - which coincided with the Chinese embargo on Malaysian birds’ nests. These official records were reached by a combined inventory conducted by NGOs, USM researchers, and the MBPP and are the most reliable and transparent records available.

According to a personal count conducted in 2014, the number had dropped to 42 active swiftlet farms (see Figure 6.2 for locations), despite official announcements by the State Government that there were ‘zero’ swiftlet farms remaining in the World Heritage Site (Ngui, 2014; see also Chapter 8; Figure 8.1). This dramatic reduction is likely a combination of the

severe impact of the market crash after 2011, and enforcement work conducted by the local authorities. In contrast, however, State Government figures estimating the number of swiftlet houses in George Town have always been significantly lower. In 2011, the authorities estimated that there were only 128 swiftlet houses at the start of enforcement action, compared to the 178 recorded by the PHT members (ibid). Finally, at the start of the State’s moratorium on swiftlet farming as of January 1, 2014, it was announced that there were zero swiftlet farms remaining active (see Figure 1.5; Chapter 8).

Figure 6.2: Active swiftlet farms in George Town WHS, as of June, 2014 (author’s map).



Furthermore, other counts vary dramatically in the estimated totals of swiftlet farms. For instance, a 2010 article in the *New Straits Times* reported an estimated 300 swiftlet houses in George Town (Emmanuel, 2010). Similarly, UNESCO’s World Heritage Centre Director, Francesco Bandarin, reported that there were 200-300 swiftlet farms in George Town as of January 2011, according to reports received by the Center (Kaur, 2011). This figure was likely derived from a widely cited statement from ASNI, which estimated a total number of 300 swiftlet farms in George Town as of year 2010, or ‘at least 8.3% of an estimated 3,500 pre-war buildings in George Town UNESCO historical site’ (*The Star*, 13 January 2011).

6.3.2 Malacca:

Due to Malacca's smaller demographic and geographical size, the scale of the swiftlet farming industry is also smaller. By March of 2002, Lim and Jorge (2006: 357) noted that there were already 'over 20' buildings in the main conservation zone that had been converted to swiftlet farms.⁶⁰ Indeed, Cardoso recalled how she would visit Malacca every 6 months around this time and each time she visited she would notice that 'there was a new building that had been converted to a bird house, or was in the process of being converted' (interview, 8 October 2013). As such, by 2004, the total number of swiftlets in the inner city was estimated at 'over 25' (Lim & Jorge, 2006). By 2008, it was estimated in *The Sun* that there were 100 swiftlet breeders operating in the State, with 20 in the core heritage zone of Malacca town, particularly around Heeren and Jonker Streets (Chen, 2009). Indeed, Lim and Jorge (2006) noted that there were over 14 houses along Heeren Street alone that had been converted to swiftlet farms. However, the figure from *The Sun* is likely an underestimate, as Cardoso explained, she visited Malacca every two weeks in 2008 for UNESCO meetings and each time there would be another building being converted into a swiftlet farm. 'Literally, it was like that, at that time', she emphasized (interview, 8 October 2013). This proliferation of swiftlet houses, and the listing of Malacca as a UNESCO World Heritage Site in 2008, prompted the Malacca State Government to require all swiftlet farms in the inner city to cease operations by the end of 2009 (see Chapter 8).

Heeren Street was also the site of a controversial birds' nest museum, 'Jonker Bird House: Swiftlet eco-heritage', which was established in a prominent historical residence along the street (see Figure 6.3). Another significant building is the nearby 'New Oriental Theatre (formerly Royalty Hall) on Second Cross Street (*Jalan Hang Kasturi*) which had also been taken over by the swiftlet industry (Figure 6.4). Many of these were still active as of my first visit in September 2013, but some had closed down as of my final visit in 2015. As mentioned above, this is most likely due to the impact of the Chinese embargo on Malaysian birds' nests from 2011-2013, which had a devastating effect on the industry (see Chapter 5).

As can be seen, the scale of swiftlet farming operations in George Town and Malacca are actually smaller than other places in Malaysia, such as Sitiawan, as was documented in

⁶⁰ Indeed, a *New Straits Times* article (26 March 2002) estimated the number to be closer to 30 at this time (see also Al-Attas, 2002).

Figure 6.3: Malacca's Jonker bird house - note the clever naming to fit in with the surrounding UNESCO World Heritage Zone (author's photo).



Chapter 1. In fact, even the mainland side of Penang State was estimated to have nearly 2000 swiftlet farms as of 2011, nearly half of which were operating illegally (Looi, 2011). However, as I will demonstrate in the following sections, George Town and Malacca still experienced the most significant site of controversy over the swiftlet farming industry, and were the only places in Malaysia in which swiftlet farming was declared illegal. As I argue, this is due to the significance of the World Heritage Sites in both cities, and the economic and symbolic significance of maintaining this listing.

Figure 6.4: Malacca's New Oriental Theatre which has since been taken over by swiftlet farming - note the distinctive air holes on the facade and boarded up windows (author's photo).



6.4 Contested Interpretation of Heritage: Swiftlets and the City

As demonstrated in Chapter 2, landscape scholars have long been at pains to point out that landscape is both a work and an erasure of work, in that the ways in which it is constructed often attempt to make a scene, and the meaning(s) attached to it appear 'natural' (Williams 1973, Cosgrove 1998, Mitchell 2000).⁶¹ As Cresswell argues, this ideological use of nature is intended to present something as though there could be no alternative interpretations. Or to use Latour's (1987) term, landscapes are 'black-boxed' as their 'internal nature' is seen to be beyond the possibility for human action to re-shape them. Yet, as Tim Cresswell (1992: 330) has demonstrated, 'places are not "natural", but historical products'. Yet, this (re)shaping of landscape has been quite visible in the short history of swiftlet farming in Penang, as various

⁶¹ See Chapter 2 for a review of the landscape literature and how it is used in this dissertation.

stakeholders have sought to (de)legitimize the industry through various discursive strategies, as I illustrate in this section.

For most stakeholders, urban shophouses are generally not considered to be the natural home of swiftlets. As one commentator put it, ‘for many people, swiftlet farming, by its very definition, is incompatible with the urban environment’ (Bhatt, 2010b: 11). Even Mr. Ding (swiftlet farmer in Penang State) lamented, ‘how can you rear birds in a residential area? I don’t understand!’ (Ding, T.H., interview, 27 February 2014). This view echoes those discussed in the previous chapter, which see productive activities involving animals as inappropriate in and around areas of human inhabitation. Likewise, an impact assessment report on swiftlet farming in George Town (discussed further in the following section), stated that ‘the production and harvesting of edible birds nest does not have any historical association with urban environments’ (GTWHI, 2012: 76-77). This way of framing the urban was also seen in Penang State official, Chow Kon Yeow’s statements on swiftlet farming, in which he has frequently made a categorical distinction between the urban and rural; natural and cultural. For instance, ‘swiftlet belongs in the natural realm [sic]. Just because swiftlet activities are found in Mulu National Park, a natural heritage site, does not mean it should be allowed in the living heritage site of George Town’ (in *The Sun*, 12 April 2011).

Similarly, critics of swiftlet farming such as Elizabeth Cardoso of BWM have argued that ‘buildings, particularly residential buildings and shophouses, should be used for people, not birds’ (interview, 8 October 2013). According to Cardoso, ‘converting a heritage building into a ‘bird house’ is not only inappropriate but has many other deleterious effects’. For instance, ‘in a closed environment, moisture accumulates and accelerates the decay of plaster, brick walls and timber ceilings...the rotting wood invites termite infestation. Bird droppings also hasten the destruction of building materials and the interior ornamentation and beautiful embellishments of heritage buildings’ (in Chok & Bhatt, 2006: 6). Mr. Ding also lamented that the ammonia released from the decaying guano damages the wooden pillars, paintings on the walls and the overall structure of the buildings (Ding, T.H., interview, 27 February 2014). As we will see later in this chapter, such discourses sought to protect the symbolic and use value of the inner city buildings, which was perceived to be threatened by the corrosive effects of the swiftlet farming industry. As Duckett-Wilkinson put it more acutely, ‘swiftlet farming is a great worry for the residents and investors...because people have put hard earned

money into their long term homes and developments'. Clearly, then, this controversy is not only about heritage, aesthetics, or health concerns, but also very much about money and livelihoods.

Though, this way of representing swiftlet farming in relation to the urban environment and heritage landscapes in George Town and Malacca did not go uncontested. Indeed, industry representatives have attempted to demonstrate how swiftlets have always been a part of the urban environment - thus a living heritage - but also central to Penang's *natural* heritage. As the Malacca Bird's Nest Merchants Association President John Chen put it, 'the birds have been a part of the historic city's skyline over the past few centuries, even before the streets were built. If we get rid of them, we will also be destroying part of the city's living heritage' (in Carvalho and Lai, 2009: N17). Supporting this view, Association of Swiftlet Nest Industries (ASNI) President, Carol Loh, argued that 'if anything is "threatening" George Town's native heritage, it would be the tide of westerners buying up heritage properties and the trend of converting them into expensive boutique hotels' (PLGCF, 2010: 13). Moreover, this 'natural' view of urban swiftlet farming built on the efforts of swiftlet farmers associations like ASNI and BNM to prove that such house swiftlets were in fact genetically different from cave-nesting swifts, as discussed in the previous chapter.⁶²

6.5 Constructing George Town's Heritage Landscape

UNESCO has been one of the primary actors in the negotiations over urban swiftlet farming in Malacca and George Town, due to the cities' joint World Heritage listing since 2008. UNESCO has developed several 'outstanding universal values' (hereafter OUVs) used to describe each listing on the World Heritage List. Since George Town and Malacca are jointly listed, the following description is a summary of the OUVs for both sites: 'The two towns constitute a unique architectural and cultural townscape without parallel anywhere in East and Southeast Asia' (UNESCO, 2014: np). The OUV used to describe George Town is that 'the city is a thriving port in the Straits of Malacca with multi-cultural heritage and unique shophouse architecture' (ibid). These OUVs, amongst others, are the main criterion by which

⁶² However, as also demonstrated in the previous chapter, this possibility has been disregarded due to the extent to which swiftlet farmers have purposely manipulated the nesting behaviors of swiftlets, which would preclude any arguments about the 'natural' habitat of swiftlets.

the state governments in Malacca and Penang regulate developments in the World Heritage Sites (hereafter WHS) of both cities. Though UNESCO initially did not take a clear stance on the swiftlet farming issue in Malacca and George Town, the Malaysian authorities ultimately were the ones who determined that swiftlet farming was deleterious to the OUVs of the two sites, and that swiftlet farming would be banned in both areas.

This section answers the research question of how idea(l)s of heritage become so important to swiftlet farming in Malaysia, and how they superseded health concerns as the primary factor leading to the Federal Government's ban on swiftlet farming in George Town and Malacca. I argue here that, in addition to the impacts on the urban environment, the core reason lies in the UNESCO World Heritage Listing 'awarded' to George Town and Malacca, and the fundamental OUVs of the sites which the UNESCO has entrusted the Malaysian authorities with protecting. Moreover, the fear of losing or endangering the city's world heritage status has been the ultimate driver in sparking action on swiftlet farming in both cities. In Malaysia, state promotion of tourism as a main component of economic development and foreign exchange earnings has compelled the government to facilitate tourist development - and heritage is increasingly seen as a key attraction for tourists (Cartier, 1998; Johnson, 2005). Indeed, as Chow Kon Yeow stated candidly in an interview: The commitment (for enforcement action) is the World Heritage Site, so that swiftlets don't threaten our World Heritage Status' (interview, 22 October 2013).

The panoply of pre-war shophouses in Penang and Malacca has created a unique streetscape which has come to shape the identity and image of both cities, both amongst locals and on the images used to represent the island externally (Mohit & Sulaiman, 2006: 113). Furthermore, Mohit and Sulaiman stress the importance of shophouses in shaping the so-called 'shophouse culture' in George Town and for attracting both domestic and international tourists, captivated by the beauty of the shophouse landscape (ibid). The significance of this cultural and colonial heritage of Malacca and George Town is described on the UNESCO World Heritage listing as follows:

The influences of Asia and Europe have endowed the towns with a specific multi-cultural heritage that is both tangible and intangible...Melaka demonstrates the early stages of this history, originating in the 15th-century Malay sultanate and the Portuguese and Dutch periods beginning in the 16th century...George Town represents the British era from the end of the 18th century.⁵ (UNESCO, 2014: np)

This colonial history has been quite central to the resistances that have emerged against swiftlet farming in Penang. Indeed, George Town is widely credited as being ‘established’ by Captain Francis Light of the British East India Company in 1786, and, as a 2010 article on swiftlet farming in the *Penang Monthly* magazine declared, ‘the city’s character has remained virtually unchanged’ (Chua, 2010: 9). This character, like the above quotation mentions, refers to both the built (tangible) heritage, and the people inhabiting them, along with the diverse economic and cultural practices that they maintain (intangible heritage). Furthermore, I argue that this rich colonial history has been deeply ingrained in the psyche of many of the critics of swiftlet farming in George Town, who see the industry as incompatible with idea(l)s of what this colonial city should look like, and the economic activities it should promote. As McCannell has argued, heritage ‘is an ideological framing of history, nature and tradition; a framing that has the power to reshape culture and nature to its own needs’ (in Johnson, 2005: 314).

Accordingly, Maya Ishizawa (2014) has recently posited that conservation of (in) tangible cultural heritage is most prevalent in regions like Southeast Asia, which have a colonial past related to European empires. Indeed, the most tangible contemporary sign of the colonial era are the grandiose colonial buildings which remain throughout Malaysia. Moreover, Barber (2013) has argued that the remnants of and yearning for the colonial era in such places are not entirely separate from contemporary experiences of urbanization. To be sure, colonialism figures prominently in various accounts of both the making of Malaysia and its contemporary urban landscapes. As the various discourses presented in this section speak to, such idea(l)s of intangible cultural heritage have thus not only shaped popular and official responses to swiftlet farming in George Town, but also suggest why particular actors continue to defend these ideals.

Therefore, it has been argued by numerous stakeholders that if action is not taken against urban swiftlet farming and the two cities lose the characteristics which determined their joint inscription on the World Heritage List, then they may be placed on the ‘List of World Heritage Sites in Danger’ or have their World Heritage Status revoked. Yet, the concern was not only about the World Heritage Status, or competing business interests, but also about George Town’s image in an era of increasing competition amongst aspiring ‘world class’ cities. As one MBPP officer concisely put it, ‘do we want an image of Penang as a global city, *or* do we want to allow swiftlet farming’ (PLGCF, 2010: 15, emphasis added). Similarly, another

George Town resident lamented Penang's 'fading lustre as the Pearl of the Orient' and added 'we hope it won't get another notorious label like City of Bird Droppings!' (*The Star*, 17 December 2004).

This threat of losing the UNESCO status, and the preservation of the town's (in)tangible heritage thus acted as a major catalyst to spur research and action on behalf of the civil society associations of Penang to create awareness about the detrimental aspects of swiftlet farming for George Town. As Duckett-Wilkinson asserted, because the Swiftlet farmers' associations (like ASNI) are so strong, NGOs like the Malaysian Nature Society, PHT, and SAM 'really need to come together to take on the issue, and make more noise against [illegal swiftlet farming]. Otherwise [the PHT] will be no match for ANSI and others on their own' (interview, 12 November 2013). As she put it, the swiftlet associations are very powerful, and more public awareness needs to be raised about the issue to counter ASNI's 'manipulation' of the public opinion (ibid). For this reason, Khoo Salma, the President of the PHT reached out to the President of the Consumer Association of Penang (CAP) in May 2011, noting that: 'all sorts of regulations are being broken and the breeders have time and time again misrepresented the issue in the newspapers.

This is why we need support from the CAP' (correspondence, 18 May 2011). Though the CAP and other local NGOs never fully engaged with the swiftlet farming, the PHT did have some support from the local university (University Sains Malaysia - USM) in conducting research, and also other public intellectuals. In addition, there was some public advocacy to protest the presence of swiftlet farms in George Town, such as the blog 'noswiftletsin-georgetown' mentioned in Chapter

Figure 6.5: Anti-swiftlet farming pamphlet distributed in George Town.



3; as well as a pamphlet that was circulated in George Town, with the ominous title ‘Swiftlet Farming - Are your children safe?’. The pamphlet contained the image shown in Figure 6.5, which suggested that swiftlets should be prohibited within heritage zones, and contained a number of ‘facts’ about the industry’s potential health impacts.

As mentioned above, the Penang State Government was also quite clear about the potential impacts of the swiftlet farming industry, which was reflected in press releases on the need to remove swiftlet farms from George Town. In particular, Chow sought to place the responsibility of potentially losing the prestigious UNESCO status directly on the swiftlet farmers by warning that ‘those in the industry must also realize who will be responsible if one day Unesco takes away the listing because of swiftlet farming [sic]’ (in Bhatt, 2011: 8). For instance, Duckett-Wilkinson cautioned that the proliferation of the industry would have ‘disastrous results for this wonderful cultural and community site’. This is a sentiment that was shared by other members of the public in George Town, as one resident elaborated, ‘swiftlet farm investors should realize that if George Town is taken over by birdhouses, this city would be turned not only into a bird city but a ghost city, which threatens not only its World Heritage Site status but also George Town as the capital city of the state of Penang’ (in *The Sun*, 12 April 2011). Therefore, Chow asserted that swiftlet farmers ‘should revise their investment strategies in line with the Federal Government’s decision to stop swiftlet farming in both Malacca and George Town’ (ibid).

The importance of maintaining the UNESCO status was thus one of the few objectives that united most stakeholders, particularly the State Government, heritage activists, and city residents. At least in part, the status’s significance boils down to a case of defending their business-interests, and heritage property values, which were seen as being threatened by swiftlet farming. As one news article put it, ‘apart from not allowing residents, hotel and restaurant operators and other businesses to operate in a healthy environment, swiftlet houses are also being feared in George Town for its potential to cause damage to properties and result in the devaluation of these units’ (Emmanuel, 2010: B2). These concerns reflect earlier discussions about the close relationship between landscape and property, and more specifically the tensions between private property and public landscape (see Chapters 2 & 4; Blomley, 1998; Mitchell, 2001).

As Don Mitchell (2001) has noted, the close but conflictual relationship between landscape and property most clearly arise when the drive for profits take priority over individuals in the development of urban space. For instance, in protesting against swiftlet farms in her neighborhood, Rebecca Duckett-Wilkinson asserted ‘I am a full time resident [of Penang] and someone who has invested heavily in making a home in this heritage city’ (Duckett-Wilkinson, correspondence, 15 December 2010). However, this comment also contains an inherent contradiction, in that claims against swiftlet farming are not only about having a safe and healthy place to live, but also about defending competing business interests. This comes through more clearly in her statement that, ‘the site listing undoubtedly brings more tourism and therefore more money to our city. The loss of our architecture and/or listing would negatively impact on (cultural) tourism and harm the economy of George Town’.⁶³ This is a clear example of the contradictory manner in which the landscape can act as a playing field for the accumulation of capital, even while simultaneously acting as a hindrance to that same accumulation (Harvey, 2007; Henderson, 1999; Mitchell, 2001). It is also perhaps an underlying reason why the government and PHT council members were able to unite over protecting the heritage value of the city, because of the considerable financial interests inherent in this goal.

Moreover, the above cited fears of potentially losing the UNESCO status were not unfounded or embellished by opponents of the swiftlet farming industry. In fact, on 14 January 2011, UNESCO sent a letter to Malaysia’s permanent representative at the World Heritage Center encouraging the state to monitor the impact of swiftlet farming activities in the heritage zone of George Town and Malacca. This letter was sent in the wake of UNESCO’s apparent receipt of a series of reports about the state of heritage properties in George Town and Malacca being used by birds’ nest operators and noted that the ‘integrity’ of the heritage value of both towns could be affected as a result (Bhatt, 2011). The letter further warned of a possible delisting of George Town and Malacca as a World Heritage Site if the issue was not addressed. As such, UNESCO advised that the Malaysian authorities should ‘investigate whether the farming is having a detrimental effect on the buildings within the World Heritage Site’ and report back with their findings (correspondence, 18 May 2011).

⁶³ Rebecca Duckett Wilkinson, open letter to Penang State Government, 20 June 2010, latter quotation citing YB Dato Maimunah - (former) acting general manager to George Town World Heritage Incorporated (GTWHI).

Upon beginning enforcement action in early 2011, however, city officials faced considerable resistance from the operators and swiftlet farmers' associations (see Chapter 8).⁶⁴ Aside from claims of swiftlets preceding George Town's World Heritage listing, much of this opposition centered primarily around fears of lost investments. For instance, Carol Loh argued that the decision to move swiftlet farmers out of the urban area of George Town was 'akin to shutting down our business...I must stress that it is impossible for us to move without affecting the birds and it is not because we do not want to, but that we *cannot* move' (*The Star*, 13 October 2010, emphasis added). The reason, as emerged from my interviews with swiftlet farmers, is that swiftlets are more attracted to older heritage buildings because they do not have the same 'newly constructed' scent that newer, purpose built swiftlet farms in rural or industrial areas do.⁶⁵

Interestingly, UNESCO was used as a 'higher authority' that both swiftlet farmers and heritage advocates appealed to in attempting to legitimize their stance on the presence of swiftlet farms in George Town and Malacca. In contesting the state's decision, Loh questioned the authenticity and implications of the letter of inquiry sent to the Malaysian authorities, and travelled to UNESCO's regional office in Jakarta to query their officials over this issue in April 2011. As she argued, many of the swiftlet farms were already in existence even before UNESCO officials conducted an evaluation of the city for the heritage listing in 2007, adding that some are now at 20-30 years old.⁶⁶ Accordingly, she reasoned, 'shouldn't that be considered part of the inner city's living heritage?' (correspondence, 11 May 2011). At this meeting, UNESCO stated that swiftlet farming was acceptable provided the buildings' façades were maintained and advised Loh that she should 'promote a dialogue to reach a mutually beneficial conclusion that will satisfy all stakeholders' (ibid).

Following this seemingly positive statement from UNESCO, Loh argued that 'bird houses should not be singled out as destroying the heritage quality of the interior of buildings

⁶⁴ At this time, there were an estimated 141 swiftlet houses in George Town's WHS - an area of approximately 1.6km².

⁶⁵ Yet, some critics would argue that it is the operators who prefer the use of heritage buildings because they are cheaper than building a new, purpose-built structure, and are safer from potential predators (see Al-Attas, 2002).

⁶⁶ However, these allegations do not have any concrete basis. For instance, the President of the Swiftlet Farmers Association of Malaysia, Ang Bak Khoo put this figure at 50 years (*The Star*, 28 January 2014). Given the informality of the trade, any details about its origins are necessarily estimations, which can neither be confirmed nor refuted on a purely factual basis.

because owners...are required to ensure that the façade maintains its heritage features' (in See & Kaur, 2009: np). Furthermore, she claimed that swiftlet farming was not entirely detrimental to the UNESCO listing, as charged by critics of the industry. In her opinion, buildings would have otherwise been left abandoned and dilapidated due to urban flight and decaying land values in the inner city. Indeed, a report by BNM stated one of their aims to be 'to promote and assist those willing to convert empty and unproductive (residential) homes for the breeding of swiftlets and birds' nest harvesting without any restrictions imposed' (BNM, nd). In other words, residential shophouses in cities are suitable for appropriation by the industry given their otherwise 'unproductive' nature. Moreover, it stated that 'the modification of empty shophouses into successful bird houses will increase the demand for such buildings, resulting in an increase in prices and the number of market sales and, therefore, help boost the declining domestic real estate market' (ibid). Using this logic, Loh argued that 'the birds' nest business in the inner city has managed to restore and rehabilitate at least 8.3% of an estimated 3,500 abandoned pre-war buildings following the repeal of the Rent Control Act in 2000' (ibid).

However, UNESCO's statement to Loh thus invited the criticism of heritage advocates, such as the PHT, who interpreted this statement as implying that 'UNESCO disagrees with the Federal Government and State Government's stand that swiftlet farming will be prohibited from the UNESCO World Heritage Site of George Town and Malacca', and further charged that by engaging with ASNI in this manner UNESCO had 'in fact condoned an industry that is illegal and that has contravened all local council building guidelines and codes in George Town (Duckett-Wilkinson, correspondence, 18 May 2011). In response to these allegations, a representative from their Jakarta office stated 'UNESCO...is NOT in the position to say 'yes' or 'no' on the issue' (Masanori Nagaoka, correspondence, 18 May 2011). Rather, they made clear that it was the responsibility of the Malaysian authorities to handle the matter on their own terms. UNESCO's concern was primarily about the potential impact on the 'authenticity' and 'integrity' of the two cities' heritage shop-house buildings, and not the presence of the swiftlet farming industry *per se*.

Subsequently, a high impact assessment (HIA) on the swiftlet farming industry in George Town was completed by a group of (foreign) heritage consultants on behalf of the Penang State Government in June 2012, and submitted to UNESCO. This report confirmed

that the swiftlet farming industry ‘impacts severely upon the fabric of historic buildings’ (UNESCO, 2013: 198), and that continuation of the business ‘will lead to urban flight, loss of traditional trades and serious deterioration of urban space’ (GTWHI, 2012: 76-77). Moreover, it specified that ‘in keeping to authenticity of a site, ideally the best use will very often be the use for which the building was originally designed for. The continuation or reinstatement of that use should certainly be the first option when the future of that building is considered’ (ibid). This report gave further legitimacy to the State’s enforcement action on illegal swiftlet houses in the city, and resulted in the eventual removal of most of the remaining premises.

As a result, UNESCO later announced in a 2013 report (UNESCO, 2013) that they were satisfied with the action taken by the authorities and that the site would consequently not be added to the ‘List of Heritage Sites in Danger’. Yet, by the end of my fieldwork in May 2014, there were still approximately 40 active swiftlet farms remaining in George Town’s World Heritage District, despite the State Government’s public announcement that the site was ‘swiftlet farm free’ as of January 2014. This contradiction will be discussed in more detail in Chapter 8 of the dissertation, which considers the effectiveness of regulatory measures employed to control the industry.

By tracing the discourses concerning the (in)appropriateness of swiftlet farming on George Town’s World Heritage Status swiftlet farming, this section has sought to further expand upon the power relationships embedded in the refashioning of the urban landscape. The discussion of the importance of the World Heritage status has shown how definitions and standards of ‘intangible cultural heritage’ have become bound up with competing understandings of how George Town’s urban landscape should be ordered. Indeed, as McCann (1997) has demonstrated in a study of the Bluegrass region of Kentucky, the political rhetoric utilized by key actors was shaped considerably by their experiences of the landscape - as farmers or environmentally concerned residents of the region. This was certainly the case in this study, as many of the heritage activists in particular were very much influenced by themes of environmental sustainability, and the colonial legacy of Penang, as reflected in the built landscape and local environment. Furthermore, the competing interests inherent in these struggles speak to David Matless’ point about how the landscape can become a ‘complex philosophical and political minefield’ concerning rights to land, definitions of aesthetics and beauty, as well as control over the content and form of public and private space (Matless,

1998: 12). The next and concluding section will extend this discussion on different ways of valuing and ordering landscapes, and offer some reflections on the broader significance of these frictions.

6.6 Conclusion: The Value of Landscape

As David Matless (1998) has argued, some critics may argue that arguments over the look of a building might be regarded as ultimately grounded in and explained by competing claims to valuable land. He argues, though, that the power of landscape resides in it being simultaneously a site of economic, social, political and aesthetic value, with each aspect being of equal importance (Matless, 1998: 11-12). This chapter contributes to such landscape studies by incorporating critical perspectives on urban heritage in the context of urbanization. The controversy over swiftlet farms in George Town and Malacca demonstrates how the very definitions of heritage (either ‘cultural’ or ‘natural’) are negotiated and differ according to context. In particular, contrasting views on the appropriate landscape aesthetic for these cities can be seen to stem from the diverse cultural and social identities of their inhabitants. This study also reflects and supports Walker & Fortmann’s (2003: 484) assertion discussed in Chapter 2, that ‘ideas of how the landscape *should* look are central in the struggle between the old and new economies’ (original emphasis). Accordingly, determining *where* swiftlet farming is deemed to be appropriate is a highly political issue, due to the implications that the industry poses for different forms of livelihood.

A considerable strand of work in urban geography and political ecology in recent decades has attempted to analyze how and in whose interests local economies are produced and reproduced (e.g. Blomley, 2008; Harvey, 2014; Keil & Young, 2009; Loftus, 2007; McCann, 1997; 2002). One interesting contribution of this chapter to this corpus of literature is to illustrate the ways in which various urban elites can directly influence the development of government policy on a particular issue. As I have shown, the development of urban space is deeply embedded within competing landscape and property interests as well as differing understandings of place. Yet, it also demonstrates the unevenness inherent in government attempts to regulate economic activities in urban areas, which arise in part due to the disjunctions between different levels of government, and different understandings of which activities are seen as acceptable or desirable for a particular place. In other words, it shows how these struggles are enmeshed in complex political ecologies in which particular understandings of the urban are naturalized and contested through discursive strategies. This chapter thus supports McCann’s (2002) assertion that ‘culture’ and ‘economy’, like culture and nature, can not necessarily be neatly distinguished or pulled apart. Finally, it further develops the arguments

of previous chapters in illustrating the quotidian and rhetorical ways in which political action is carried out, interpreted and always contested.

For instance, as we have seen, swiftlets and swiftlet houses have been subject to opposing conceptions of George Town and Malacca's urban heritage by different stakeholders. The themes that city residents and heritage activists set out - loss of landscape heritage to swiftlet farms; unsustainability of the swiftlet farming ventures; impacts on intangible heritage and livability; as well as the importance of the heritage shophouse landscape as a cultural signifier and tourism attraction - comprise the core arguments made in opposition to swiftlet farms in George Town and Malacca. Two understandings of swiftlet farming are shown to co-exist in the moral landscape of these cities; one of which labels swiftlet farming 'out of place', while the other seeks to put it in its place. In the first, swiftlet farms are seen as degrading to the character and (in)tangible heritage of the heritage landscape. In the other, swiftlet farming is simultaneously a legitimate and lucrative business, which is in accordance of George Town's living and natural heritage.

Underlying these issues of value are, as Walker and Fortmann note, are competing ideas about the form(s) that rural (or urban, in this case) capitalism 'should' take, cultural frictions, and class conflict. The various ideals expressed in this chapter are thus clearly about more than birds' nests or urban farming more generally, but also about the tensions involved in constructing and maintaining a 'world-class' heritage landscape. I have thus teased out how competing landscape histories and values become enrolled in the (contested) construction of urban environments. I have also shown how these ideas can be traced elsewhere through time and space - back to Penang's colonial era, for instance, or to the UNESCO's definitions of 'outstanding universal values'. Moreover, the particular ways in which swiftlet farming has been represented unsettle taken for granted binaries such as nature/culture, or urban/rural and problematize notions of what counts as urban heritage - and for whom. Or as Carol Loh succinctly put it: 'how do *you* define heritage?' (in Harvey, 2011: np, emphasis added).

The controversies over urban swiftlet farming in George Town thus provide a lens through which to examine how control over the look and feel of an urban landscape play out in everyday lived ways. They also demonstrate the contentious politics surrounding urban environments and how they are imbued with more-than human relations (Braun, 2005; Wolch *et al*, 1995). This chapter thus builds on the previous one in demonstrating how the urban(e) lim-

its of George Town - the contested processes through which ideas about the 'appropriate' use of urban space in the city - are established. By digging into such controversies, I have also intended to tease out the inherent contradictions inherent in these competing claims, and their implications for the construction of just and democratic cities.

Chapter 7 - 'Bird Cages and Boiling Pots for Potential Diseases': Contested

Ecologies of Urban 'Swiftlet Farming' in George Town

I think this is really unhealthy for all of us. As we know, birds do carry along with them certain type of viruses that could be fatal to human beings [sic](resident letter, *The Star*, 14 May 2003: np).

This can already be observed from the gradual transformation of our townships into bird cages and boiling pots for potential diseases (See, 2004: np).

7.1 Overview

The above quotations signal to some of the typical concerns that have emerged in the controversies over swiftlet farming in Malaysian cities, and the industry's potential health implications. As the second quote, in particular, indicates, the concern is with the conversion of inner city shophouses and their potential to act as 'a time bomb for a serious epidemic outbreak' (Ho, 2009: N49). Such comments also indicate that severe health impacts are a *potential*, though unproven, effect of the proliferation of swiftlet farms within inner city, residential areas. This threat has been mobilized as further justification to relocate swiftlet farms to rural, agricultural, or industrial areas. Thus, the primary question investigated in this chapter is how the perceived impact of swiftlets and swiftlet farms on human health and quality of life in Malaysian cities is framed by different stakeholders. In particular, it considers the ways in which what come to be regarded as legitimate knowledge about diseases are constructed and contested. The material presented in this chapter focuses primarily on the UNESCO World Heritage City of George Town (Penang) and argues that narratives of health and disease continually police which landscape practices are acceptable for this increasingly globalizing and image conscious city.

The LPE approach utilized in this dissertation is well suited for examining the political ecologies of health, as King (2010) has pointed out, both fields - political ecology and health geographies - draw on ideas of place and landscape and utilize an understanding of place as a socially (re)constructed phenomenon (see Parizeau, 2015). As such, my focus in this chapter is on the discursive practices and narratives circulating through my field sites, and how they have resulted in shaping the urban landscape. In doing so, I aim to demonstrate how urban political ecologies of health can be enriched through a more detailed analysis of landscape and

the discourses built into them. As I argue, discourses of health and disease are bound up with the ‘moral landscapes’ of particular places and regions, and can be politically motivated to achieve particular ends (e.g. Brown, 2015; Notzke, 2013; Proctor, 1998; Thompson, 2010). The landscape lens thus allows for unveiling the power relations that shape official decision making on public health, and the importance of incorporating lived experiences and perceptions of (un)healthy landscapes in informing such decisions (see Nash, 2006).

The following section provides a brief review of the political ecologies of health literature, which I have placed in conversation with the broader LPE framework. I then discuss three areas of concern that have been raised in regards to the potential impacts of swiftlet farms on public health, including: avian flu, dengue fever, *Cryptococcus* outbreaks and quality of life, which I will review in turn. The chapter then concludes with a reflection on how to make sense of the various claims that have been presented, and how to respond to them in the face of factual uncertainty.

7.2 (Landscape) Political Ecologies of Health

The political ecology of health is a promising field of study, which finds its origins in the disease ecology tradition within health and medical geography. The disease ecology strand of thought has aimed to show how the relations between human populations and the environment contribute to the incidence of disease (Gesler, 1992; May, 1954; Mayer, 1996). As Mayer (1996: 441) writes, disease ecology examines how ‘humanity, including culture, society and behavior; the physical world...biology, including vector and pathogen ecology, interact together in an evolving and interactive system, to produce foci of disease’. However some scholars have challenged that disease ecology deemed economic and political processes to be irrelevant, which led to the development of the political ecology of disease as a new approach in health geography (Huff, 2014; King, 2010).

Yet, the political ecology of disease has only recently gained recognition as a useful conceptual framework for addressing health and disease. King (2010: 38) was one of the first to develop this approach, recognizing that ‘health geography has provided less rigorous attention to the role of political economy in *producing* disease and *shaping* health decision-making’ (emphasis added). This built on earlier work by Mayer (1996), who argued that political ecology’s focus on the interaction between political interests, social institutions and

human-environment interaction can bring about a greater systemic understanding of health and disease.⁶⁷ Accordingly, a new wave of scholars are now beginning to recognize the usefulness of political ecology as a lens for studying issues of health and disease, particularly in urban areas (Harper, 2004; Jackson and Neely, 2013; King, 2010; Parizeau, 2015; Véron, 2006). For instance, urban political ecology can offer insights into the ways in which (urban) landscapes of health and disease are socially constructed, and not merely ‘naturally occurring’ elements of urban life.

Given the centrality of the concept of metabolism in urban political ecology, which examines the multitude of socio-natural flows into and out of the city, UPE is an extremely useful tool for understanding the relationships between urban environments and public health (Keil, 2003; Swyngedouw, 2006b). In particular, scholars have drawn on the work of David Harvey, Neil Smith and Erik Swyngedouw in situating the urban as constituted through political, cultural, economic and biophysical processes which have strong implications for public health (see Keil, 2013). Through an explicit UPE lens, Parizeau (2015) has applied these concepts to analyzing the health precariousness of informal recyclers in Buenos Aires, Argentina. Her study unpacks the multi-scalar processes which have combined to create a highly uneven health landscape, with marginalized groups being particularly more susceptible to disease. Similarly, in this case, the flows of birds, droppings, bacteria and hazardous effluent have been highlighted as key factors threatening urban health in areas of dense swiftlet farming.

Moving beyond strictly historical-materialist or political-economic approaches to health and disease, Véron (2006) uses UPE as a lens to pull out the role of cultural power and discursive practices in the social construction of urban health (see Kaika, 2003). This study specifically addresses the politics of health decision-making in the form of air pollution policies in Delhi, India since the 1990s. Similar to the research conducted for this dissertation, Véron’s paper examines the material and discursive strategies used by ENGOs (environmental NGOs), which have shaped official responses to Delhi’s hazardous air pollution. King (2010) has further argued that research into the political ecology of health is useful to interrogate how health discourses are produced by key actors and institutions, and to show how health is shaped through the relationship between social and environmental systems. For example, Mulligan *et*

⁶⁷ Yet, King has argued that Mayer’s focus in this paper was still on disease ecology, rather than an explicit political ecology of disease. Thus, it is only in the past decade that the political ecology of health and disease has been developed as a conceptual framework in its own right.

al., (2012) has assessed how a political ecology of health framework can be used to understand how dengue epidemics in Malaysian cities are shaped at the interface between environmental health and urban governance. The authors use research conducted in the administrative capital of Putrajaya, to highlight how the management of health and disease is absent from mainstream urban planning and governance. As I will discuss further in this chapter, this has also been the case in George Town, where government officials have not taken into account potential health hazards stemming from swiftlet farms in their regulation of the industry.

Some scholars working on the political ecology of health have already begun to use landscape as an analytical lens to consider how various discourses of health and disease can become materialized in the landscape (see King, 2010; Mulligan *et al.*, 2012; Parizeau, 2015). This focus on landscape is important, as Nash (2006: 8) has asserted, to examine the political ecology of health ‘without reference to specific landscapes is to assume at the outset that landscapes do not matter’. Moreover, she argues that previous understandings of disease, including disease ecology, did not ‘fully encompass individuals’ experience of disease or place’. For instance, Harper’s (2004) study on air quality and respiratory disease in Houston demonstrated how local understandings of respiratory health often contradict official determinants used in assessing environmental health, and thus differentially shape people’s interactions with their environment.

The concept of landscape has been used in previous health and medical geography studies since the 1990s in order to explore inter-connections with work in the cultural geography tradition (see Gesler, 1992; Gesler & Kearns, 2002; King, 2010; Parizeau, 2015). Indeed, political ecology and health geography both share an interest in places and landscapes, which makes the political ecology of health a useful conceptual lens for this chapter. For instance, discourses of health and disease are also bound up with the ‘moral landscapes’ of particular places and regions, and can be politically motivated to achieve particular ends (e.g. Brown, 2015; Notzke, 2013; Proctor, 1998; Thompson, 2010). Moreover, I maintain that the landscape concept can be utilized in seeing disease as not only determined through biophysical factors, but also constructed out of a particular set of social relations, lived experiences, which are mediated through the landscape. In this light, political economic factors, socio-ecological considerations, and health discourses constitute equally important factors in shaping health decision-making.

7.3 ‘In a Fluff’ Over Swiftlet Farms⁶⁸

Like any reared animal, house-swifts are messy, smelly potential sources of infection transmissible to humans. Anyone who cares to visit the vicinity of a swift hotel can attest to the unhygienic conditions. In fact, I know of no owners who choose to stay nearby (Tan, 2007: 29).

As the above quotation suggests, health concerns have been one of the most frequently occurring reasons cited in newspapers, blogs, and personal interviews supporting the removal of swiftlet farms from urban areas. As Nash (2006: 9) has put it, ‘the material qualities of a specific landscape are critical to the production of certain diseases: local habitats that support anopheles mosquitoes, warm temperatures that allow the survival of parasites and bacteria, [and] the material and biological conditions of human communities’. These conditions have all been linked to urban swiftlet farms in Malaysia, because of the general features of the premises which were described in Chapter 1. Of particular focus is the effluent that is often emitted from buildings, including guano, mildew, mould and associated forms of bacteria. The stagnant pools of water inside, or on top of the farms have additionally been labeled as potential sources of dengue due to the ideal environment that they foster for mosquito breeding. Moreover, the noise emitted from the buildings - and the birds inhabiting them - have also been argued to negatively affect mental health and seen as general sources of nuisance. However, as mentioned above, there have not been enough scientific studies conducted to support (or disprove) these various claims regarding the ability of swiftlets or swiftlet farms to spread infectious disease.

Therefore, I argue that swiftlet farming in Malaysia has, over the past 12 years, been embedded in an episode of ‘acute collective anxiety’ set off by reported risks of dengue fever, avian flu, and other disease outbreaks that could be triggered by the activity in urban areas (Beardsworth, 1990; Freidberg, 2004). Much of this has to do with how swiftlet farming has been represented in the mass media, but also in outputs by activist groups, which have highlighted the dangers of swiftlet farming in urban areas.

This fervor, however, has little to do with actual danger, given that the links between such diseases and swiftlet farming often have little scientific backing. As a 2008 report on the

⁶⁸ Title adapted from Chok & Bhatt (2006).

swiftlet farming industry put it, ‘this is generally and naturally a misconception or self-fear of the public towards something new due to ignorance and lacking in in-depth understanding’ (Lim, 2008: 21). Rather, what alarms people is that the risks hidden within the (at one time) rapidly growing industry are neither well understood by science nor properly regulated by government. A fundamental friction has therefore arisen over the possible risks arising from the industry, and how they are to be determined.

This tension seems to stem back to the fact that the natural sciences have for some time been regarded as *the* legitimate and primary form of knowledge in many societies. Notwithstanding this endemic hierarchy knowledge, however, it can still be observed that lay peoples or popular cultures do generate their *own* knowledges, and that these can differ from and even oppose, expert and elite forms of science. For example, in recent years there has been a growing interest in, and appreciation of ‘other’ forms of knowledge, which have dovetailed with successful critiques of the scientific laboratory (see Latour, 1987). The domination of certain knowledges over others also points to related divides that have been constructed to separate expert and elite from lay and popular knowledges. This has of course also had significant consequences for which understandings of disease - and their causes - become sanctioned as ‘proper’. Many forms of boundary work are involved in the social struggles over which group has authority, and hence over which form of knowing is taken as legitimate. This is especially problematic given that the participants in these struggles obviously all portray their stand-points as legitimate in different ways.

The following sub-sections will now review the primary discourses used in campaigning for the removal of swiftlet farms from Malaysian cities. There have been four central areas of concern that have emerged, namely concerns over avian influenza, dengue fever, lung and respiratory diseases, and mental health or quality of life. However, the risk of each of these health concerns has been fiercely debated by swiftlet farmers seeking to defend their right to the city. The section will thus interrogate the competing claims to consider how the various risks have been represented, and which matters of concern have prevailed.

7.3.1 Avian Influenza

Avian influenza, or bird flu, is a common enough condition for wild and domestic birds. Indeed, as Bingham and Hinchliffe have pointed out, ‘the wide variety of subtypes of influenza

virus provides a large reservoir of viruses that ‘perpetually circulate’ in bird populations’ (2008: 218). The popularized spread of diseases between species barriers, such as the H5N1 strain, which crossed to humans in 1997 (in Hong Kong, with 18 cases) have caused considerable concern that the same could happen with swiftlets as well (see Wong, 2015). As one Penang doctor cautioned in a newspaper editorial, ‘we should ask ourselves why these new diseases are cropping up more regularly than ever in the past decade. Is it because human populations are being brought closer to wildlife due to our own selfish needs to satiate our hunger for exotic animals and their products?’ (See, 2004: np). Another observer (also a doctor), lamented that ‘it seems that the owners of these shophouses are willing to jeopardize the health of their neighbors and the public for monetary gain’ (Ho, 2009: N49). These editorials thus cautiously commended the economic benefits brought about by the swiftlet farming trade, but also cautioned about the ‘unknown diseases’ that the public could be exposed to as a result.

In an open letter sent from Rebecca Duckett-Wilkinson to the Penang State Government on 20 June 2010, she cited a claim from the WHO indicating that, ‘all birds are thought to be susceptible to infection with influenza viruses’.⁶⁹ The letter also cited a report indicating that ‘the avian flu virus could be introduced to swiftlets...from migratory waterfowl, which are thought to carry the H5N1 virus in its highly pathogenic form, sometimes over long distances’ (ibid). These comments highlight the possible transfer of avian flu between species, and the potential for swiftlets to contract the disease, given that they still, after all, belong to the avian family. This was a point echoed by another anonymous resident, who cautioned, ‘birds do carry along with them certain type of viruses that could be fatal to human beings [sic]’ (in *The Star*, 14 May 2003).

Mr. Liang shared some of these same concerns, especially the mutability of viruses between different species. In cementing this point, he asked rhetorically, ‘do you really think that swiftlets can’t possibly carry bird flu? They still share the same water and food sources of other birds, like dirty insects, and live in a human environment which is polluted with all sorts of things. Then you think about what the insects eat, the dirty leftover garbage and other things from the streets, the city is really an unclean environment’ (Liang, interview, 13 No-

⁶⁹ See: World Health Organization, ‘Avian Influenza - bird flu’ www.who.int/mediacentrefactsheets/avian_influenza/#countries, February 2006.

vember 2013). This statement also contains a conflation of ideas about the dirt and impurities often associated with the urban environment, with ideas about the proper place of animals within cities. Such ideas can be seen to contain an implicit assumption that the removal of ‘dirt’ will naturally lead to a more ordered environment (see Cresswell, 1992; Douglas, 1970).

Additionally, Duckett-Wilkinson also discussed how the particular characteristics of urban swiftlet farming, such as the dense clustering of buildings and densely populated farms could lead to the rapid spread of the disease. This point underscores how the particular configuration of the landscape in a particular place can increase risk of disease. In particular, Duckett-Wilkinson cautioned how, by ‘living in such close proximity to one another, contaminated swiftlets would quickly transfer the disease between themselves, increasing the chances for human infection either via direct contact with contaminated birds or contaminated feces, the two most common sources of infection’ (Duckett-Wilkinson, correspondence, 20 June 2010). As Liang also noted, this potential for human infection was considerable given the close proximity of the birds to human populations. In contrast, he pointed out that if swiftlet farms were located primarily in rural or less-populated areas, the human health risk would be much lower - even if the birds were to somehow contract the disease - as it could be more easily contained amongst the swiftlets in that area. Nonetheless, given the absence of such regulation, many respondents worried that the government was not taking these potential risks seriously.

Given these *possible* risks, a George Town resident’s group also claimed in light of the 2013 bird flu outbreak in China, ‘we think the people of Penang need to be warned about the possible risk. The Penang Government is not clearing out the swiftlet houses in inner George Town. Are they waiting for an outbreak?’ (in *The Star*, 14 April 2013: np). Another resident added that, ‘although it has not been scientifically proven that [swiftlets] can harbor the [avian influenza virus], it is always safer to be comprehensive rather than lackadaisical in the practice of preventative medicine’ (*The Star*, 6 February 2004: np). In my interview with him, Liang also recalled a case earlier in 2013 where there was an alleged outbreak of the bird flu virus H5N1 in Vietnam which was blamed for the death of a five year-old boy and nearly 5,000 swifts in Southern Vietnam (see *The Nation*, 12 April 2013). This raised concerns from the PHT who later announced in an open letter on 15 April 2013, that the event proves that swiftlets are indeed susceptible to H5N1. The event also seemingly disproved the former assump-

tion that swiftlets were somehow immune to avian flu, as one prominent swiftlet farming expert once boasted, ‘no health official anywhere in the world has ever found a single strain of avian flu virus amongst swiftlets’ (Chin, 2009a: np).

Given the 104 recorded swiftlet houses in the George Town World Heritage Site at the time, the PHT argued that this event should serve as a warning to the State Government and Malaysian authorities to take the health threats posed by swiftlets seriously and renew their actions to eliminate swiftlet farms from residential areas. Yet, the PHT charged that the Malaysian authorities have been negligent regarding the potential health threats of swiftlet farms, as the deadly H7N9 strain of bird flu, which also emerged in 2013, was being ‘ignored by authorities’ (correspondence, 15 April 2013). This perceived reluctance to directly address and take action on the numerous concerns over swiftlet farming in Penang, and other urban areas in Malaysia, was thus linked to the ‘apathetic’ attitude displayed towards the issue at all levels of government (Cardosa interview, 8 October 2013).⁷⁰ Nonetheless, as Cardosa underscored, ‘this is their responsibility. The government is responsible for the safety and security of the people, and this is a safety issue’ (ibid).

Following these criticisms, the MOH maintained that their reluctance to act on the issue was not due to lack of concern, but rather because there was no proof that these health concerns were legitimate. Responding to an inquiry by Duckett-Wilkinson (on behalf of the PHT) regarding this issue, the MOH stated that ‘the Department of Veterinary Services (JPV) and Department of Wildlife and National Parks (PERHILITAN)...confirmed no cases of avian influenza among poultry or migratory birds in Malaysia’ and: ‘swiftlet enterprises fall under the jurisdiction of the local authorities and JPV’ (MOH, correspondence, 24 April 2013). Indeed, many online sources disputed the fact that the swiftlets in Vietnam died from bird flu and attributed numerous other reasons to the deaths: either that it was a case of poor animal husbandry which led to contamination in the swiftlet house; a farmer (unsuccessfully) trying to raise the birds in captivity; or even a case of sabotage between rival bird farmers (Craig Thorburn, personal communication, 23 May 2014).

Furthermore, previous research conducted by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) conducted in 2005 determined that

⁷⁰ These issues will be discussed in more depth in the following chapter on the regulation of the swiftlet farming industry.

swiftlets are not carriers of the bird flu virus (Chuah *et al.*, 2010). Most experts believe that both birds and humans can only contract avian flu through physical contact with other birds, particularly wild or domestic fowl, which are the primary carriers of the disease (see Bingham & Hinchliffe, 2008). As the CITES report pointed out, there is no common interface between swiftlets and influenza vectors, since swiftlets do not share the same physical spaces as these other animals (see Chok & Bhatt, 2006; Bingham & Hinchliffe, 2008). Additionally, it noted that human outbreaks of the virus to date have been limited in number, and there have been few, if any, clear cases of human-human transmission, which suggests that the current H5N1 virus is poorly adapted to human hosts. Similarly, research conducted by UPM (Universiti Putra Malaysia) on the incidence of the Newcastle virus (a contagious and fatal disease amongst avian species) in swiftlets suggested that the risk of the birds contracting the disease is very low, because they ‘fly at a different level from that of other species’ and do not mix or interact with other species of birds (Chow *et al.*, 2012: 9; see also Lim & Cranbrook, 2002).⁷¹

7.3.2 Lung and Respiratory Disease

A second health concern identified through this research is the ‘extraordinarily high’ incidence of lung disease amongst inner-city residents in the heritage zone, which Duckett-Wilkinson believes is directly correlated to the clustering of swiftlet farms (Duckett-Wilkinson, interview, 22 October 2013). The reason for this is that dried bird droppings have been known to harbor the yeast spore *Cryptococcus*, which forms colonies at 20-37C (making Malaysia’s tropical environment ideal) and is known to cause meningitis and lung infections in human beings through inhalation of the spores.⁷² Moreover, health research has confirmed that the most common bird-related diseases affecting humans are lung infections (Kati Lindstrom, personal communication). Indeed, Duckett-Wilkinson has spoken to several local doctors in George Town about this issue who have verbally confirmed that cases of lung disease are ‘disproportionate’ in Georgetown (Duckett-Wilkinson, interview, 22 October 2013). This point reflects insights about how the environmental conditions in a particular place can influ-

⁷¹ Nonetheless, the findings of this particular research are questionable as the authors only sampled 60 swiftlets within one small population in Perak state.

⁷² Duckett-Wilkinson, open letter, 20 June 2010; citing DeWitt, M.L. ‘*Cryptococcus*’ <http://emedicine.medscape.com/article/215354-overview>.

ence the incidence of disease, and how uneven health landscapes can be produced. Noting concern about the prevalence of bird droppings in Malaysian cities, one resident in Sungai Petani, just north of Penang, noted that ‘vehicles and shop compounds are littered with bird droppings daily and everyone feels a foreboding sense that a health catastrophe is about to happen’ (*The Star*, 6 February 2004). Yet, considerable debate emerged around the question of whether or not these were from swiftlets or other birds.

For instance, according to a 2005 report in *The Star* (3 August 2005), a Perak State Government official cited a claim from the Malaysian health authorities revealing that the droppings were not a health hazard as feared by some. In supporting this claim, proponents of the industry often emphasized the clean and solitary nature of swiftlets in attempting to alleviate public concern over swiftlet farms. As one operator argued, for example, ‘bird house operators practice cleanliness and systematic harvesting in order to assure that the swiftlets return to their bird house, and to produce high quality nests’ (*New Straits Times*, 11 September 2009). Similarly, an article titled ‘Swiftly Growing’ in the *Star Metro* cited a claim from Carol Loh stating that ‘swiftlets like clean premises’ and, accordingly, ‘the [swiftlet] houses are cleaned weekly’ (Tan, 2010: M4). Therefore, the President of the Malaysian Bird’s Nest Merchants Association (BNM), Lim Theam Siew, argued that they should be allowed to regulate the industry, since they oversee a large number of swiftlet farmers as their members. As he put it, ‘we have the experience and can educate operators on the proper way to set up and maintain ‘bird-houses’. We teach them how to keep their premises clean and to ensure the nests are collected only when the chicks leave’ (in Chok & Bhatt, 2006: 7). However, it has been pointed out by various stakeholders that merchants’ associations, such as the MBNMA, do not have much control over their members, and also that their members only represent less than half of all swiftlet farmers in a given area. This was acknowledged by Loh in response to complaints against ASNI, and insisted that they were only able to control their members, and could not be held responsible for non-members (Cardosa interview, 8 October 2013).

In response to previous complaints of bird droppings found outside swiftlet farms, Loh claimed that these ‘are actually that of the pigeons, as swiftlets are very particular and only release their droppings in the house’ (in PLGCF, 2010: 14). Furthermore, Loh made the (possibly exaggerated) claim that, ‘5000 tests have been conducted over the course of 10 years, and JPV can confirm that no dangerous pathogens have ever been detected in swiftlet drop-

pings', rather, she attested, 'pigeons and crows are the culprits, producing acidic and pathogenic droppings' (ibid). Such claims were encountered repeatedly during my fieldwork, yet was also refuted by both critics and proponents of the industry alike. For instance, Duckett-Wilkinson challenged in a response to the *Star* article, 'I do not see any of the houses around me being cleaned on a weekly basis and maybe [Loh] would like to explain the green slime oozing from the back of 21 China Street - a very large swiftlet house' (correspondence, 20 January 2010). Responding to Loh's claims about the droppings, she argued, 'I can assure you that the swifts do defecate whilst they fly about and you can see their droppings, which I need to scrub off with disinfectant from all surfaces of my home. I can assure you also that I certainly do not have hundreds of pigeons defecating on my property everyday' (ibid).

In a similar fashion, many other residents raised concerns about the effluent from swiftlet houses, which is often dumped into (largely uncovered) city drains, along the sides of streets. One respondent elaborated on this danger by noting that 'bird hotels are well ventilated. Some have exhaust fans on rooftops. Dried bird droppings, dried skin and muck are disposed of through these fans. The naked eye may not be able to see these fine airborne particles. Those living nearby breathe and eat this muck. These particles are also virus carriers' (*New Straits Times*, 9 September 2009). Such conditions would clearly have broader health implications, such as the potential for lung infections or other bacteria-related diseases. Yet, as Braun (2008: 251) has argued, such 'absent actors' have been by and large banished from many official understandings of urban health, even as they actively shape it. These deleterious aspects of the swiftlet farming industry was even acknowledged by the Malaysia Bird's Nest Association President, who cautioned that 'some members have no experience in the industry and their operations might cause pollution that would harm the environment and health of residents living near their farms' (in Nathan, 2003: 13). Not surprisingly, then, PERHILITAN's law enforcement director reported that their office did receive numerous complaints about the cleanliness of swiftlet farms in urban areas. Yet, local governments and health authorities in Malaysia have not taken seriously these personal accounts of urban health, which has resulted in the proliferation of such unhealthy urban environments.

A further health hazard are swiftlet farms which operate on the upper story of another business, such as restaurants, cafes, and even hotels. This is something that many stakeholders expressed concerns about, including Chow Kon Yeow, who pointed out that many customers

of these buildings are not even aware of the swiftlet premise above. As he argued, ‘this is totally unacceptable I think...if you put a sign at the top, that says the top is a swiftlet farm, then the customer can choose to go, knowing full well, but deceiving people is not ethical’ (interview, 22 October 2013). Nonetheless, such business patterns are not uncommon in George Town, as there were two restaurants in George Town’s UNESCO zone which had very active swiftlet farms operating on the upper levels during the time of my fieldwork. Furthermore, there was also a hotel in Taiping, Perak, which operated a swiftlet farm on the top story, while the bottom three stories were rented out to human occupants! The health danger of such premises was made clear by Duckett-Wilkinson, who cautioned that the businesses underneath can potentially bring in dangerous fungus spores released from the feces through their air conditioning systems.

Yet, the 2007 Malaysian Swiftlet Farming Industry Report claimed that reports criticizing the cleanliness of swiftlet farmers focus on ‘errant swiftlet farmers’ and are inspired by ‘jealousy and envy of the potential financial returns that such farms may bring’ (Merican, 2007: np). This perception was shared by a swiftlet farmer that I met in Kota Kinabalu, who emphasized that it is in the best interest of swiftlet farmers to maintain clean premises. Nonetheless, fully licensed swiftlet houses are in fact a minority in most Malaysian cities (see Chapter 8). For instance, Duckett-Wilkinson pointed out that (in 2010), there were actually only 29 permits issued in the core UNESCO zone of George Town, despite over 150 recorded swiftlet farms in this area with no permits. Therefore, Cardosa emphasized that the health aspect is an area of major concern, not only because of the poor regulation of the industry, but also because it is not possible to know definitively whether swiftlet farming is a health threat, as there have been no scientific studies to confirm or disprove this.

In this light, swiftlet farming can be considered what Beck referred to in *Risk Society* as a ‘modern’ risk which cannot be easily detected or assessed, and therefore cannot be managed in the same way as more tangible risks (Beck, 1992). As we have seen above, there are strong arguments made both ways, i.e. swifts are clean birds and not health hazards, or, conversely, that as birds they are *potential* carriers of avian flu and other diseases. Therefore, many worry that H5N1 or another avian influenza virus could develop the ability to move quickly through

human populations (see Ali & Keil, 2008; Wong, 2015).⁷³ This has caused a considerable amount of anxiety, which can easily turn into public distrust of government because of the lack of both protection from risk and acknowledgement of uncertainty (Mulligan *et al.*, 2012). This has certainly been the case in Penang, as residents feel that that State Government has not acted quickly or responsibly enough in the wake of such risks and uncertainties. As Liang lamented, ‘I’m sorry to say, but it needs to be a tourist who dies from it - otherwise it won’t make a big enough impact. If it’s a tourist who dies, then it will get a lot of international attention, and will spark serious action on the issue’ (interview, 7 November 2013).

7.3.3 Dengue Fever

Dengue fever is a tropical, mosquito borne disease that is strongly associated with urbanization (Mulligan *et al.*, 2012; Dickin *et al.*, 2014). Cities provide ideal habitats for the *Aedes aegypti* mosquito, its primary vector, which depends on anthropogenic water sources for breeding (ibid). There are three types of dengue fever in humans, including dengue fever and its more severe forms of dengue hemorrhagic fever, and dengue shock syndrome. There is currently no vaccine or cure for the disease, which means that the principal method for controlling the disease is the reduction of breeding sites for Aedes mosquitoes. According to numerous sources, one of the key causes of dengue is rapid urbanization combined with poor or non-existent urban planning (Mulligan *et al.*, 2012; Dickin *et al.*, 2014; Shankar, 2014).

As Duckett-Wilkinson and her family have been personally affected by the industry over the years, she has been quite active in lobbying against the pervasive swiftlet farming in George Town. As she has explained in a letter to UNESCO, ‘this has not been a mindless campaign on my part but has been from a sense of frustration at the lack of recourse to law when it comes to my right as a citizen to have basic health and safety, no fear of disease and no noise pollution etc.’ (Duckett-Wilkinson, correspondence, 5 May 2011). As a result of this experience, Duckett-Wilkinson believes that there is a direct link between swiftlet farming and dengue fever, as explained in the following statements:

⁷³ This transfer can happen through ‘reassortments’ where avian and human viruses can ‘exchange’ genetic material during a co-infection of a host human or through gradual adaptive mutations (Bingham & Hinchliffe, 2008: 219).

The farms around me continue to proliferate, breed evermore swiftlets (the numbers are unprecedented and have become...a nuisance and pest), and continue, I believe, to jeopardize the health of my family. Last October I contracted hemorrhagic dengue with the added complication of H1N1, and without doubt, my life was in danger. I am just thankful that it was not my 13 year old daughter who without doubt, would not have made it (Duckett-Wilkinson, correspondence, 5 May 2011).

Just on China Street [her street] we had 5 cases of dengue but in the small area from China Street. Stewart Lane, Love Lane and Muntri Street, which, according to 2005 figures, have 23 swiftlet houses, there were too many cases of dengue. I personally know and work with 5 of the people who contracted dengue just in this area. There has just been more dengue on our street. This is appalling! Studies have to be done to see if there is a correlation between dengue cases and location of swiftlet farms (Duckett-Wilkinson, correspondence, 5 May 2011).

However, there has been no research done to link cases of dengue to the location of swiftlet farms, despite repeated attempts to get this information from the Penang State Health Department, who seemed unwilling to divulge figures in this regard. Therefore, in the absence of official evidence to support or deny the relationship between swiftlet farming and dengue fever, many swiftlet farmers continue to debunk these concerns by arguing that: ‘a well-run swift farm has no mosquitoes, as swiftlets consume insects’ (Chin, 2009a); ‘swiftlet house owners are often advised to use salt or ABATE (insecticide) to kill all insect larvae in their ponds’ (NSHiGT, 2010); or even that, such ponds ‘have been replaced by humidifiers, which do not allow the breeding of *Aedes* mosquitoes’ (Oh, 2008: np). Furthermore, one Penangite argued in a letter to *The Star*, ‘Dengue fever has been around for a while and during that time, the swiftlet industry was not at this magnitude. So why blame it on the swiftlet industry?’ (Oh, 2008: np). Indeed, dengue is also endemic in neighboring Singapore, where there are no swiftlet farms, so it cannot be tied solely to swiftlet farming. Such proliferation of different opinions about the health risk of posed by swiftlet farms, and the lack of ‘solid factual ground’ on which to base these claims, raises difficult questions about how to act in the face of uncertainty (see Latour, 2013; Mangiameli, 2013). In this way, this case also resonates with Mangiameli’s (2013) study of leukemia in Sicily, Italy, which asked how to proceed in controversies where the ‘factual ground is somewhat slippery’.

Indeed, the question of whether or not swiftlets are in fact a way of controlling dengue has been much debated, as indicated in the foregoing paragraph. For instance, Lord Cranbrook has demonstrated that the preferred foods of swiftlets include winged termites, flying ants,

small hymenopterans including parasitic wasps, and flies and these are found mainly over forest and agriculture (Cranbrook, 2010). Similarly, Duckett-Wilkinson has argued that ‘stagnant pools of water do cause mosquitoes but the birds obviously do not eat these even though there is a misconception that they keep areas mosquito free. The swiftlets are aerial and fly out to agricultural or forested areas to feed during the day’ (in NSFiGT, 2010: np). Likewise, Liang also expressed doubt, in my interview with him, that mosquitoes constitute the main diet of swiftlets, ‘simply because they’re so small...they would have to eat thousands of them to sustain themselves’ (interview, 12 November 2009). The diet of swiftlets also been studied by several swiftlet farmers who have been interested in the possibility of farming swiftlets in a more traditional (captive) manner, but have not found mosquitoes in their diets (Pak, interview, 1 October 2013).

It is true that some operators do take steps to control the prevalence of mosquitoes in their farms, including the use of ABATE in their ponds, or using humidifiers as opposed to pools of water, as I have witnessed in my fieldwork. Moreover, there is some debate amongst swiftlet farmers about the necessity of using pools inside the buildings. Some swiftlet farmers argue that the construction of pools is obsolete, noting that they can be replaced by humidifiers and other appliances in the interests of hygiene (e.g. Lim, 2008; Lim C.K., interview, 7 November 2013). Therefore, as one swiftlet farmer argued in a newspaper editorial, ‘we should not kill an industry or business just because of a stagnant pond’ (Oh, 2008: np). In this letter, he pointed out how swiftlet farmers must be ‘innovative and find new methods to solve the problem’, rather than bringing down an entire industry (ibid). This course of action would thus constitute a compromise about how to deal with the issue, which would satisfy the different interests of the opposing parties involved. Yet, like many counter-claims made to defend swiftlet farmer interests, this potential compromise contradicted the opinion of other established experts in the swiftlet farming industry. For instance, renowned swiftlet farming consultant, Harry Pak, explained in an interview that pools are important for insect generation and even advocates for a ‘wet-floor’ system. In his view, pools are better than humidifiers because the latter can cause the growth of fungus on nests, since they push the air upwards inside a birdhouse which differs from the evaporation of moisture from the floor (interview, 9 November 2013).

Therefore, there is a clear dilemma between the (perceived) need for insect generation inside swiftlet farms - to provide food for the birds - and, on the other hand, the potential health threats created by potential mosquito breeding areas within urban areas. Such divergent perspectives speak to the proliferation of uncertainties with regards to 'proper' swiftlet farming methods, and their impacts on human health and well-being. This situation underscores the need for more scientific research on the industry, and also proper regulation of farms. Swiftlet farmers' associations have attempted to ensure the cleanliness of their members' swiftlet farms, but their members typically only represent less than half of all swiftlet farmers in a given area (Ding T.H., interview, 11 November 2013). Proper regulation of the industry is thus clearly needed to control such matters, but has been extremely patchy and largely ineffective throughout the country, as will be documented in the following chapter.

7.3.4 Mental Health and Quality of Life

Many of the externalities posed by swiftlet farming discussed in the previous sections do not only have a detrimental impact on human health, but also on general quality of life and mental health. This section focuses more on those aspects of swiftlet farming which do not directly impact human health or cause tangible forms of disease. As a key component of this research has been to investigate how swiftlet farms are perceived and experienced in everyday life, I would argue that these less tangible impacts are equally important in the rationale for removing swiftlet farms from urban areas, such as George Town. Yet, it is important to note that these should not be viewed as merely NIMBY ('not in my backyard') or nuisance complaints, but have in fact been linked by some individuals to increased stress levels or other impacts on mental health and well-being, which often are not accounted for in standard definitions of health and, particularly, disease. Indeed, for many people living or working in the vicinity of swiftlet farms, the presence of large numbers of swiftlets living in close proximity to humans was 'offensive to the senses'. This resonates with Philo's (1995: 674) study of slaughterhouses in Anglo-American cities (discussed in Chapter 5), in which he described how the 'dreadful smells and sounds' intrinsic to slaughterhouses, in part, resulted in their ultimate removal from the city. This section thus discusses the sensory impact of swiftlet farming on urban residents, and the perceived impacts upon quality of life in the city.

According to Lim Chan Koon, noise concerns are the primary complaint from people across Malaysian cities, and even outnumber health concerns.⁷⁴ As one Kuala Lumpur resident put it, ‘having the swifts for neighbors is like living in hell. No human being should be forced to live this way. I can’t remember the last time I was able to open my windows for some fresh air. I just can’t take this anymore’ (in Muhammad, 2007: np). This was a common experience of critics of the industry, who did not open their windows for fear that swiftlets would fly in. Moreover, as Duckett-Wilkinson wrote in a letter to UNESCO, ‘on a daily basis we have to put up with these flying over us and their droppings all over our walls, courtyards and out door furniture [sic]. The noise of the birds is appalling, while they are flying around at daybreak and sunset, and is a constant nuisance at night’ (Duckett-Wilkinson, correspondence, 22 February 2011). These concerns do have much truth to them, as the building that I lived in during my fieldwork in Penang was in one of the primary swiftlet farming areas of Penang, and was also a former swiftlet house. Therefore, I also would frequently have swiftlets fly in if I opened the windows, and the noise from the birds was considerable, particularly in the early morning and evening.

However, such noise complaints do not only refer to the noise of the birds themselves, but also to the recordings that many operators used to attract the birds to their premises. These recordings broadcasted swiftlet calls on specially designed sound systems, and were played in the morning and the evenings, which are the most active times for the birds. As one city resident complained in a newspaper editorial, ‘all over these breeding places, noisy recorders are installed to lure the swallows from early dawn till the night. We are, in fact, living with the swallows’ (in *The Star*, 3 March 2005: np). As another George Town resident explained, ‘this has severely affected our quality of life. On weekends, when we look forward to just relaxing at home, we have to put up with the aural assault’ (Lee, 2010: np).⁷⁵ These complaints thus speak to the lived dimensions of urban environmental health that are often overlooked in understandings of health and disease.

Commenting on public complaints that swiftlet houses were causing noise pollution, one Perak State Government official noted that ‘this industry is big but it is noisy’, and con-

⁷⁴ See Figure 1.6, which displays the frequency of different types of complaints.

⁷⁵ Indeed, during my fieldwork in George Town, I was woken up by the sound of swiftlets at 7:00 A.M. each morning, even without the use of recordings (which are now illegal in George Town). Though, in George Town and Malacca heritage concerns have been more prevalent.

ceded that ‘breeders should at least reduce the volume of the recordings’ (*The Star*, 3 August 2005). An open letter by Duckett-Wilkinson reinforced this comment, adding ‘the sound systems used to attract swiftlets by playing amplified birdsong continuously constitutes noise pollution, which is a nuisance for residents of and visitors to George Town’ (correspondence, 20 June 2010). However, since such recordings have been banned in George Town since 2012, she notes, ‘in recent months, the main source of noise pollution is the birds themselves because numbers have soared and are now out of control. The sky above residences in George Town are full of birds emitting piercing sounds especially in the early hours of morning, late afternoon and evening’ (ibid). These noise concerns thus demonstrate the point that indicators of health cannot only be understood in a biomedical sense, but must also take into consideration socio-environmental factors which create unhealthy landscapes.

Yet, one question which could arise is whether such noise pollution is actually linked to mental health and quality of life, or if it is just a nuisance. One George Town resident argued for the former in a 2010 letter to *The Star* stating that ‘research has shown that prolonged and continuous exposure to unwanted noise can have a detrimental effect on one’s stress levels and mental health’ (Lee, 2010: np). This letter was written in response to an article from two days prior announcing plans by ASNI to sue the State Government over the eviction of swiftlet farmers from the inner city. The resident, in turn, responded ‘what about the suffering neighbors? Can we sue the swiftlet farm owners for creating a public nuisance?’ (ibid). Similarly, one blogger on the site ‘noswiftlethousesingeorgetown.blogspot.com’ likened living near swiftlet houses to ‘mental torture of daily shrieking’ (NSHiGT, 2010).

However, as noted in the previous section, swiftlet farmers associations have attempted to vindicate the industry by blaming the complaints on just a few errant swiftlet farmers. As the 2007 Malaysian Swiftlet Farming Industry Report stated in this regard:

Al-
most all the publicity has been negative with the media [selectively] focusing their reporting on errant swiftlet farmers who do not adhere to the guidelines set by the ministry but continue to carry on their swiftlet farming businesses in residential areas, vocalizing swiftlet chirps at over and above the permitted levels as well as not in accordance with the permitted timetable as set out by the ministry, causing public health disturbances, renovating and constructing their swiftlet farms without the consent of the relevant councils and turning thriving townships into low commercial traffic areas by sealing shut their swiftlet farming properties (Merican, 2007).

Furthermore, pro-swiftlet farming lobbyists sought to put the noise issue into context, as one argued, ‘I would rather listen to the chirping of the birds than the deafening music from some shops and the roaring traffic’ (in *The Star*, 7 May 2010). Indeed, the Indian CD and DVD shops clustered in George Town’s Little India also use loud speakers to play popular music and Bollywood movies throughout the day and night, while public food courts in the city often contain live music in the evenings, which affects neighboring residential areas. This contradiction relates to Gaynor’s (2007) historical study on the keeping of productive animals in 20th century Perth, Australia. She found that the complaints mobilized to remove such animals from the city privileged economies of consumption over those of production in the selective regulation and enforcement of economic activity located within the urban area.

Regardless of these counter narratives employed on behalf of swiftlet farmers, it is clear that the discourses presented up to here connect to the concerns raised in previous sections regarding the contradictions, risks, and general ‘unpleasantness’ caused by the presence of swiftlet farms operating in close quarters with human inhabitants. As with avian flu and dengue fever, it is important to note that many residents were genuinely concerned about the medical and moral effects of swiftlet farming in the city, because of the incidence of disease experienced by them and their neighbors. Yet, as I have argued here and in the previous chapter, since these concerns were not quantifiable, they were not acted upon by the relevant health authorities, nor were they seen as grounds for removing swiftlet farms from George Town.

7.4. Conclusion: ‘Matters of fact’, Versus ‘Matters of Concern’

Place, Massey (2005) has argued, is always negotiated, fraught with antagonism and shaped through competing ideologies. If that is the case, she asks, what forms of dialogue may ensue in negotiating these different interests? This statement raises the question as to how the swiftlet farming issue can be resolved, particularly given the highly controversial nature of the industry. In this case, most respondents sought to place responsibility on the state to regulate the urban environment, and protect the health of its citizens. As one resident complained, ‘I always wonder why the Town Council is not taking any action...have we no other choice but to share our homes with these [birds]?’ (Tan, 2009: 22). This lack of effective agency speaks to Mangiamelli’s point about how the power of local people ‘seems to be very limited, with re-

gard to the control that they are able to exert over their environment and over political institutions’.

Though it was never implemented, one suggestion that emerged to mitigate the potential risk of swiftlet farms was for the state to create ‘a hefty annual tax to be paid by each individual urban swiftlet farm until they have moved from the urban areas of George Town’ (Duckett-Wilkinson, correspondence, 20 June 2010). This tax would create a fund for emergency measures which can then be used in the case that there is an outbreak of one of the diseases discussed above, or for environmental disaster cleanup. As she further argued this tax payment also puts responsibility on swiftlet farmers for ‘the maintenance of their farms’ health and safety measures and further reinforces their belief that swiftlet farming in urban areas amongst a dense population, poses no dangers to humans’ (ibid). Moreover, it would seem to be within swiftlet farmers’ own interests to encourage and co-operate with such regulatory measures because it would offset impacts to the surrounding community and allow them to continue there business in urban areas. Such strategies for mitigating potential sources of disease were also highlighted by Mangiameli’s (2013) paper, which underscored the role of moral judgements about those who were allegedly responsible for sources of ‘contamination’, and those who were supposed to prevent potential outbreaks.

Finally, there is the question of how to proceed in the face of insufficient evidence to support or deny the health threats that have been made. Much of the evidence presented by government to downplay health risks is based on reports conducted by JPV or PERHILITAN, which are official supporters and promoters of the industry. Similarly, comments made about the cleanliness of swiftlets and swiftlet farms mostly come from industry representatives and operators, which further implies a sense of bias. Yet on the other hand, many complaints about the industry have come from those who have alternative visions for the types of economic activities that George Town should promote. Therefore, what is needed is an impartial body that can arbitrate in the face of such disagreements. Or, in Latourian terminology, a representative spokesperson in a parliament of things that would adjudicate between ‘matters of concern’ on one hand, and ‘matters of fact’ on the other (Latour, 2004; 2013).

The LPE approach here has enabled an understanding of how controversies over urban swiftlet farming in George Town thus provide a lens through which to examine how control over the look and feel of an urban landscape play out in everyday lived ways. Moreover, it has

also allowed for a consideration of how the political ecology of health literature can be benefitted rather than limited by such contradictions and uncertainties that can emerge through urban health controversies. For instance, it has brought into view the urban(e) limits of George Town, and how narratives of health and disease are used in determining appropriate relations for individuals with their urban environment. By digging into such controversies, I believe that this research can push forward Cook and Swyngedouw's recent call for urban research which can help to 'stimulate a critical - and political - rethinking of the types of city-natures that we want to experience, now and in the future' (Cook & Swyngedouw, 2012: 1975; Swyngedouw, 2009). In so doing, it emphasizes the need for critically evaluating the claims made by competing stakeholders to question how public space should be used, and by whom. After all, what is ultimately at stake in this case is who has the right to the city, which economic activities should be prioritized over others, and on what grounds.

Chapter 8 - ‘One More Year’: Challenges in the Regulation of the Malaysian Swiftlet Farming Industry

8.1 Introduction

This chapter explores the particular legislative and regulatory measures that have been developed to control swiftlet farming across peninsular Malaysia, and the challenges that have been faced in doing so. It begins by considering policies developed at the national level, before narrowing in on the specific case of George Town, Penang. This case was chosen because the Penang State Government has arguably put the most effort into regulating the industry of all states in Malaysia. Yet, at the time of research, there were still a number of swiftlet farms remaining in George Town, despite official government declarations suggesting otherwise, and the fact that the industry was declared illegal in the city as of 2009. This chapter thus probes deeper into this case, by asking why swiftlet farms still proliferate in Malaysian cities like George Town, despite their illegality. Addressing this question allows to bring into focus the ‘fractured, complex, and frequently contradictory character’ of negotiations between various interest groups involved in the formation of urban environmental policies (Desfor & Keil, 2004: 169).

The reasons behind the delay in enforcing the removal of swiftlet farms from Malaysian cities is a question that was posed by one affected Sitiawan resident who complained, ‘I always wonder why the Manjung Town Council is not taking any action to save the environment. Are shophouses also meant for breeding birds?’ (in *The Star*, 14 May 2003). Another resident echoed this frustration, and speculated three possible reasons for this lack of enforcement:

- a) Is it for want of regulations that the authorities find it hard to rein in this fairly new industry?
- b) Is the swiftlet farming industry subjected to licensing requirements mandatory for all business activities? or,
- c) Do the businessmen involved in this particular industry resort to political connections and lobbying to tie the hands of the authorities?

(Tan, 2009: 22)

As I will discuss in this chapter, all of these reasons have played a role in the limited enforcement action that has been carried out on illegal swiftlet farms in Malaysian cities. In addition, and drawing from Mitchell (1994; 2006), I suggest, that the reason also lies in the fact that the landscape is not a 'unitary form', in that it is shaped by various competing interests. In contemporary George Town, landscape has been fought over quite explicitly and vehemently in both the urban arena and the media. As Desfor and Keil (2004: 7) have noted, urban policies are efforts to address social problems, which are inherently socially constructed. This requires a certain degree of social consensus about their gravity and importance, which is not always easy to achieve. Moreover, the urban and environmental conditions which come to be understood as problems - such as urban swiftlet farming - are also tied to normative understandings of what activities are accepted in a particular place.

As a result, an 'uneasy compromise' had to be made by the state, taking into account the economic merits and perceived social threats of swiftlet farming in the city (Walker & Fortmann, 2003). Consequently, rather than merely banning swiftlet farming in urban areas, the government's approach to regulating urban swiftlet farming became more of a cost-benefit analysis between the economic benefits of the industry, versus the urban, social and environmental costs. This shift resulted in part from a deliberate attempt by swiftlet farmers - and some government bodies - to safeguard their interests against challenges by those seeking a healthier urban environment, and more political accountability. Like other studies of urban policy making (Cho, 2010; Desfor & Keil, 2004; Gaynor, 1999; McCann, 1997; 2002; Polk, 2015), this chapter thus seeks to understand the political-economic and discursive elements involved in producing such policy shifts. This task is taken up in the following sections which first provide an overview of the key regulatory frameworks introduced at the federal level in Malaysia from 2003 - 2011, before considering the more specific case of George Town, and the challenges and resistances faced by the government in removing swiftlet farming from the inner city area.

8.2 Legislative Attempts to Control the Swiftlet Farming Industry: 2003-2011

At the early stages of the swiftlet farming industry's history, around the early 2000s, the industry was not yet recognized by the state as a legal business, and as such there were no operating licenses to be granted, which meant that there was a period of unrestrained growth of the

industry. This situation lasted until around 2003, when there were already an estimated 8,000 swiftlet farms across the country, as noted in section 1.6.2. At this time, it was unclear which government department should issue the licenses, and there was also little knowledge about the industry. Furthermore, as mentioned previously, residents not living or working in the direct vicinity of swiftlet farms are unlikely to notice them, meaning that the issue did reach the public spotlight for some time.

As such, Elizabeth Cardoso lamented that the issue of licensing and regulation just fell between the cracks of the different government agencies, such as PERHILITAN, the Ministry of Housing, and the JPV (interview, 8 October 2013). Moreover, as Lim Chan Koon explained, there was a large debate between ministries on which department would have jurisdiction over the swiftlet farming industry. First, PERHILITAN vied for responsibility because they claimed that swiftlets were wild animals and hence they should be the ones to control the industry. Subsequently, the Veterinary Department got involved in the development of guidelines for the industry because the birds were being reared inside buildings ('farmed'). As one writer commented at the time, 'in tried and tested Malaysian tradition, the buck is passed as hastily as a hot potato. The Health Department; the Chief Minister's office; and so on' (Al-Attas, 2002: np). Initially, the Ministry of Science, Technology and Environment (MOSTE) was tasked with developing the first guidelines on the swiftlet farming industry, released in 2003 (see below). However, following the change of MOSTE to the Ministry of Science, Technology and Innovation (MOSTI) in 2004, the responsibility was then passed on to the JPV, which is currently the department still in charge of regulating the industry. As to why these debates over the control of the industry would occur in the first place, Lim explained that since it was such a lucrative industry, there was much incentive for the various government departments to have a stake in it (interview, 7 November 2013).⁷⁶ In this way, there was a clear sense of 'legal ambiguity' at play, which resulted in the ineffective regulation of the swiftlet farming industry right from the start.

⁷⁶ Indeed, even the Tourism Ministry in 2010 investigated the prospect of promoting the birds' nest industry as a new tourist attraction in the country (*The Star*, 8 July 2010). One result of this was the country's only swiftlet farming museum 'Jonker Swiftlet Eco-Park', which was a birds' nest production and processing facility (bird house) combined with a museum, located in the Malacca World Heritage Site. However, at the time of a followup visit in January, 2015, the 'museum' was no longer in operation.

8.2.1 Swiftlet Nest Industry Guidelines (2003)⁷⁷

This first set of guidelines released at the federal level came out in November 2003, in response to the many complaints received by local governments from urban residents who were worried that swiftlet farming activities in neighboring shophouses could affect their health, as discussed in the previous chapter (see *The Star*, 29 September 2004: 19). The guidelines were issued by the (then) Ministry of Science, Technology and Environment, which oversaw swiftlet farming at the time. They were developed in conversation with various agencies and bodies associated with the birds nest industry, including PERHILITAN, the Ministry of Health (MOH), the Department of the Environment and the Malaysian Bird's Nest Merchants Association (*New Straits Times*, 12 June 2003). The guidelines also called for registration of all swiftlet farmers, which required a total of four licenses in order to operate: three for the collection, sale and trade (import/export) of edible nests, to be obtained from PERHILITAN; in addition to an operating permit from the relevant local authority (*The Star*, 15 June 2003; Government of Malaysia, 2003: 5).⁷⁸ The guidelines required swiftlet breeders to comply with the guidelines by December 31st of 2003, or else they would be liable to a fine up to RM 2,000 (\$600).

Despite the general government stand in Malaysia supporting swiftlet farming as a viable industry for building the national economy (as discussed in Chapter 4), the government also needed to account for residents who could be adversely impacted by the business. These federal guidelines served as a foundation for local governments across peninsular Malaysia to establish their own regulations on the industry, requiring the need for collaboration between the various local councils, relevant ministries, and the Federal Government in implementing them. The importance of this point was emphasized in a report by BWM, which argued that officials 'must ensure that local authorities throughout the country have a consistent policy regarding the development of this industry' (BWM, 2002: np). Indeed, most state governments saw the need for stringent but fair guidelines, as the Perak State Chief Minister stated upon the release of their own guidelines, 'the government does not want to destroy the bird's nest industry and the livelihood of those involved in this venture' (*The Star*, 3 August 2005:

⁷⁷ Malay: *Garis Panduan Perusahaan Sarang Burung Layang-Layang*.

⁷⁸ The combination of these licenses cost between RM 2,000 and 6,800, depending on the location and floor area of the premises used (Tan, 2005).

np). Yet, while supporting the entry of more people into the business, he also emphasized that ‘we do not want the industry to create a nuisance and health hazard to the public’ (*The Star*, 15 December 2005: np).

In order to reduce the nuisance and health-related externalities of the industry, the guidelines sought to restrict swiftlet farming to agricultural or light industrial areas and stated that they should not be allowed in housing, public and recreational areas. Furthermore, they stipulated that swiftlet farms should be located ‘no less than 100 meters from any other building’ (Government of Malaysia, 2003: 5-6). They also sought to protect the country’s vast stock of heritage buildings, by explicitly prohibiting the conversion of heritage buildings into swiftlet farms. The guidelines further prohibited the dual use of buildings as swiftlet farms and restaurants or food processing sites, which was a phenomenon discussed in the previous chapter. Finally, they stipulated that renovations of any other buildings must obtain approval from the local council, and needed to fit in with the general ‘character’ of the surrounding area (ibid).⁷⁹

The guidelines were thus lauded by NGOs such as the Malaysia Nature Society (MNS), which stated that they would help to ‘prevent further unhealthy practices and abuse by farmers’ (*New Straits Times*, 12 June 2003). The guidelines sought to accomplish this with various clauses to control the potentially harmful effluent and waste being generated by the farms. The first of these stated that ‘the floors and walls of the building (on the bottom story) should be constructed from materials that are waterproof, are easy to clean and can avoid contamination of the surrounding area by absorbing pollutants’ (Government of Malaysia, 2003: 7). Relatedly, the guidelines stipulated that owners should ‘remove any overgrown shrubs, mould, debris and other impurities that can contaminate or interfere with the cleanliness and beauty of the building and its surroundings as a whole’ (ibid: 8).

The guidelines also contained a number of clauses intended to reduce the potential risk of meningitis and lung diseases spread from the guano inside the farms. For instance, they required that the building interior and surrounding environment ‘should always be clean, especially from bird droppings excrement’ (ibid: 8). In addition, they required that ‘each room of the building should be provided with a sealed rubbish bin and all waste should be put in plas-

⁷⁹ This included limitations on building height and designing the facade of the buildings to ‘fit’ within the surrounding area.

tic bags before being added to the bins' (ibid: 7). It can be interpreted that the waste referred to here is guano, which implies the need for regular cleaning of the premises. However, the guidelines did not explicitly state how often a particular premise should be cleaned by the operator.

In relation to the concerns regarding dengue fever, discussed in the preceding chapter, the guidelines also sought to limit the breeding of mosquitoes in swiftlet farms by prohibiting the building of a pond or water tank on top of the farms. Instead, all operators were required to use 'modern equipment that can control the temperature and humidity regularly as the use of electrical humidifiers' (ibid: 8). Furthermore, operators were required to manage their buildings in such a way so as to 'not cause nuisance problems that can adversely affect public health such as bad odors, mosquitoes, flies and other vectors / disease-carrying insects' (ibid). Finally, the use of recording systems to attract the birds was explicitly prohibited. If any premise was in breach of any of the above requirements, the guidelines give the city council or relevant government agencies the right to 'break into the premise and confiscate any birds, nests, or equipment that is a potential source of disease' (ibid). Each of these clauses, if properly enforced and carried out, would thus eliminate the public concerns that were identified in the previous chapter.

The industry guidelines were welcomed by most stakeholders, but there were still some aspects that were criticized by various groups. In particular, swiftlet farmers associations and even some politicians considered the guidelines to be 'not logical' (Tan, 2005: 6). Malaysia Bird's Nest Merchants Association (MBNMA) President Lim Thaeam Siew, for example, complained that the government agencies in charge of formulating and issuing the guidelines 'do not understand the industry' (in Chok & Bhatt, 2006: 6). In demonstrating his point, Lim pointed out that 'one of the requirements...is a fire escape. But why is that necessary when the only occupants are birds?' (ibid).⁸⁰ A Perak government official echoed these claims, arguing that 'the clauses were so stringent that no one will be able to sustain the business [sic]' (in *The Star*, 3 August 2005: np). Furthermore, swiftlet farmers were upset about the cost of all the licenses required, which would amount to over RM500 (\$150) annually. They also urged the government to simplify the licensing process so as to allow the industry

⁸⁰ Indeed, the guidelines did stipulate that annexes or additions to buildings should be done in accordance with fire and safety requirements, including the need for fire extinguishers. Though, this was intended to reduce fire risk to neighboring buildings (Al-Attas, 2002).

to grow even faster (Jamin, 2009: np). As I will discuss in the following section, the number of licenses involved, and different agencies responsible for issuing them did create a considerable amount of criticism from both proponents and opponents of the industry for various reasons.

8.2.2 Premise License Application Guidelines for Swift Nest Operators (2005)⁸¹

Despite the strict nature of the 2003 guidelines, it was estimated that by 2005 there were an estimated 10,000 swiftlet farms were operating illegally in Malaysia. This claim was made based on a statement from PERHILITAN which indicated that they had not issued any permits for swiftlet farms since 2003. As the Director of Law Enforcement explained, ‘we can’t issue our permits until [operators] can get a license for their premises from the local authorities’ (Henry, 2005: 4). Despite official recognition of the need to have consistent policies on swiftlet farms across the country, as mentioned in the previous section, this did not take place in reality. Rather, it was up to local councils to enforce the federal guidelines as they deemed appropriate, which created a patchwork of legislation across the different states and municipalities of Malaysia. Moreover, some states such as Penang and Perak issued their own policies and regulations for swiftlet farmers, as I discuss in the next section, which created further confusion and ambiguity amongst operators as to what was required.

In an attempt to make the licensing requirements clearer, the Ministry of Housing and Local Governments (KPKT - *Kementerian Perumahan dan Kerajaan Tempatan*) released the Guidelines for Premise License Application for Swiftlet Nest Operators in October 2005, which provided a step-by-step guide for getting swiftlet farms licensed and registered.⁸² This document made reference to the 2003 Industry Guidelines, but a number of the requirements for operators were made considerably less stringent, perhaps in response to the swiftlet farmers’ complaints discussed above. While this document was released in late 2005 for implementation from the following year, existing premises were given two years to comply with the requirements. Moreover, some specifications were stated that they would only come into force at ‘some point’ in the future, to be notified by the ministry. For instance, one of these was the

⁸¹ Malay: *Garis Panduan Permohonan Lesen Premis Perusahaan Sarang Burung Walit*.

⁸² Now known as the Ministry of Urban Wellbeing, Housing and Local Government.

requirement for swiftlet farm operators to submit a course completion certificate, from a certified course on swiftlet farming operated by the government or JPV.⁸³

A number of things that were explicitly prohibited in the 2003 guidelines, such as the use of heritage buildings, siting in urban areas, and the use of sound systems, were permitted in this version, subject to some qualifications. As for the use of heritage buildings, it was noted that any operators wanting to use heritage buildings would have to seek approval from Badan Warisan (BWM) before applying for a licensing permit.⁸⁴ There was no specific language banning swiftlet farms from urban areas, but simply stated that ‘fully residential buildings’ were not allowed to be used (KPKT, 2005: 2). On the use of speakers, the guidelines stated that they were allowed, but ‘must be mounted facing the sky at a minimum of 60 degrees away from the ground’ (ibid). Moreover, recordings were only allowed to be used between the hours of 7 a.m. and 7 p.m., and not louder than 40 decibels, as measured six meters away from the building. Despite these changes, the standards of cleanliness were kept more or less the same, requiring regular removal of bird droppings, the use of humidifiers rather than pools, and the removal of odors, mosquitoes and other insects.

This edition of the guidelines came out of bi-annual meetings that Cardoso had been attending with different stakeholders in the swiftlet farming issue, but she said that they were ‘very closed’, which resulted in many of the shifts in policy from the 2003 edition (interview, 8 October 2013). For instance, the stance on the use of recordings was considerably softened, which drew criticisms from many city residents due to the nuisance and mental health effects discussed in the previous chapter. Moreover, many stakeholders (including swiftlet farmers) argued that it is unnecessary for swiftlet farmers to play the recordings all day, as they are only needed in the evening when swiftlets are returning to their nests. In addition, the relaxing of the guidelines in relation to heritage buildings drew criticism from heritage groups, such as BWM, due to the concerns outlined in Chapter 6. Yet, heritage NGOs were also concerned about the effects of the shifts in policy, and the unevenness of their application across the

⁸³ However, Lim Chan Koon told me, that when the Sarawak government (Malaysian Borneo) introduced licenses for swiftlet farmers, they required potential farmers to get a license, and to do so they would need to become ‘certified’ and take a ‘course’ which was run by the husband of one of the veterinary department officials, who was by no means an expert in the industry. He thus doubted the legitimacy of the course and the information contained within it, which speaks to the corruption inherent within the Malaysian swiftlet farming industry.

⁸⁴ Interestingly, BWM was referred to as a ‘technical agency’, which would consider the use of heritage buildings as swiftlet farms on a case-by-case basis.

country. As Cardosa further argued, the guidelines also needed to take into account the enforcement of the policies put forward, so that they are enforceable and that there are the requisite resources to do so (ibid).

Yet, despite the relaxing of the guidelines in this version, the Malaysian Association of Swiftlet House Owners were still unhappy with the requirements needed to operate. In fact, they even questioned the need for the guidelines all together, as Penang Member of Parliament (MP) Phee Boon Poh, representing swiftlet farmers' interests, charged that it is 'unfair to fine breeders 10 times their building plan fee if they do not submit the plan. Is there a fair court in the world that does this?' (Tan, 2005: 6).⁸⁵ He also complained that newcomers to the industry would be 'financially crippled if they have to pay a RM2,000 (\$450) fine'. Similarly, the Malaysian Swiftlet House Owners Association report questioned the need for licenses altogether, stating that 'we are doubtful if there is a need for a premise or a business license. After all, the birdhouse is still an empty house with no business or trading activities inside' (Lim, 2008: 12). In justifying their argument, the report cited Indonesia and Thailand as 'exemplary cases' which, 'are not issuing licenses to inconvenience and restrict the birds' nest house farming' (ibid).

The rhetoric employed by the Swiftlet Farmers' Association also played on the difference between the 'natural' and 'artificial' forms of birds' nest cultivation, in attempting to avoid registration and licensing. As the report claimed: 'we maintain that Perhilitan does not have any jurisdiction or authority on the handling of the cultivated birds' nests from a man-made and privately owned property. Such type of license is only applicable to the birds' nests harvesting in the caves' (Lim, 2008: 14, original emphasis). This claim is interesting given the Association's view that since they are harvesting nests from buildings, and the birds are thus semi-domesticated, it is somehow not a 'natural' process. The report thus went on to argue that the collection of any fees on the cultivated nests from a 'man-made' swiftlet house is 'illegitimate, illegal [and] unjustified' (ibid). These claims constitute another example of how rhetorics of nature were used by various stakeholders throughout the debates over the urban swiftlet farming industry in order to support their positions.

⁸⁵ In response to this claim, it was pointed out by the Government that this fee applied to all business owners, and not just swiftlet farmers, thus was not 'unfair' (Lim, 2008: 12). I would add that the rationale of imposing fines is to encourage operators to adhere to the guidelines. Moreover, given that the price of birds' nest at the time was between RM 5,000 - 6,000 (\$1,100-1,400), the fines were not too disproportionate (*The Star*, 29 September 2006).

In supporting their case, the Association's report also claimed that 'all birdhouse owners are indeed doing PERHILITAN a favor by helping to increase and conserve the population of the natural swiftlets in the wild which PERHILITAN has tried but failed in the past decades' (ibid). This claim made reference to the earlier status of swiftlets as endangered species in Malaysia due to the unsustainability of cave-harvesting practices in Borneo, which was discussed in Chapter 4. As I noted, it is true that swiftlet farming did help to increase numbers of swiftlets back up to healthy levels, but, as some stakeholders have suggested, the uncontrolled growth of swiftlet farming over the past fifteen years has in fact created the opposite problem. That is, some view that swiftlet farming has artificially raised the population of swiftlets beyond healthy levels, hence the need for regulating the industry.

Nonetheless, due to the cost of registration and the (perceived) inability of swiftlet farmers to comply with the guidelines, it was estimated in 2009 that 90% of swiftlet farmers were operating without a license (Foo & Balan, 2009). As one Veterinary Services Officer noted, 'unlicensed breeders have not made any attempt to apply for relevant permits from the local authorities before converting buildings' (*The Star*, 11 March 2009). Therefore, eight years after the publication of the first set of guidelines on the swiftlet industry, the government released an updated version of the guidelines. in a renewed attempt to control the industry. However, as I will demonstrate, this edition of the guidelines actually reduced the stringency of the requirements even further, which generated considerable frustration on behalf of those negatively impacted by the industry and exacerbated the externalities posed to neighboring communities.

8.2.3 Guidelines for the Swiftlet Farming Industry (1GP) (2010)

This most recent edition of the guidelines, *Guidelines for the Swiftlet Farming Industry*, commonly referred to as 1GP (1 *Garis Panduan*), were developed by the MOA, and published by the JPV in January 2011 (MOA, 2011). This edition marked another strong shift in policy, which granted the swiftlet farmers even more liberties.⁸⁶ As many interviewees lamented, the process for developing this edition of the guidelines was even more closed, barring the participation of any heritage groups or even municipal council officers, which resulted in a set of guidelines which were perceived to be extremely biased. Though the use of recordings was

⁸⁶ Malay: *Garis Panduan Pembangunan Industri Burung Walit*.

banned during the day, only allowing them to be played between the hours of 7 to 10 a.m and 5 - 8 p.m., other policies seemed to ignore the concerns of residents and other stakeholders.

First, there were some changes to the permitted locations of new swiftlet farms. The policies controlling rural swiftlet farms were quite specific, including banning them near schools, health clinics, places of worship, playgrounds, environmentally sensitive areas, watersheds and protected forest reserves. Yet, this was the only policy in the guidelines in the interest of protecting public health. All of the policies from the previous editions regarding the collection of guano, and cleaning of the premises were dropped in this version. Moreover, the guidelines had very little policies regulating the location of urban swiftlet farms. As with the 2005 edition, swiftlet farms were still permitted in urban areas, subject to licensing approval, but the minimum distance from other buildings was reduced to 50 meters. There was the vague clause that ‘the location of swiftlet farming premises is not allowed to be at the central point of clusters of urban activity’ (MOA 2011: 14). However, this clause only pertained to new buildings, as ‘existing premises in the CBD of cities are allowed to continue operating until a period to be determined later’ (ibid). The 50 meter distance requirement clearly contrasted with the 100m policy as stated in the original (2003) version of the guidelines, which generated further complaints from local residents. For instance, one Penang resident complained that this stipulation was actually a loophole, since most shophouses in Malaysian cities can be classified as either commercial or residential buildings due to their historic function as both residence and commercial premise (Tan, 2009: 22). Relatedly, Duckett-Wilkinson voiced the concern of whether this implied that the JPV was actually condoning swiftlet farming in urban areas (PLGCF, 2010: 12).

In addition, the policy on the use of heritage buildings was also revised, stipulating that applications for new swiftlet farms in heritage buildings or heritage areas would be considered by a panel consisting of members from the JPV, municipal councils, and swiftlet farming associations. However, apart from one representative from the Department of National Heritage (*Jabatan Warisan Negara* - JWN), not one heritage organization (such as BWM or PHT) was represented on this technical committee. Rather, most members were representatives from swiftlet farming associations or municipal councils. To be specific, ASNI had three members on the committee; three were from the Melaka Birds Nest Association; three from the Veterinary Services Department (JPV); and another three from the Melaka and Penang

Municipal Councils. Contributors to other sections of the guidelines are mostly from swiftlet farming associations, the veterinary department (or other government ministries), and swiftlet farming businesses.

Furthermore, as Chow Kon Yeow lamented, ‘local stakeholders such as heritage groups, the state government and residents, who are likely to be affected by the breeding of swiftlets in their neighborhoods [sic], were not consulted during the formulation of the guidelines’ (in Bhatt, 2010a: np). Most strikingly, the MOH was not consulted at all, which explains the lack of policies related to public health. On the other hand, the Association of Swiftlet Nests Industry (ASNI) was deeply involved in the development of the guidelines. As Chow explained, ‘they were made members of committee to make the guidelines. They were also included in the technical committees to approve applications (for birds’ nest farming). This is a conflict of interest’ (ibid). Similarly Duckett-Wilkinson exclaimed that ‘even Lord Cranbrook wasn’t consulted because he had raised a number of concerns with the last set of guidelines, such as the proximity to residential areas, the sustainability of the trade, etc., and he wasn’t invited back to participate in formulating the new guidelines’. As she elaborated, ‘if you look through the list of people consulted in the process of formulating the 1GP, you see ‘Carol Loh’, ‘ASNI’, ‘Carol Loh’. Even heritage - ‘Carol Loh’, come on, give me a break!’

In response to the complaints regarding the guidelines, the JPV issued a statement that, ‘the swiftlet industry is here to stay. We have received a directive from the Federal Government that it is one of the new key economic areas and will contribute 1.4 billion (\$324 million) to our GDP by 2020’ (PLGCF, 2010: 12). This stance was in line with the position of swiftlet farming as a main area for the MOA and JPV, discussed in Chapter 4. However, it also apparently implied that this economic priority thus superseded the Federal Government’s declaration in 2010 that swiftlet farming would be banned in Malacca and George Town (see following section). Indeed, as an MBPP officer noted, ‘if laws are truly followed, there would be no birdhouses in George Town. It should not be allowed to compromise on heritage’ (PLGCF, 2010: 14). Nonetheless, as with the previous editions of the guidelines, there were also some issues regarding the enforcement of the 1GP, as will be discussed in the following sections with relation to the Penang case.

Part of the reason for this lack of enforcement lied in the fact that each edition of the guidelines were ‘just guidelines’ and not law. For instance, according to Lim Chan Koon,

much of the problem arises because in Peninsular Malaysia there are only industry guidelines to regulate the industry, and not laws. This sentiment was echoed by Elizabeth Cardosa, who argued that the guidelines were not widely enforced because ‘guidelines are just that: guidelines, they’re not law’. Because of this, it is up to the discretion of each state government to decide whether or not they will accept and enforce the guidelines as set out, or in modified or redacted form. In contrast, Lim pointed out that in East Malaysia (Malaysian Borneo), there are very few complaints about swiftlet farms because there are ordinances (laws) controlling the trade in both East Malaysian states (Sabah and Sarawak), and because swiftlet farming is banned in all urban areas. In addition, swiftlet farms in East Malaysia are renovated and operated quietly (and there is not the heritage component), as they do not use tweeters, so they do not attract a lot of attention, unlike in cities in Peninsular Malaysia. Furthermore, all operators there need licenses to operate, and such licenses are only given out in rural areas (Lim, interview, 8 November 2013).⁸⁷

Moreover, the stark shift in policy introduced in this version of the guidelines reflects the mechanisms through which local economies and landscapes are (re)produced, and in whose interests (see McCann 1997; 2002). In particular, it relates to Cho’s (2010) analysis of the contested (re)construction and rebranding of Seoul’s Hong-dae district. Her study found that key stakeholders who had previously been marginalized in local policy-making ultimately became key partners of the city government in (re)envisioning the area. The same can also be said for Malaysian swiftlet farmers, who were incredibly successful in influencing government policies to reflect their own interests. The next section will now focus specifically on the case of Penang, and discuss how these negotiations over swiftlet farming legislation in George Town played out locally.

⁸⁷ See Section 8.5 for further discussion on the problems with regulating swiftlet farming, with particular reference to the Penang context.

8.3 Swiftlet Farming Legislation in George Town: 2005-2014

Penang and Perak were the first states to introduce licenses for swiftlet farmers (followed by Sarawak), with annual licenses of RM500 (\$120) being implemented in both states for the cultivation and trade of birds' nests (*The Star*, 14 December 2005; *The Star*, 15 December 2005). The first legislation concerning urban swiftlet farms in Penang emerged in 2005, when the previous State Government announced that swiftlet farmers would have until the end of the year to clear out of George Town. However, swiftlet breeders in the state thought that this announcement was 'too harsh' and launched a petition in protest, which received 100 signatures from swiftlet breeders in the city (*The Star*, 14 December 2005). This section discusses how swiftlet farming associations managed to use such narratives to position themselves as being marginalized and discriminated against through Federal and State Government policies on swiftlet farms. Yet, the State Government also needed to account for critics of the swiftlet farming industry, many of whom also held considerable political and economic power. The Government thus became 'caught' between these opposing interests, and therefore had to make considerable compromises on their enforcement action, as I discuss here.

In justifying their opposition to the State Government's planned removal of swiftlet farms from George Town, swiftlet farmers argued that the declaration was announced 'with little consideration for the hundreds of swiftlet breeders in the state' (ibid). Therefore, the petition asked for the deadline to be extended to June 2006, to give swiftlet farmers a reasonable period of time to comply and relocate. Accordingly, the government then decided to institute a three-year 'grace period', and gave the final deadline of 2008 to cease operations in George Town's inner city area. This 'grace period' would thus give swiftlet breeders enough time to source new premises and announced that all illegal and unlicensed swiftlet breeders would need to register themselves and submit their building plans to the MBPP during this time. It was also warned that at the end of three years, action would be taken on those who did not relocate, including demolishing their premises (Duckett-Wilkinson, 2011a).

Though welcoming the planned removal of swiftlet farms in Penang's urban areas, some residents argued that the three-year 'grace period' was unfair. As one resident in Butterworth, on the mainland side of Penang state, put it, 'the guidelines released by the Federal Government did not provide any grace period for the removal of swiftlet farms from urban areas... We have been putting up with these swiftlet breeders for many years. Now, despite the

new guidelines from the Federal Government on the business, we still have to put up with them for another three years' (in Tan, 2006: np).⁸⁸ One reason that residents criticized this grace period is that it was not being used for farmers to relocate their premises elsewhere (as intended), but on the contrary, some were actually expanding their operations. As one Butterworth MP argued on their behalf, 'since the council has already given the grace period, it should at least monitor the situation to ensure that the operators do not expand their activities'. Furthermore, the Penang State Government was even offering temporary licenses for operators until they could relocate their premises elsewhere (Tan, 2006).

In addition to these concerns, the grace period eventually proved to be ineffective because of a change of government in Penang, as well as the fact that it went unenforced, which left inner-city swiftlet farms in the unmonitored. During the three-year period of the 2005-2008 'grace period' for swiftlet farmers, MBPP practiced zero enforcement on swift breeding premises, as temporary licenses were issued to operators. Therefore, building inspectors did not interfere with illegal swiftlet breeding operations, and no records were kept of new illegal renovations or illegal swiftlet premises following the 2005 registration exercise (Duckett-Wilkinson, 2011a).

In December 2008, the then newly elected Penang State Government announced that swiftlet breeders would have another year to continue their operations, as they needed time to familiarize themselves with the swiftlet farming situation. However, they did increase enforcement activity from the previous three years. In April - August of 2008, 23 fines were issued to swiftlet farmers for illegal building renovations, or unlicensed operation of their swiftlet premise, which were rarely issued previously. Moreover, the severity of the fines was quite harsh, as they could amount to a maximum of 10,000 RM (\$3,000) each (*The Star*, 2004). Furthermore, in the three months following the announcement of George Town as a World Heritage Site (July 2008), there were 107 notices given to operators to stop activity, and 30 notices issued for illegal building structures. Though the latter figure only resulted in two enforcement exercises being executed by the end of that year, the State Government nonetheless ceased issuing temporary licenses for swiftlet rearing from the end of 2008.

⁸⁸ In fact, the 2005 edition of the guidelines did give existing farms two years to comply with some of the clauses, but the point is still valid, particularly given the continuation of the grace period, as I will discuss below.

In 2009, partially in response to demands from swiftlet farmers, the Penang State Government announced that they would extend the ‘grace period’ for swiftlet farmers until the end of 2009, and that swiftlet farming activities would have to cease by the end of 2010. In justifying this extension, the State Government claimed that it was only because they were awaiting national guidelines on the industry from the Federal Agriculture Department and the Veterinary Services Department (1GP) on how to handle the closure of swiftlet farms (*The Star*, 23 December 2009). Understandably, however, the state’s decision to extend the grace period sparked significant criticism by many residents and civil society organizations in George Town. As Duckett-Wilkinson remarked, ‘the breeders are openly setting up new farms all over George Town; by condoning and allowing this to happen the State Government and Municipal Council accept that they are responsible for any negative impact on public health and environment’ (in Loone, 2010: np). As she explained further, ‘laws are being enforced by the state government on developers, residents and landlords that are trying to revitalize George Town as a residential, cultural, heritage and tourist hub, yet swiftlet farms are being allowed to proliferate freely, beyond the realms of the law’ (ibid). Similarly, Anwar Fazal, of the Consumer’s Association of Penang (CAP) echoed, ‘it is preposterous and intolerable to allow them to flourish hap-hazardously, as is happening now. It is a flagrant declaration of duty by the authorities to allow the situation to continue’ (ibid).

This lack of action thus gave the impression that economic and political factors were more important than health and disease in shaping the State Government’s position on swiftlet farming. Given the threat of negative health impacts potentially arising from the proliferation of the industry in residential areas (discussed in Chapter 7), the PHT sought to place responsibility for any potential outbreaks directly on the State Government. As Duckett-Wilkinson wrote in a press release following the State’s announcement of the deferral:

The State Government as a whole, with the heads of the Veterinary Department and Public Health, be made personally responsible for any environmental and health and safety issues that will arise from the spiraling increase in the population of swiftlets over George Town and the environmental disaster that will take place within the next few years, if swiftlet farms are not removed immediately from our urban areas (correspondence, 20 June 2010).

In seeking to make the State take the health issue more seriously, Duckett-Wilkinson argued that a plan should be made that could be followed in the wake of an outbreak, which she saw to be inevitable. This plan also involved compensation to those affected, as detailed below:

The State Government and the Heads of the Veterinary Department and Public Health will also be personally responsible to pay any compensation required in events of death from any bird related disease, outbreak of disease, as well as the loss of investment made by stakeholders who have put huge investments into the belief that George Town will benefit from it's [sic] UNESCO World Heritage Status...Loss of investment should also include, but not be limited to, being forced to move from buildings because of an individuals fear for his/her own personal health and safety (ibid).

As she further specified, this compensation could be generated from taxes on swiftlet farms, which she proposed as a measure to control the number of swiftlet farms in the city, as discussed in Chapter 7.

These claims seemed to have some effect, because shortly afterwards, on 2 September, 2010, after the 1GP guidelines had been announced (though not yet officially released) Malaysia's Deputy Prime Minister Muhyiddin Yassin, declared that swiftlet farming would be henceforth prohibited from the UNESCO World Heritage Sites of George Town and Malacca (*The Star*, 4 September 2010). These announcements were followed by a declaration by the Penang State Government that all swiftlet farms would have another three years to relocate out of the George Town World Heritage Site. This was the final time that the state extended the grace period and they actively began shutting down swiftlet farms in January 2011. At the start of this enforcement work, there were 121 active swiftlet farms in the inner city: 11 of which were new premises (since 2008); 32 unregistered; 50 registered but unlicensed premises, and; 28 premises with temporary licenses. This comprised four categories of swiftlet houses in George Town, which the Penang State Government and MBPP used in organizing their enforcement actions. Chow stated that the new premises and some of the unregistered ones all voluntarily ceased operations, which made their task somewhat easier (Chin, 2011).

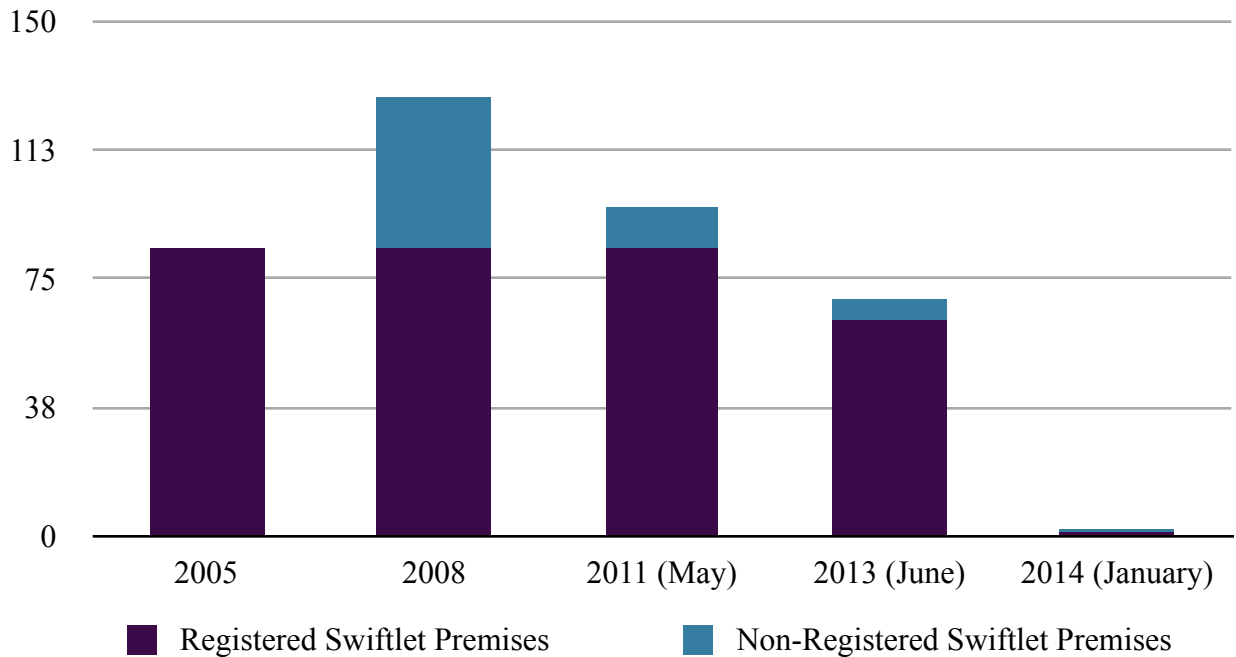
Local enforcement work on swiftlet farms in Penang not only related to active swiftlet houses, but also inactive ones, which had been renovated without building permits. According to the Penang State Government's 2005 registration exercise for swiftlet breeders (see Chapter 1), only 9 of 88 swiftlet farmers reported that they had received a planning permit for all

renovations made to their premises. Due to the deleterious impacts of such renovations on the heritage buildings and overall landscape of George Town, the government began taking legal action on the owners of the buildings who made illegal modifications.

At the outset of the Penang Government's most recent grace period for swiftlet farmers in 2011, the government seemed quite strict on their stance regarding swiftlet farming in George Town's inner city, as Chow put it, 'by lobbying intensively against the decision to stop swiftlet farming in the George Town World Heritage Site, swiftlet farm investors are expecting the wider interest of the state and people to be sacrificed so that their narrow interests can be protected' (*The Sun*, 12 April 2011). Moreover, Chow initially stressed that the state would not wait until the grace period is over before taking action (Tan, A., 2011). As he emphasized, 'swiftlet farm investors should realize that if George Town is taken over by birdhouses, this city would be turned not only into a bird city but a ghost city, which threatens not only its World Heritage Site status but also George Town as the capital city of the state of Penang' (in *The Sun*, 13 April 2011). Therefore, Chow warned, 'those in the industry must also realize who will be responsible if one day UNESCO takes away the listing because of swiftlet farming' (Bhatt, 2011). With such statements, Chow sought to put moral responsibility on swiftlet farmers for the negative impacts caused by the industry.

These measures seemed to have some positive impact, as by March 2011, the MBPP had taken action to shut down 28 swiftlet farms run by 27 operators (Kaur & Yeoh, 2011). Chow emphasized that 'this enforcement action was done as discreetly as possible, so that the public may not be aware that the actions had taken place' (ibid). This was meant to not only reduce the disturbance to residents neighboring the swiftlet farms, but also to reduce any potential complaints about the (mis)handling of the swiftlets. Following these actions, the State Government began further legal proceedings which would force the operators to return the buildings to their original form. This was thus the year that swiftlet farm numbers in George Town finally began to decline, as visualized in Figure 8.1, which graphs the results of the government's enforcement actions from 2005-2014. Note, however, that these are official figures, and do not reflect the actual numbers of swiftlet farms in George Town. For instance, the figures for 2011 seem to match other available data collected from NGOs that year, but the 2014 figures contrast with a personal count conducted at the time (see figure 6.1). This is because the State Government needed to convey to the public that they had followed through on

Figure 8.1: Enforcement Action on Swiftlet Farms in George Town, 2005-2013



their promises to remove swiftlet farms from George Town’s inner city area and thus misrepresented the number of active swiftlet farms still remaining. In fact, Chow admitted to me in October 2013 that there would still likely be some swiftlet houses remaining after the December 31st deadline, but that they would still consider the task to be completed (interview, 22 October 2013). In this meeting, Chow pointed out a number of swiftlet farms which the MBPP still had not taken action on despite phase four of the eradication plan ending in September 2013.

8.3.1 Implementation Plan (2010-2013)

Following the announcement in 2010 of the Penang State Government’s three-year plan to remove all swiftlet farms from George Town by the end of 2013, Duckett-Wilkinson drew up an ‘implementation plan’ for the authorities to follow in carrying out their enforcement actions, in collaboration with renowned swiftlet-ecologist Lord Cranbrook. This was based on her personal experience of shutting down an active swiftlet house (see Section 8.5), and was meant to combat the lack of knowledge prevalent in Malaysia regarding the appropriate methods for closing down swiftlet farms in urban areas. The implementation plan was published in the PHT newsletter, and also sent as an open letter (25 December 2010) to the

Penang State Government and municipal officers. The letter began assertively by stating: ‘please note that the proposed 3 year plan is not and cannot be referred to as ‘a grace period’ for swiftlet farmers to remain in George Town. It is the length of time *required* from the start of implementation to final total removal of all farms’ (emphasis added).⁸⁹

The implementation plan stated that enforcement should begin after the completion of the first breeding cycle of the year, around March, which would ensure there were no (or few) chicks remaining in the nests (Lim, 2011; Lim & Cranbrook, 2010). Once the implementation process began, it mandated a series of important steps to successfully close down the farms. First, ensuring that all swiftlet farms ceased the use of taped swiftlet recordings (‘tweeters’), so as not to attract the birds back. Second, that the entry-windows on all swiftlet farms would need to be netted off during the day to prevent the birds from re-entering in the evening. Third, the premise would have to be fumigated and cleaned, after all nests (and any remaining chicks or eggs) had been removed. Due to the high density of swiftlet farms in the inner city, the plan also recommended conducting the enforcement actions in stages, rather than closing down high density areas all at once. This was proposed to reduce the level of public nuisance in these areas, as the birds could more easily find somewhere nearby to relocate.

The framework which the government used for planning enforcement action involved dividing all swiftlet farms into four categories: A, B, C and D, to be eradicated through four eradication phases (January-March, 2011; January-September, 2011; October 2011-September 2012; October 2012-September 2013) are explained in the table below (Table 8.1).

⁸⁹ Yet, in an interview with Chow Kon Yeow, his reaction to the decision to delay the moratorium for three years was, “hey! Another three years, so we can relax a little bit” - you see the frame of mind of the Government. Because also the swiftlet farmers were lobbying very hard, so ‘OK *lah*, let’s not see each other for another 3 years’ (interview, 22 October 2013).

Table 8.1: Classification of George Town swiftlet farms under the MBPP enforcement framework.
A: 32 registered swiftlet houses (established before 2008), which obtained building plan approvals from the MBPP. Enforcement actions taken on most by September 2013 (phase four of implementation plan), but five remained active at the time of my fieldwork (spring, 2014).
B: 52 registered swiftlet houses (established before 2008), which <i>did not</i> obtain building plan approvals from the MBPP. These were the last premises that the Council took action on (phase three of implementation plan), 11 of which were quite well established and still remained at the time of fieldwork (spring 2014).
C: 11 unregistered swiftlet premises (established before 2008). There were 33 of these in January 2011, and all but six were shut down by September that year (phase two of implementation plan). Four still remained active at the time of fieldwork.
D: 33 new and unregistered premises (built after 2008). These premises were completely shut down by March 2011 (phase one of implementation plan).

8.3.2 ‘Feathers Ruffled’: Swiftlet Farmers’ Resistance to Enforcement Action⁹⁰

At the start of the Penang State’s enforcement actions on swiftlet farms in the World Heritage Site, there was still fierce resistance on behalf of the swiftlet farmers’ associations. As mentioned earlier, this strategy ultimately allowed them to delay or otherwise modify the state’s enforcement action to their own interest. Carol Loh led much of this resistance, arguing that it was ‘unfair’ to ask the breeders to relocate when their bird houses were about to show returns, since some birds’ nest houses only become profitable after four years (PLGCF, 2010: 15). Loh argued that her members had been treated unfairly, because ‘the State Government had announced that we will be given three years, yet action was taken within months. We did not have the time to plan’ (Chin, 2011). Moreover, given the contingent nature of swiftlet farming, farmers argued that there would be no guarantee that their premises would be successful in their new locations, and would require an additional investment of funds to set up. As a result, Loh argued that ASNI members stood to lose up to RM78 million (\$18 million) if they were

⁹⁰ Title adapted from Filmer and Chen (2011).

evicted from their premises in the George Town World Heritage Zone (*The Star*, 24 August 2010).

As discussed in Chapter 5, swiftlet farmers did not only position themselves as victims of the Government's enforcement action on swiftlet farms, but also enforced the impact on the birds themselves. For instance, Carol Loh and other ASNI members also argued for the state to have more consideration for the thousands of swiftlets, which would 'have nowhere to go' if the bird houses were closed en mass (PLGCF, 2010: 14). In addition, Loh emphasized the agency of the birds in justifying their reluctance to move, as discussed in 5.3, by arguing that 'it is impossible for us to move without affecting the birds, and it is not because we do not want to, but we cannot move' (*The Star*, 13 Oct 2010: np). Such comments also implied that the State's enforcement actions were cruel, as they were not only evicting the swiftlet farmers, but also the birds themselves. To this end, one birds' nest retailer in George Town argued that it is 'cruel if their bird houses are shut down just like that. The State Government could [instead] introduce strict regulations to control the industry' (*Star Metro*, 25 February 2011: M4).

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Swiftlet farmers' associations in Penang, convinced of their right to the city, also employed legal tactics in their resistance against the State Government's decision to remove swiftlet farms from George Town. For instance, the Swiftlet Farmers Association of Malaysia lodged a police report against the Penang government over the forceful demonstration of swiftlet houses in the state. As Malaysia Swiftlet Farmers Association President Ang Bak Khoon argued, 'the act of demolishing swiftlet houses is illegal' (ibid). Ang further charged that 'the destruction of these houses resulted in the mass killing of swiftlets, a protected bird' (*The Star*, 28 Jan 2014: np). He therefore claimed: 'this action violates all protection accorded to the swiftlet under the Wildlife Conservation Act 2010', and that they wanted the World Wildlife Fund (WWF) to investigate the killings (ibid). Ang's arguments thus sought to make it more difficult for the State to remove swiftlets from the inner city of George Town, and also to attract the criticism of animal rights activists, which would create negative press reports about the State's handling of the issue. Ang thus urged Chow Kon Yeow to prove that swiftlet hatchlings and eggs were not harmed when removed from the farms, as he put it: 'we want

⁹¹ Yet, this point is also somewhat contradictory given that swiftlet farmers had been strongly opposed to the legislation that emerged to regulate the industry, and were actively involved in weakening them.

Chow to show us where have they kept the swiftlets or whether they have been destroyed' (ibid).

The association thus threatened to apply for a court injunction to stop the authorities from shutting down swiftlet farms in the inner city in March 2014. This caused considerable concern amongst Chow's government, because such a lawsuit would weaken the State's image and also counteract all the efforts that they had taken to remove swiftlet farms from the World Heritage Site to date. However, the Association never carried through on this threat, most likely because they realized that they would have no legal ground to stand on, given that swiftlet farming in George Town was declared illegal at the Federal level in 2009.⁹²

As we have seen in the previous chapters, many of these arguments made on behalf of the swiftlet farmers did not hold much water. First, Loh's complaint about the suddenness of enforcement action reflects the misunderstanding on behalf of swiftlet farmers of the State Government's three-year plan, which did not mean that enforcement would only start *after* three years, as discussed in the previous section. Secondly, in response to the swiftlet farmers' claims regarding lost investments, Chow maintained that 'they should not risk their investments by putting up swiftlet farms in unapproved zones as they would have to face enforcement action for failing to get the required planning and building approval from local councils' (*The Sun*, 12 April, 2011). Accordingly, he added that swiftlet farmers 'should revise their investment strategies in line with the Federal Government's decision to stop swiftlet farming in both Malacca and George Town' (ibid). Furthermore, Ang's claims about the mishandling of the 'protected' swiftlets were also inaccurate. As discussed in Chapter 4, swiftlet farmers actively lobbied for the removal of swiftlets from the Protected Species List in Malaysia, in order to make it easier to harvest their nests. Ang's arguments were thus highly ironic in that the removal of swiftlets from the protected list actually made it easier for the State and MBPP to carry out their enforcement action.

Yet, ASNI also charged that swiftlet farmers were sent mixed messages by the state, since they were 'asked by the previous administration to set up the farms and now the government want us just to move out' (Loh, cited in Kaur, 2010a: np). While 'being asked' may not be the

⁹² The Swiftlet Farming Association made this threat during the course of my fieldwork in 2014, and had an interesting effect in that it sparked cooperation from Duckett-Wilkinson - a former opponent of the State Government on this issue - to ensure that if such a lawsuit was made, the Government had all the evidence that they would need to win the court battle.

correct term, it is true that the previous government called on swiftlet farmers to formally register themselves, as discussed earlier. As such, the stark shift in policy in 2008, where no new licenses were permitted, did allow some room for confusion and noncompliance. However, this is because of the fact that Malacca and George Town were granted UNESCO World Heritage Status in 2008, which triggered this rapid policy shift. As such, it is claims like these that sparked criticism from the industry's opponents such as Duckett-Wilkinson, who argued that Loh (and others) often misrepresented the truth in the media, in an attempt to influence the public's opinion on the matter (Duckett-Wilkinson, correspondence, 2011). Moreover, according to the 'implementation plan' discussed above, there were actually procedures drawn up to manage the move of existing premises out of George Town. Therefore, Loh subsequently agreed to compromise and announced that her members would be willing to move out of the heritage zone if the state could provide alternative sites for them to relocate (*StarMetro*, 15 September 2010). The State obliged with these claims and agreed to move the farms to agricultural areas on the mainland side of the State.

8.4 Cracks in the Facade: Challenges in the State's Enforcement Action

Despite the reasons that have already been suggested for the lack of success in enforcement of the federal guidelines on swiftlet farming (i.e. that they were not legally binding and the government's support of the industry), there were some more practical issues, to which I will now turn. First, there was a significant underestimation of the amount of time taken to clear the swiftlet houses from George Town when the last 'grace period' was issued in 2010. As established in the above implementation plan, the eradication period should have taken place in the first two years, with 2013 being used as an 'enforcement period' to take action on the remaining premises. Though, given the timing of the MBPP's four phases, described above, it seems as though 2011-13 was treated as the eradication period, and 2014 as the enforcement year. Therefore, by the end of the grace period in late 2013, there were still 42 active swiftlet farms remaining, according to personal observations in March 2014. This marked a significant reduction in the number of swiftlet houses that existed during the last official assessment in 2011 (173, or 128 according to MBPP statistics), but still is not quite 'zero' as the State Government proudly announced in the media in January 2014.

Furthermore, as acknowledged by Chow Kon Yeow in an interview, much of this reduction was actually a result of the fivefold decrease in the price of birds' nests since the Chinese embargo on Malaysian nests in 2011 and a similar increase in property values in Georgetown over recent years - rather than due to direct enforcement action on the state's behalf (interview, 22 October 2013). As Chow explained in an interview, enforcement of the national guidelines on swiftlet farming was not easy for local councils to carry out, as the offending premises would often be locked upon the officers' arrival, and they would usually not have the authority to forcibly enter the buildings (see Figure 8.1). The physical resistance that the State Government and MBPP officers have faced from swiftlet farmers and their associations also constituted a significant challenge to enforcement operations. As Mulligan *et al.* (2012), pointed out in their study on official responses to dengue fever in Putrajaya, Malaysia, civil servants in the country are often not respected due to their historically inferior position. Indeed, the MBPP officers have even faced hostility from unscrupulous owners - desperate to protect their investments in their farms - when they have gone to carry out their enforcement actions. As Chow intimated: 'we face fears, because the owners retaliate, this is always a problem doing the enforcement work, they can fight back' (interview, 22 October 2013). This

hostility was also cited as a reason why some residents were afraid to speak out to the media, fearing retaliation from the farmers in question (Khoo, correspondence, 18 May 2011).

Yet, many of the problems were due to problems internal to the local government in Penang. This point was encapsulated by Duckett-Wilkinson's personal experiences relating to an illegal swiftlet farm neighboring her home on China Street. As she explained, the premise was operated by an illegal sitting tenant who had a rental agreement for the property, but no swiftlet farming license, and did not pay rent. Duckett-Wilkinson and her husband purchased this property from the landlord in late 2008, and it subsequently took them two years of court battles to evict the illegal swiftlet farmer and take control of the property. The Penang State Government and City Council did nothing to help them through the process, and the farmer appealed several times before the court finally agreed that the Wilkinsons could take possession. This point reinforces the claims made by critics of the swiftlet farming industry about the ambivalence of the State Government and MBPP towards swiftlet farming, given that they did little to enforce the legislation on swiftlet farming. Furthermore, following the court battle, the Wilkinsons cleared out the swiftlets by following the implementation plan described above, which took two months to complete, thus emphasizing the amount of time and cooperation required to properly close down a swiftlet farm - which was largely lacked by the local government.

Moreover, there was a significant lack of knowledge amongst MBPP officers, who were responsible for actually carrying out enforcement actions. According to one MBPP officer I interviewed, he was under the impression that they should open up the (previously boarded up) windows of swiftlet premises, which was taken directly from the guidelines issued by the Federal Veterinary Department to the MBPP (and other local councils) on how to close down active swiftlet houses. However, this is actually not the correct procedure, because the swiftlets will still fly in and out, regardless of the extra light in the building. Rather, the windows must be closed and netted off, as described in the implementation plan, which would physically deny the birds access to the building. Therefore, it seems as though there was a significant lack of communication between NGOs, experts, and different levels of government when it came to enforcement practices.

Another issue is that the fines issued to illegal swiftlet farming operations were often petty sums compared to the potential income that the buildings would be generating. Despite

the numerous complaints made regarding the severity of fines imposed by the various government bodies, as discussed earlier in the chapter, the fines were actually not disproportionate. For example, one building on Lorong Toh Aka in George Town was only issued with a RM250 (\$60) fine in addition to the removal of the ‘tweeter’ speakers at the outset of the State’s enforcement actions in 2011 (Tan, A., 2011). Yet, one kilogram of birds’ nests at that time could sell for over RM2000 (\$470). Therefore, if the local councils issued larger fines, and actually followed through on collecting them for all of the illegal swiftlet farms, then more operators would likely comply with the guidelines.

Furthermore, swiftlet farming is just one of the many problems faced by both the City Council and State Government, who seem to be overburdened with managing other ongoing issues in the state. For instance, Chow Kon Yeow’s title is the ‘State Executive Chairman of the Local Government Committee, Traffic Management and Environment’, in addition to being an elected MP in the Penang State Assembly. According to Duckett-Wilkinson, who has had lots of experience working with Chow on the swiftlet farming industry, she felt that ‘his heart is in the right place, but he just has so much on his plate. He is a very busy man...he’s got so many issues to deal with that swiftlet farms aren’t really on the top of the list, he’s got to prioritize’ (interview, 22 October 2013). Moreover, Duckett-Wilkinson added: ‘Chow doesn’t really get that much support from the civil service, because they are more partial to the BN [*Barisan Nasional* - the current ruling party in Malaysia], and not the opposition party, so the government is just overwhelmed’ (ibid).

Duckett-Wilkinson has had a number of meetings with Chow Kon Yeow, and said that though his enforcement efforts have been quite commendable, they have been ineffective because the government chose such a broad area to tackle:

I’ve said to him, Chow, why not just focus one street, even if it only has five swiftlet farms. Just choose that street and eliminate all of the swiftlet farms from there. Then at least there will be one street in Georgetown that is free of swiftlet farms, and they can progress from there. Instead, they’ve just been picking random farms in different areas of town, and closing down one here and one there. Also, they don’t really have the time or staff resources, or the authority to properly close down the farms. All they do is go around and open up the windows and remove the sound systems, but that doesn’t stop the birds from going back (interview, 28 April 2014).

Nonetheless, according to Cardosa, the government has demonstrated an apathetic attitudes towards urban swiftlet farms. Referring to the Federal and Melaka State Governments,

her perception is that they simply have different fundamental values regarding the swiftlet farming industry. 'They are just concerned with new development. Old things are just old fashioned, and old equals bad, or not modern, so that is the mindset, and that is the problem. Heritage is not a core value for 99% of the population' (interview, 8 October 2013). Referring to the government's focus on maintaining the UNESCO status in George Town and Malacca, Cardoso lamented that 'now heritage is just seen as a commodity, and only in the sense that it can bring in tourist dollars, but not really respected for the inherent value in heritage buildings themselves' (ibid). This could be seen in Chapter 6, where arguments against swiftlet farming in heritage buildings could partly be explained as an attempt to protect competing interests.

Yet, Cardoso further suggested that the government's inaction on the swiftlet farming issue was not only an issue of apathy, but something deeper. She said she would use 'complicity' or 'collusion', 'but to say that would require evidence to prove', which she did not have. Nonetheless, Cardoso maintained that 'it's a government sponsored industry, which means that the government supports it and promote the economic benefits of it' (ibid). In fact, according to one anonymous PHT council member that I interviewed in Penang, 'the former head of the Veterinary Department (JPV) - a Malay lady - was a supporter of the swiftlet farmers, and paid off by them! Now she's a big official in the Federal Government and has lots of power. She has allowed the swiftlet farming industry to stay active' (interview, 25 February 2014). Similarly, in an interview with Duckett-Wilkinson, she explained that Lim Guan Eng (the Chief Minister of Penang and Chow's superior) 'is apparently very much for the swiftlet farming industry, since he has been influenced by the wealthy Chinese swiftlet farmers (i.e. 'if you close down my farm, you don't get my vote'). Yet, on the other hand, she added that Chow Kon Yeow, 'is not for it', so this creates another difficulty for him in truly enforcing the State's legislation on swiftlet farms (interview, 28 April 2014).

Supporting these comments regarding the perceived collusion between the local government and swiftlet farmers, Duckett-Wilkinson shared an anecdote about the building next to her studio, which used to operate as a swiftlet house on the upper level. She recounted that the tenant would always turn up the volume on the 'tweeters' when she was out of town, because they knew that she would otherwise complain to the MBPP about the noise. One time, she left the country for a few days and when she came back found that the tweeters were on full blast so she called the Council that morning, and within hours the tweeters were turned

off. Therefore, Duckett-Wilkinson inferred that the MBPP officer must have called the swiftlet farmer and said ‘hey, she’s back now, you’d better turn off the tweeters’. Though she felt that the particular officer in question did not have any direct interest or involvement in swiftlet farms, she surmised that he faced pressure from both sides (swiftlet farmers and the general public) and thus tried to appease them both whilst doing his job, ‘which is to close down the swift houses’ (interview, 19 April 2014). However, Duckett-Wilkinson recalled one meeting with city officials where it became clear that one officer in particular clearly had an interest in some of the swift houses, which was later verbally confirmed to her by Chow Kon Yeow. These anecdotes reveal the extent to which the various government bodies responsible for regulating the swiftlet farming industry are actually deeply interested in it. Due to such conflicts of interest, Cardoso concluded that there has simply been no will from the government to do anything about it. ‘It’s a short-sightedness, they see the economic benefits now, but don’t see the long term effects on the urban landscape or public health’ (interview, 8 October 2013).

Identical to my difficult experience in working with the State Government in Penang (see Chapter 3), Cardoso said that when she would complain that a particular building had been converted to a swift house, the government would use the argument that ‘oh, but there are no birds there!’. To Cardoso, however, that is not the issue, ‘whether it is successful or not is beside the point. The fact is that the building has been converted to a swiftlet house, which has irreparable effects on the fabric of the building as a heritage building’ (ibid). Furthermore, Cardoso lamented that this attitude has characterized the government’s attitude to swiftlet farming, not just in Penang, but Malacca as well. For instance, at an international meeting in 2005 in Lijiang, China, in which UNESCO announced the granting of World Heritage Status to Malacca and George Town, there was a large rift that formed between BWM and the Federal Government. This happened because of a question that was raised in the audience regarding swiftlet farms in George Town and Malacca, and the government actually got quite upset with Badan Warisan about that, because they (mistakenly) thought that BWM had planted the question in the audience. The question regarded the impact of swiftlet farms on safety and security in the World Heritage Sites. The government was upset that they would raise the swiftlet farming issue at an international forum like that, because of the ‘loss of face’, which is a

serious issue in Asia. This thus caused a significant break between BWM and the Federal Government, which continued until the time of my interview with Cardoso.

This experience of Cardoso's was similar to my own encounters with the government in Penang. As discussed in Chapter 3, I had a similar experience in which I was confronted by staff from George Town World Heritage Incorporated (GTWHI) regarding information on the number of active swiftlet farms remaining in George Town (from a personal count) that I had sent to UNESCO representatives in Jakarta. The officials that I met with were very upset that I had sent this information to UNESCO because it (in their opinion) belied the active enforcement efforts that they had been carrying out in George Town. According to GTWHI, they had resolved the swiftlet farming issue in the city, and completed all necessary reporting with the Federal Government and World Heritage Office, and now would have to redraft this work in light of my report.

In line with these experiences, Mulligan *et al.* (2012: 618) reported that this attitude amongst civil servants in Malaysia results from a 'culture of secrecy' in the Malaysian bureaucracy, paired with a desire to project a positive image of Malaysia as a 'fully developed' country with a capable and responsible government. As a result, government workers tend to downplay any social or environmental issues, and keep them out of the spotlight. For instance, Mulligan and colleagues quoted one official who advised city residents against reporting to the media about such issues: 'we don't want that to happen. We want them to tell us, not to tell the press, because when they tell the press, then our big bosses, they will jump. So very [much] pressure' (ibid).

Yet, according to numerous accounts, this very attitude has resulted in illegality performing numerous aspects of everyday life in Malaysia. For instance, according to a Penang resident's letter printed in *The Star* Newspaper from early 2010:

The unwillingness of the authorities in Malaysia to enforce laws, regulations and bylaws has become endemic and represents a complete failure of governance that breeds contempt for the law on the part of citizens and government alike...the law these days is mainly observed in the breach. The reason for this is clear. Enforcement is either non-existent or at best selective. The latest example of the government's encouragement of this lamentable state of affairs is the announcement by the Penang State Government not to take action against illegal swift-breeding operations in George Town (Kok, 2010: np).

Duckett-Wilkinson had similar comments, observing that, this extent of this illegality has resulted in the very reason for the continued proliferation of swiftlet farms in Malaysia. As she put it:

Everyone is doing something illegal, so they aren't going to complain. Whether it's blocking the 'five foot ways' - which are public - or making an unauthorized renovation to a heritage building. So I could do whatever I want at my place, and I could say 'f--- off' to the authorities. They couldn't do anything - and how could they? With all the stuff that I have put up with over the years, and the illegal swiftlet farms all around her, with the illegal renovations and add-ons to the buildings (interview, 19 April 2014).

Here, Duckett-Wilkinson suggests that the reason why there hasn't been a broader resistance to illegal swiftlet farms throughout Malaysia is because they themselves are also guilty of doing something illegally. Yet, as discussed above, there are other reasons for this, including fear of speaking out against swiftlet farmers, and a lack of faith in the authorities to deal with the situation. These findings reflect Neo's (2009: 266) observations of the Malaysian pig farming industry, where 'institutions, rules and regulations which are supposed to provide stability and direction...have failed'. He attributes this to the culmination of state-level politics, cultural politics, and problematic socio-cultural relations within the country. Much like the case of swiftlet farming discussed here, rules and regulations have been invoked in an ad hoc manner, which have resulted in the problems at hand. The next and final section will now address the research question set out in the introduction to this chapter, through a synthesis of the regulatory challenges and cultural politics discussed above.

8.5 Conclusion

This chapter has explored the question of why swiftlet farms still proliferate in Malaysian cities, despite repeated complaints from local stakeholders, and the existence of government guidelines intended to regulate the industry. I have focused in particular on the case of George Town, where swiftlet farming has been declared illegal in the city's World Heritage zone since 2010, but at the time of research in 2014, still contained over 40 active swiftlet farms. The chapter has argued that, despite some attempts at evicting the swiftlet farms from the city, this enforcement action has not been successful for a variety of reasons. For instance, despite the existence of detailed guidelines, these have not been enacted as laws, meaning that they are not legally binding. This created a situation of legal ambiguity, whereby swiftlet farmers were encouraged to abide by the guidelines, but it was up for the local governments to decide whether or not to enforce them (see Kuyucu, 2014). In addition, the local governments also lacked the manpower and expertise to carry out the enforcement action required to close down the illegal swiftlet farms, which took a considerable amount of time and sustained effort.

Nonetheless, it has been argued by many that proper regulation of the Malaysian swiftlet farming industry would not only benefit the state through potential tax/licensing revenues, but also would have a number of other downstream and indirect benefits for the Malaysian economy (MBNMA, 2010). For instance, proper regulation could lead to a 'win-win' situation in which swiftlet farms could coexist in urban areas, and perhaps even in George Town and Malacca. However, the regulation of swiftlet farming in Penang, and all of Peninsular Malaysia, has been inconsistent and sometimes non-existent throughout the industry's history, resulting in this coexistence never being realized. Moreover, the situation described in this chapter constituted a conflict of interest, whereby the lucrative nature of the swiftlet farming industry meant that some government officials were actually profiting from the industry's continued growth.

In addition, I have argued that the institutional support for the swiftlet farming industry is not only weak, but also highly decentralized, whereby a gamut of state agencies have been involved in regulating the industry.⁹³ Accordingly, the requirements and enforcement

⁹³ This echoes Neo's (2010) analysis of the problems that have historically confronted the Malaysian pig farming industry, resulting in the fundamental instability of the industry.

action between different states has been quite inconsistent, which has created confusion amongst swiftlet farmers, and meant that the policies have ultimately failed to be effective. This underscores David Harvey's observation that, 'the practices that constitute the exercise of state powers are far from monolithic or even coherent...it is a bundle of practices and processes assembled together in unbounded ways' (2014: 90). This patchwork of legislation indicates the complex nature of legal requirements in Malaysia, which, according to some informants, often results in companies often opting not to acquire all the licenses and permits needed, because it is cheaper (and equally plausible) to operate without them. Similarly, as the last section demonstrated, there have also been different interests even within the Penang State Government. As Duckett-Wilkinson put it, this means that taking action on swiftlet premises in George Town has required a strong degree of 'political will' on the minority of officials who are against swiftlet farming on normative grounds (interview, 22 October 2013).

A final reason for the poor enforcement of the Malaysian swiftlet farming lies in the considerable amount of power and political connections possessed by the swiftlet farming associations, which they used to their advantage in a number of ways. First, they had the economic advantage of the industry being supported by the Local and Federal Governments in Malaysia, which allowed them a significant amount of bargaining power when it came to contesting the policies established by the government. In addition, they were able to use this lobbying power to modify the industry guidelines to suit their own interests, and even became involved in steering committees for the development of the guidelines - to the exclusion of other key stakeholders such as heritage NGOs and swiftlet ecologists. Given how public interests prevailed in early editions of the government policies - which resulted in the strict regulation of the swiftlet industry - this chapter echoes Cho's (2010) insights as to how groups who were previously marginalized in state policy can lobby to shape public policy according to their own interests.

This study thus accords with other studies of urban environmental policy formation in foregrounding the importance of cultural norms and political-economic factors in explaining and shaping institutional responses to particular social issues (Cho, 2010; Desfor & Keil, 2004; McCann, 2002; Neo, 2009). As I have shown, these interests have evolved over time, as opposing stakeholders have lobbied in defense of their competing interests and ideologies. The next and final chapter will reflect briefly on the future of the Malaysian swiftlet farming

industry, while also considering future avenues for research. As I suggest, Malaysia's urban swiftlet farms contain an uncertain future, given their dependence on the Chinese market and unpredictable changes in import policies. Therefore, I spend more time considering other more pressing questions related to urban socio-ecological relations that this thesis has opened up.

Chapter 9 - Conclusion

9.1 Overview

This dissertation has offered an analysis of the contested socio-ecological processes associated with the growth of edible birds' nest cultivation, or 'swiftlet farming' in Malaysian cities. The research is centered around a six month participatory ethnography that took place primarily in the city of George Town, Penang, but also investigated other related sites in peninsular Malaysia. Throughout the eight chapters of this dissertation, I have sought to systematically render into view such socio-ecological problems posed by the urban swiftlet farming industry. The five empirical chapters unpack the controversies and discourses that have emerged in response to swiftlet farming in the study areas, primarily its perceived impact on urban health, forms of cultural heritage, and the wider implications of 'farming' such animals in urban residential areas. While investigating the physical (socio-ecological and material) changes that have transpired over the course of the industry, I have also considered how discourses and ideologies have been bound up with these transformations.

As demonstrated in the empirical chapters, the urban swiftlet farming industry has also significantly transformed the physical form of cities and indeed the nesting behaviors of swiftlets, which also poses important implications for the use of urban space, and the sustainability of urban swiftlet farming as a whole. As Vogel has astutely observed, 'the natural environment is never encountered independently of its social context' (in Mels, 2002: 136). This point encapsulates a plethora of research on the social construction of the physical and natural world surrounding us that has emerged in recent decades (Cronon, 1991; Braun & Castree, 2001; Haraway, 1991; Harvey, 1996; Latour, 1993; Luke, 1999; Olwig, 2002; Smith, 1984). Similarly, the LPE approach applied in this thesis recognizes how swiftlet farming is a form of produced nature (see Chapters 2 and 4), which has transformed not only natural ecosystems and animal ecologies, but also urban landscapes. The landscape component of this framework highlights how such transformations not only affect the physical landscape, but also the moral and cultural landscape of a place. Moreover, it is not only biophysical or material changes that are important, but also the discursive and rhetorical struggles that have contributed to shaping the landscape. As such, this thesis has sought to provide substance for reflection on the inter-

twining of the social and ecological, competing rights to the city, and ‘how to live together’ in an increasingly ‘hybrid’, or ‘cyborg’ world (Latour, 1993; Haraway, 1991).

More broadly, swiftlet farming can be seen as a form of urban agriculture, which, ‘in recent years, has received increasing support as a strategy for food security and urban sustainability’ (Colasanti *et al.*, 2012: 348). Yet, as Colasanti *et al.* note, ‘there is little understanding of how more extensive urban agriculture activities might be perceived among residents or might integrate with the cityscape’ (ibid). Thus, while not engaging explicitly with existing work on urban agriculture, this is one of the broader implications of the thesis, which follows up on the call of Colasanti and colleagues to explore more controversial aspects of urban agricultural activities - many of which have otherwise been portrayed in a largely positive light (see Tornaghi, 2014). For example, Tornaghi’s (2014) review of the urban agriculture literature in geography contained little discussion of work critical of the proliferation of different forms of urban farming. As noted in the introduction, this also constitutes a significant gap in the literature on swiftlet farming, which has not considered the contentious socio-ecological aspects associated with the industry’s rapid development. The remainder of this chapter will provide an overview of the arguments advanced in each chapter, before turning to the specific conceptual contributions that have been achieved throughout this dissertation.

9.2 - Towards a Landscape Political Ecology

This dissertation is underpinned by the overarching assumption that the emerging framework of landscape political ecology holds great explanatory potential for making sense of contemporary socio-ecological transformations taking place through urban swiftlet farming, and their effects upon (urban) ecosystems, landscapes and livelihoods. For that reason, Chapter 2 provided an overview of the synergies between landscape and urban political ecology, and how I see LPE as a fruitful avenue for future research. I argued that a LPE framework can be used to emphasize the crucial ways in which representations of the swiftlet farming industry have been enrolled in the (re)shaping the material and moral landscapes of Malaysian cities, which would be more difficult to achieve with either framework on their own. This is because, as Harper (2004) has pointed out, political ecology in and of itself is not a theoretical framework. Similarly, the most successful landscape inspired approaches have been used in combination with historical materialist, historical geographic or assemblage frameworks (e.g. Cosgrove,

1998; Hung, 2015; Mitchell, 1994; 2003; Olwig, 2002). Given that there have as yet been no sustained attempts to utilize an explicit LPE approach in empirical work, this research has also involved developing a suitable methodological approach for this framework. In doing so, I employed a mixed methods, participatory ethnographic method to ‘tracing the controversies’, which is a mobile, multi-sited approach, drawing on a number of participatory methods in attempting to understand the nature of controversies over swiftlet farming in Malaysia and possible solutions to them (see chapter 3).⁹⁴

Through a sustained engagement with the case of urban swiftlet farming in Malaysian cities, I have sought to reveal several aspects of the socio-ecological transformations which it has brought about. This was the topic of Chapter 4, which answered the research question seeking to understand how the swiftlet farming industry transformed not only urban landscapes, but also the ecology of swiftlets and their breeding patterns. Yet, in order to contribute to future studies on LPE and resource conflicts in cities, I have also sought to extend my analysis beyond the limits of Malaysian cities to consider how local landscape transformations were strongly influenced by political-economic changes in the broader East Asian region. A focus on landscape allows such an analysis, due to its lack of site-specificity and ability to extend beyond places that could be considered ‘urban’. Accordingly, this research can make a contribution to emerging literature on planetary urbanization, ‘cityness’ and ‘methodological cityism’ in urban political ecology (see Angelo and Wachsmuth, 2015; Arboleda, 2015; Lepawsky et al, 2015). To be specific, the LPE approach developed here can demonstrate how urban landscapes are shaped through diffuse processes taking place in many different sites, including those that cannot be considered ‘urban’.⁹⁵ Further research could thus be conducted in explicating how broader networks of production, consumption and exchange articulate with the socio-ecological transformations associated with Malaysia’s urban swiftlet farming landscapes.

⁹⁴ Though, my situation in Manchester - on the other side of the world from Malaysia - limited the extent to which the research could be truly participatory and engaged with local stakeholders in George Town. This is something that I would like to change in future research collaborations.

⁹⁵ For this reason, urban scholars have now begun to think of the city as a ‘space of flows’, to counterpose the earlier idea of an urban-rural continuum (see Castells, 1996; Kaika, 2005; Thompson et al., 2013).

To this end, Chapter 4 also discussed how a Chinese ban on Malaysian birds' nest imports in 2011 had more of an impact on swiftlet farming practices in Malaysia than even the local government bodies were able to exert. Since China dominates the world market for demand in EBNs, the move sparked a sharp crash in the market for birds' nests in Malaysia, pushing many farmers out of the industry. Yet, the chapter also discussed the various reasons cited as the trigger of the ban, which brought to light numerous tensions between Malaysia and Indonesia - the world's largest producer of EBNs - and fundamental social, ecological, and economic problems related to the Malaysian swiftlet farming industry. The chapter thus concluded by emphasizing the usefulness of the 'phantom epistemologies' approach (introduced in Chapter 3), which allows for an examination of the realities and elusiveness that are often inherent in globalized commodity chains.

In this sense, the case of urban swiftlet farming in Malaysia aligns with a relational understanding of cities which recognizes urban areas as complex spaces 'with multiple spatio-temporalities that are at once local and global' (Braun, 2008: 258). While the regulation of swiftlet farms focuses on local practices - hence the authority of state governments and municipal councils to carry out enforcement action on swiftlet premises - a relational understanding of space confounds categorizations of the local, national, and international. As such, swiftlet farming cannot be understood as a 'local' matter - since the networks that constitute urban life 'are at once multiple and stretched across space and time' (Braun, 2008: 265). One of my primary objectives with this thesis has therefore been to make the various socio-ecological transformations associated with swiftlet farming more visible, and in doing so, suggest how the concerns of landscape and political ecology can provide a powerful explanatory framework for conceptualizing these changes.

The diversity of work on landscape and political ecology, as well as the complex implications of swiftlet farming, has necessitated engaging with a number of different topics. This could be seen as one limitation of the thesis, in that the diversity of themes explored has meant foregoing a thorough engagement with any one topic in particular. Yet, I would argue that this is also a strength of the thesis, in that it demonstrates the range of insights that can be gained through the landscape political ecology framework, while also constituting the usefulness of the empirical focus on urban swiftlet farming. For instance, Chapters 5 through 8 drew on insights from other sub-disciplines of political ecology and cultural geography, while em-

phasizing how they were not only complimentary to each other but also considerably intertwined. These chapters thus used the concept of landscape as a form of enquiry to explore the ideological, moral and discursive aspects of the swiftlet farming concept, and their material affects. Specifically, Chapter 5 analyzed how efforts to domesticate swiftlets in Malaysian cities have intruded upon ideas about the proper place of these birds in urban, residential areas. Answering this question involved tracing the discourses circulating throughout my field sites which were either supportive or hostile of the presence of swiftlets in the city. Using empirical findings from the experience of swiftlet farming in George Town and Malacca, as well as a review of other studies of animal domestication in cities, I highlighted the discursive strategies used by various stakeholders to (de)naturalize the presence of swiftlet farms in the city. These representations made it clear how ideologies surrounding the presence of swiftlets in urban areas are strongly shaped by particular understandings of ecological and avian science, environmental sustainability, and property rights, among others. One of the most important conclusions was that swiftlets can be seen as liminal animals in that their presence in cities, on their own, was not a significant problem. Rather, people took issue with the role of swiftlet farmers in attracting the birds resulting in unnaturally high concentrations of swiftlets. As a result, they were ambivalently seen as a ‘natural’ part of the urban environment and straddled the border of inclusion/exclusion (c.f. Ang, 1996).

The purpose of Chapter 6 was to reflect on the research question that concerned the type of labour transformations taking place in the UNESCO World Heritage Cities of George Town and Malacca. To answer this question, I incorporated work from critical heritage studies, while incorporating this work along with insights from the landscape approach utilized throughout the dissertation. Using the case of these two cities, I argue that themes of heritage became the primary factor underlying the controversies over swiftlet farming in Malaysian cities. For this reason, George Town and Malacca were the only two cities in which the industry was declared illegal at the federal level, due to the importance of maintaining the UNESCO World Heritage Listing for the national and regional economy. I also illustrated how competing landscape interests were involved in sparking opposition from local residents and business owners. Yet, the chapter also showed that the opposition was not only motivated by economic factors, but by discursive understandings of swiftlet farming as being fundamentally incompatible with *cultural* landscapes of both cities. These framings were based upon

both aesthetic ideals of how a historic colonial city should look and on ideological understandings of what sort of activities are seen as appropriate for urban areas.

Chapter 7 continued to foreground the discursive framings underlying the decision to remove swiftlet farms from the landscape of Malaysian cities such as George Town and Malacca. The purpose of this chapter in particular was to answer the research question regarding how the perceived impact of swiftlets and swiftlet farms on human health and quality of life in Malaysian cities is framed by different stakeholders. In answering this question, the chapter examined the areas of concern highlighted by urban residents related to the public health risks stemming from the farming of swiftlets in residential areas. These claims were mostly based upon personal experience, which enabled an understanding of how swiftlet farms were experienced in everyday lived ways. Yet, the chapter also considered how these claims were refuted by proponents of the swiftlet farming industry, and examined the evidence invoked by both sides. The chapter thus emphasizes the crucial role of incorporating health perceptions and lived experiences into a political ecology of health framework, which takes into account the ways in which discursive, biophysical, political-economic and ecological factors equally affect understandings of urban health and incidence of disease. Together, these three chapters demonstrate the usefulness of the landscape component of LPE, in that it reveals not only how changing urban environments are a result of unequal power relations and biophysical transformations, but also how these effects and processes are rooted in different ways of seeing (land-scapes).

Despite the various factors described in the previous chapters, the nation-state remains an important mediating agent in conflicts over the urban environment. For that reason, the aim of Chapter 8 was to answer the research question concerning why swiftlet farms persist in Malaysian cities, despite prolonged efforts on behalf of the government to remove them from urban areas. This encompassed an analysis of the various legal and regulatory frameworks that have emerged to control the growth of swiftlet farms in Malaysian cities and towns. Yet, the enactment of these regulations as ‘guidelines’ and not laws created a situation of legal ambiguity (Kuyucu, 2014), whereby swiftlet farmers were encouraged to abide by the guidelines, but they were only enforced at the discretion of the local state and municipal governments. Furthermore, as I suggested, the reason for the poor enforcement also lies in the fact that the landscape is not a ‘unitary form’, in that it is shaped by various competing interests (McCann,

1997; Mitchell, 1994). In particular, swiftlet farmers contained a considerable amount of political power, which they were able to use to influence official policy on swiftlet farms at the national level and resist local enforcement efforts. This chapter thus contributes to research on urban policy formation, in underscoring the role of cultural politics in identifying and shaping institutional responses to particular social issues.

The informal and quasi-legal nature of many swiftlet farming operations in Malaysia has also resulted in one of the limitations of this thesis. For instance, much previous work on landscape in geography has focused on the crucial role of labor in producing landscapes (Mitchell, 1996; 2003; 2008). This is a form of Marxian analysis, which considers the various ways in which the very workers involved in constructing a landscape have later been erased and excluded from that landscape through other more powerful actors. One critique that could thus arise of this dissertation is that it does not shed any light on the workers who actually harvest the nests produced inside swiftlet farms. In some cases, this is because many swiftlet farms are run by individuals who harvest the nests themselves. In others, it is because the swiftlet farmers that I spoke with were extremely vague about the identity of the workers that they hired. Yet, as Rebecca Duckett-Wilkinson has suggested, such workers are highly marginalized, and likely bear the brunt of health impacts posed by urban swiftlet farms. Nonetheless, as Don Mitchell would argue, they have remained invisible features of the swiftlet farming landscape in Malaysia. In dealing with this limitation, I have taken a relational approach to landscape political ecology, which highlights the various metabolisms - flows of capital, swiftlets, birds' nests, and discourses - that have shaped the nature of swiftlet farming in Malaysian cities.

Summing up, this dissertation has developed the nascent LPE framework to analyze a particular conflict over the urban environment, namely swiftlet farming in Malaysian cities. This approach - which has drawn from but also built upon the vast scholarly work on landscape and political ecology - has been strongly grounded in an empirical examination of the socio-ecological transformations that have taken place in Malaysian cities through the esoteric phenomenon of urban swiftlet farming. It has also considered how these transformations have been perceived and contested by local stakeholders on discursive grounds. In what remains, I will conclude by outlining the core contributions made by this thesis and also by identifying future avenues for future research.

9.3 - Key Findings and Contributions

This dissertation constitutes the only sustained research project to document the relatively short history of Malaysia's urban swiftlet farming industry from a political ecology or cultural geographic perspective. This is important given the considerable social and ecological implications that it poses for Malaysian cities. So far, research on EBN cultivation has not integrated socio-ecological implications of swiftlet farming, nor documented its impact on everyday life in any of the countries where the industry currently takes place. This is a significant omission, as considerable levels of social mobilization and contestation have unfolded in response to the negative externalities posed by the industry, its implications for alternative livelihoods, and the seeming unwillingness of governments to adequately regulate the industry. Far from being a mundane or esoteric phenomena confined to the Southeast Asian region, the case brings to light socio-ecologically unjust processes of metabolic urbanization and the significant social controversy bound up within them. In using this case as an empirical lens to examine broader socio-ecological and urban issues, I consider this thesis to have made three core conceptual, empirical and methodological contributions:

- *Advancement of the conceptual framework of landscape political ecology.*

Through the exploration of the case of urban swiftlet farming in Malaysian cities, my intention has been to contribute not only to studies of landscape in cultural geography, but to urban political ecology as well. I argue that landscape political ecology provides an important framework through which it is possible to disassemble deeply entrenched dualisms between urban/rural, nature/culture, and human/non-human which abound in controversies over the urban environment. Moreover, it has enabled a different form of political ecological analysis which uses landscape as a form of enquiry and epistemic position in exploring socio-ecological transformations in the urban environment.

This particular case is important to analyze from a landscape perspective because it renders visible the social struggles over how the landscape is (or should be) made, thereby revealing the contrasting landscape interests and cultural politics at stake. In previous work, particularly within the Marxist tradition, the landscape is treated as a commodity in that it actively hides (or fetishizes) the labor that goes into its production (e.g. Mitchell, 1996; Matless,

1998). However, in the case of swiftlet farming in Malaysian cities, these struggles have been going on in a highly visible way over the past two decades, resulting in the (re)construction of landscape form over time. This illustrates the pertinence of both the urban swiftlet farming case and analytical framework of LPE. Additionally, the political ecology component of the approach can capture the significant social struggle and negotiation that is embedded in the mechanisms of landscape production and capital accumulation as they take place in contemporary Malaysian cities. In this way, the city can be seen as a ‘place of conflict’, and its changing material landscape as a result of the ‘negotiated outcome’ between different groups with asymmetrical power relations.

As many landscape scholars have pointed out, landscapes span the divide between nature and culture, humans and nonhumans, while constituting the crystallization of the discursive and material (see Hung, 2015; Ley and Cybriwsky, 1974; Mitchell, 1998; Zukin, 1991). For this reason, a focus on landscape is highly compatible with the interests of urban political ecology, while also emphasizing the relationality of urban landscapes, and the constellations of different actors involved in shaping them. In particular, the approach of LPE brings in a consideration of moral geographies and the urbane limits of a given place, which is rooted in a detailed understanding of the lived experience of that place. Viewed in this light, the empirical case of swiftlet farming brings into view the fault lines and fractures inherent in the urban landscape, which highlights the landscapes of division and exclusion created through such social spatial ‘dividing practices’ (ibid). In this sense, social and spatial conflict in cities arises because of the multiple normative geographies existing within a given place, which are only brought to attention through specific instances of transgression, such as swiftlet farming. What is at stake here, then, is precisely the issue of competing livelihoods, which are dependent upon particular landscape forms, and the associated implications for socio-ecological wellbeing. While several studies over the past decade have hinted at the potential synergies between these diverse theoretical approaches, only a few studies have made an explicit attempt at synthesizing the two (i.e. Walker & Fortmann, 2003; Neumann, 2011). Yet, as I have demonstrated here, there is considerable potential for the continued development of this field, given the pivotal role of landscape in changing urban environments.

- *The pivotal role of landscape in mediating between competing landscape interests in developing cities and regions.*

As Rebecca Duckett-Wilkinson remarked towards the end of the research for this project, one could simply substitute ‘swiftlet farms’ for ‘street art’, ‘boutique hotels’, ‘cafes’, or even ‘museums’. This refers to the problems and social controversy sparked by the proliferation of ‘new’ businesses that replaced swiftlet farms as they were displaced from George Town’s World Heritage Zone. These businesses have all been caught up in competing understandings of how George Town’s urban landscape should be ordered. This point reflects and supports the finding of one of the first studies conducted through the lens of landscape political ecology, which found that ‘ideas of how the landscape *should* look are central in the struggle between the old and new economies’ (Walker & Fortmann, 2003: 484, original emphasis). In this light, this thesis has emphasized how competing landscape histories and cultural sensitivities become enrolled in the (contested) construction of ‘world-class’ heritage landscapes like George Town and Malacca. This point also has implications for critical studies of heritage, by demonstrating the central role of landscape in mediating between conflicts over the use of the urban environment *vis-a-vis* themes of heritage. Moreover, given Penang’s role as an established center of NGO-based heritage conservation, the lessons learned from the clash between swiftlet farms and the city’s rich heritage value can be useful for informing redevelopment issues in other historic Asian centers, such as Yangon or Vientiane (see Goh & Bunnell, 2013, p.830).

The focus of this dissertation on the lived experience of urban swiftlet farms, their impact on George Town’s cultural landscape, and alternative forms of livelihood echoes existing research on landscape, which positions it as a vehicle of social identity, a generator of profit, and a space for different kinds of living (Matless, 1998; Mitchell, 2001). This thesis builds on previous urban research by illustrating how the urban landscape in George Town and Malacca have been shaped through cultural politics, power relations and competing ideologies operating at a range of scales (see also Kaika, 2006; McCann, 2002; Walker & Fortmann, 2003). Rather than being merely about concerns of the impact of swiftlet farms on urban heritage or public health, these struggles were also very much about competing livelihoods which were seen to be threatened by the industry. In other words, swiftlet farms were deemed to be in-

compatible with idea(l)s of what these colonial cities should look like, and the economic activities it should promote.

Finally, a considerable strand of work in urban geography and UPE in recent decades has attempted to analyze how and in whose interests local economies are produced and reproduced (e.g. Blomley, 2008; Harvey, 2014; Keil & Young, 2009; Loftus, 2007; McCann, 1997; 2002). One related implication of my dissertation for this corpus of literature is through the illustration of the particular strategies used by urban elites to directly influence the development of government policy on a particular issue. As I have shown, the development of urban space is deeply embedded within competing landscape and property interests as well as differing understandings of place. Yet, this dissertation also demonstrates the unevenness inherent in government attempts to regulate economic activities in urban areas, which arise in part due to the disjunctions between different levels of government, and different understandings of which activities are seen as acceptable or desirable for a particular place. The controversies documented here thus illustrate the quotidian and rhetorical ways in which political action is carried out, interpreted and always contested.

- *Application of the landscape political ecology framework to investigating the political ecology of health and disease.*

This dissertation has engaged with the literature on political ecology of health and disease to counterpose narratives regarding the potential health implications of swiftlet farming, as debated by various stakeholders. This is done in Chapter 7, which focused on the case of George Town to argue that narratives of health and disease continually police which landscape practices are acceptable for the increasingly globalizing and image conscious city. Yet, given the lack of empirical evidence to prove or disprove the various claims that have been made, the government has not officially recognized the potential health risks of the swiftlet farming industry. The chapter thus considered the ways in which what come to be regarded as legitimate knowledge about diseases are constructed and contested. It argued that the political ecology of health literature can actually be benefitted rather than limited by such contradictions and uncertainties, through the lens of landscape political ecology.

The LPE approach utilized in this dissertation is well suited for examining the political ecologies of health, as the landscape component has much to offer studies on the political

ecology of health and disease. I have argued that the landscape concept can be utilized in seeing disease as not only determined through biophysical factors, but also constructed out of a particular set of social relations and lived experiences, which are mediated through the landscape. In this light (and in relation to the previous contribution), political economic factors, socio-ecological considerations, and health discourses constitute equally important factors in shaping health decision-making. In particular, it facilitates an understanding of how rhetorics of health and disease can be politically motivated and socially constructed. For instance, the case documented in this thesis has brought into view how narratives of health and disease have (in part) been used in establishing the urban(e) limits of George Town, and in determining appropriate relations for individuals with their urban environment. Moreover, it emphasizes the importance of examining how local knowledges - which are often grounded in embodied experiences - can conflict with official and 'elite' understandings or definitions of health and disease.

- *The importance of co-productive research methods in producing action-oriented research in urban environments.*

Finally, the research in this dissertation also makes a methodological contribution to the literature on co-production, in demonstrating how participatory ethnographic approaches can be used to tackle both research questions and activist goals in urban settings. As I have argued in Chapter 3, mobile ethnographic methods are widely used in political ecology research, due to their ability to highlight the conflicting perspectives on different forms of socio-environmental transformation. Indeed, the mutual advancement of academic and activist interests is a key political foundation of much work in political ecology, and has been actively encouraged by the ENTITLE project of which this work has been a part of. More broadly, co-production of research and the engagement with a wider range of stakeholders is becoming an increasingly important criterion for academic research.⁹⁶ These methods emphasize the usefulness of making deep connections between academics, NGOs and other stakeholders in order to tackle multi-scalar, socio-ecological issues such as urban swift farming.

⁹⁶ Indeed, this was the theme of the 2014 RGS-IBG (Royal Geographical Society - Institute of British Geographers) Annual Conference in London, England, where a portion of this research was presented, see: <http://www.rgs.org/WhatsOn/ConferencesAndSeminars/Annual+International+Conference/Past+and+future+conferences.htm>

The importance of the participatory methodological approach employed here is that it has allowed for the concerns and needs of key stakeholders to actively shape the research in a way that is mutually beneficial. Understanding the different ways in which urban residents experience their everyday socio-natural environments - and how they might engage in reshaping them - becomes a useful and radical basis for a performative politics of embodied struggle in urban areas. In this sense, the research not only made a useful contribution to the academic literature, but was also able to assist the local communities involved in the research to advance their struggles for a more just urban environment. In particular, the methodological approach to ‘tracing the controversies’, outlined in Chapter 3, was important for capturing the more subtle forms of activism inherent in everyday lived experience and practice. For instance, this thesis has sought to explore how particular social groups, such as BWM and the PHT as well as online communities such as noswiftletsingeorgetown.com, formed in response to the swiftlet farming issue, and how those groups attempted to identify and tackle the specific problems that have arisen. Through such a focus, it is possible to bring to light the ways in which different people might challenge unequal power relations and injustices through everyday, place-based practices.

For instance, in order to alleviate the potential hazards that could arise from the continued proliferation of urban swiftlet farms, and in response to factors limiting previous enforcement efforts as outlined in the previous chapter, the following policy recommendations have been developed in collaboration with local stakeholders:

- Placement of responsibility for possible disease outbreaks directly on State and Municipal Governments, in addition to the federal Veterinary Department and Ministry of Health. This would make them personally responsible to pay any compensation required in events of death from any outbreaks of disease related to the swiftlet farms. It would also create more of an incentive for government to take the potential problems posed by swiftlet farming seriously, and provide more incentive for taking sustained and committed action.
- Commission further research to clarify and quantify the detrimental impact of swiftlet farming on human health. Currently, there is only anecdotal evidence to support the various claims that have been made. Particularly, research must investigate the correlation between recorded cases of dengue fever, and the location of active swiftlet farms. This is research

that must be done in cooperation with both the federal and state departments of the Ministry of Health. I had requested this data from their offices, but was not granted access. Yet, without research into this issue, it is impossible to know whether or not the proliferation of swiftlet farms does indeed exacerbate dengue fever, or other incidences of disease in Malaysia.

- Proactively designate areas for swiftlet farming (similar to free trade zones, industrial areas or designated pig farm areas in Malaysia), as suggested by stakeholders. In other parts of Southeast Asia, including Thailand and the Philippines, swiftlet farms are constructed in padi fields and in rural coastal areas, which do not place pressure on the cultural and heritage environment. It has thus been suggested that swiftlet farms in Malaysia also be restricted to such areas.
- Establishment of a state or federal agency that systematically regulates and monitors the swiftlet farming industry. This is needed because the federal and state agencies that are currently tasked with regulating the swiftlet farming are overburdened with other responsibilities. According to Lim and Cranbrook (2014), the Kalimantan (Indonesian Borneo) government has begun to develop strict regulations on swiftlet farms in urban areas, which serves the dual purpose of limiting negative externalities and developing an important source of income for the government. Given that EBNs in 2011 constituted one of Malaysia's top natural resource exports, such a move would be well justified.
- Many swiftlet farmers have argued that their farms do not cause excessive externalities to neighboring properties, and claims to the contrary are exaggerated out of proportion. Moreover, other stakeholders have argued that the issue of where swiftlet farms should be located is a complicated issue, and cannot be simply delimited only to rural areas. Consequently, it has been suggested that only swiftlet farmers who can show a letter of support from residents in the vicinity of a swiftlet farm be given a license to operate in urban areas. This could be used as a compromise to satisfy swiftlet farmers reluctant to relocate from urban areas for various reasons.
- As described in Chapter 8, swiftlet farms in East Malaysia (Borneo) are regulated by ordinances (laws), and are illegal in the major cities of Kuching and Kota Kinabalu. Moreover,

no swiftlet farms exist in strictly regulated Singapore. This contrasts with the guidelines that are established in Peninsular Malaysia, and have been considerably more effective in controlling both the number of swiftlet farms and their impact on neighboring populations. Therefore, the West Malaysia could learn from these cities in creating state-wide or national laws to control swiftlet farms in urban areas.

9.4 - On the Future of Swiftlet Farming...or Future Avenues for Research

Given the diversity of themes investigated in this thesis, as well as the broad scope of both the fields of landscape studies and political ecology, there are several avenues of future research that this dissertation has opened up. While there are more questions that could be asked related to the edible birds nest industry; such as geopolitical aspects related to the influence of the Chinese market; or the role of middlemen and informal trade networks in the international trade (and traffic) of EBNs; this project has opened up, in my view, other more pressing questions related to the cultural politics of urban transformation in the Southeast Asian region. Moreover, given the reduced price for EBNs in Malaysia, as a result of the 2011 market crash, the number of swiftlet farms in the country is now on the decline, meaning that other issues have taken over. In George Town, even the PHT has moved on to advocating about other urban issues, such as the recent proliferation of street art, unlicensed cafes and boutique hotels, which are said to be further threatening the city's (in)tangible heritage.⁹⁷

Speaking to this point, Gwynn Jenkins, a heritage consultant based in George Town put it, 'just to play devils advocate for a minute...I wonder if what's coming after the swiftlets is going to be worse? Before residents had at least been able to live underneath the farms, but now they're being evicted because of the boutique hotels coming in!' Furthermore, she argued that it is hard to maintain the integrity of the heritage buildings with the hotels coming in. 'in fact', she suggested, 'hotels are worse for the buildings than swiftlet farms were! From what I've seen, the hotels are much more destructive with the en suite bathrooms that are put in, because these houses weren't built for all the modern amenities that are put into hotels these days.' (in-

⁹⁷ Though, in recent correspondence with Rebecca Duckett-Wilkinson, she noted that many of these newer businesses have not been successful, so many of the owners or tenants are now returning to swiftlet farming, as prices for the nests are now starting to rise again. This new phase of the industry could thus be interesting to follow up on.

interview, 25 February 2014). Indeed, the nomination and subsequent listing of George Town as a UNESCO World Heritage Site in 2008 was both a blessing and a burden for the city. While the listing created an impetus for the conservation of George Town's significant urban heritage, it also created a number of unexpected changes to the urban landscape. For instance, the listing sparked considerable redevelopment with a view towards developing the tourism industry and attracting international visitors, which some argue has devalued the island's vernacular heritage.⁹⁸

In future research, I would like to explore these concerns, building on the themes and issues explored in Chapter 6 of this dissertation. This would involve examining the cultural politics of redevelopment in George Town, Penang, and the various frictions inherent in (re)constructing and promoting this globalizing Southeast Asian city (see Bunnell and Goh, 2012).⁹⁹ More precisely, I plan to examine three specific cases of redevelopment and tourism-led gentrification, interrogating the circulating discourses around ideas of what constitutes 'heritage', and 'appropriate' uses of urban space in an increasingly image-conscious, globalizing Asian city (see Bunnell, 2002; Bunnell & Nah, 2004).¹⁰⁰ While (potentially) shifting the analytical and theoretical lens away from swiftlet farming and political ecology, this research trajectory would maintain the landscape component of the theoretical framework used in this dissertation, and will engage more with the literature on vernacular heritage, which I did not have adequate space to address here. The qualitative methodology and importance placed on participatory, action-oriented research in my dissertation will also play a central part in my postdoctoral project, as well as the geographic focus on George Town, including many of the key stakeholders and interlocutors. My aim will therefore be to unpack the controversies over urban redevelopment issues to reflect on the cultural tensions that they reveal at a time of increasing urbanization and hybridization. By embarking on such a project, I believe that the research can help to further stimulate a critical and political rethinking of the types of urban

⁹⁸ See (Chang, 1997; Nijman, 1999) for examples of redevelopment projects and 'imaging' strategies adopted by other cities to become competitive on the global tourism market.

⁹⁹ A version of this chapter (titled, 'Whose Landscape, Whose Heritage? The Landscape Politics of Swiftlet Farming in George Town, Malaysia' is currently in press for a forthcoming special issue in *Landscape Research* (see Connolly, forthcoming).

¹⁰⁰ The cases are related to development and tourism led displacement that has intensified in the past few years, as well as the proliferation of street art in George Town, which has sparked much controversy over the way that the city and its culture are being represented and promoted.

landscapes that we want to experience now, and in the future, which is a task I hope to have begun in the pages of this thesis.

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