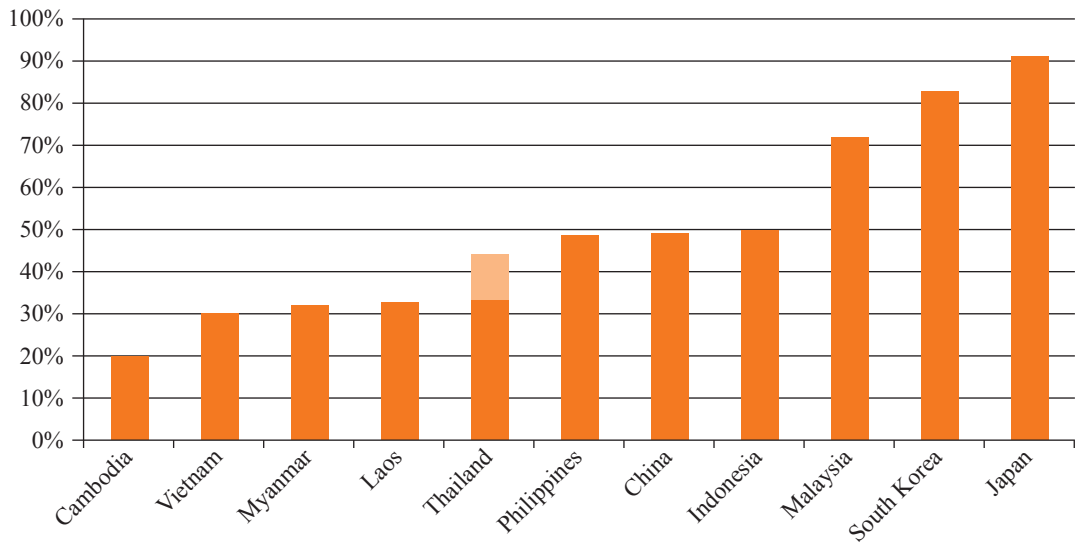
3 History and trends of urbanisation in Thailand

Thailand has a long history of urban centres. Historically, these have largely been centres of administrative, religious and military power of relatively small city states, associated with civilisation, linked through tribute and taxation to other city states.

However, in the last 40 years, Thailand has witnessed dramatic change occurring across the country. Thailand has become increasingly industrialised, and related to this, increasingly urbanised. Yet assessing the current state, rate, and pace of urbanisation is problematic due to terminology and classifications of urban, and due to the ways in which official statistics are prepared.

A perception of slow urbanization has influenced national policy. This perception was reflected in global assessments. For example, Lambregts' study reviews figures available up until 2015.

Figure 1: Thailand's urbanisation level in a comparative perspective (2010)



Data source: United Nations Population Division, 2014.
* The UN Population Division sets Thailand's urbanisation level at 33.7 per cent. This is likely to be an underestimate (Alkema et al. 2012). Thailand's 2010 Population and Housing census reports that 44.2 per cent of Thailand's population live in 'municipal' (ie non-rural) areas.

The official UN statistics of 2011 recorded Thailand as having only 34.1% of the total population as urban, placing Thailand at position 155 in a list of urbanised countries, out of a total of 196. In this place Thailand sits one position behind Laos and one ahead of Sudan (UN 2011). This assessment has been widely referenced, and seems to support a perception of Thailand as predominantly rural. This perception seems to have influenced climate change research in Thailand that remains largely focused on the environmental and rural dimensions of potential climate impacts.

Thailand is a leading economy in Southeast Asia, and while agriculture remains critically important in terms of employment and national income, the dominant role of agriculture has declined. This trend is set to continue.

This economic transition reached a watershed in 1988 when Thailand was declared a Newly Industrialised Country (NIC). Even in 2011 the Thailand Board of Trade reported that manufacturing now constitutes the sector with the largest contribution to GDP at 39 per cent, while agriculture contributes only 8.6 per cent. This situation is reversed when viewed from employment levels, with agriculture constituting 38.2 per cent of total labour force, while manufacturing's contribution is 13.6 per cent (see Table 2). However, the total non-agriculture labour force remains significantly higher, and much of the agricultural labour is highly seasonal, with workers also being engaged in off-farm employment for at least some parts of the year.

Table 2: Structure of Thailand's economy in 2011

Sector	GDP by sector (%)	Labour force by sector (%)
Manufacturing	39	13.6
Wholesale & retail trade	13.5	15.5
Transport, storage & communication	9.6	2.6
Agriculture	8.6	38.2
Construction and mining	4.3	6.1
Other services	25.0	24.0

* Note: Other services include the financial sector, education, hotels and restaurants, etc.

The statistics on rates of urbanisation have been updated recently, presenting a very different picture of urbanisation trends (UNDP, 2014). In these latest assessments, Thailand's urban population is recorded as being 49% of total population, increasing from 29% in 1990 and projected to increase further to 72% in 2050. The growth rate of urbanisation in the Mekong is quite staggering. Laos has the highest rate of annual average rate of change in the world, followed by Thailand.

Table 3: Urban Population in Mekong Countries

	Urban Population 000's			Rural Population 000's			Percentage of Total Population Urban			Average Annual Rate of Change %
	1990	2014	2050	1990	2014	2050	1990	2014	2050	2000-2015
Cambodia	1408	3161	8167	7649	12247	14022	16	21	36	0.9
Lao PDR	655	2589	6435	3589	4305	4144	15	38	61	3.1
Myanmar	10350	18023	32206	31773	35696	26439	25	34	55	1.6
Thailand	16649	33056	44335	39934	34167	17046	29	49	72	2.7
Vietnam	13958	30495	55739	54952	62053	47958	20	33	54	2.0

Figures taken from United Nations, Department of Economic and Social Affairs, Population Division (2014). *World Urbanization Prospects: The 2014 Revision, Highlights (ST/ESA/SER.A/352).*

Yet even these revised statistics themselves do not show the full nature of Thailand's economic transition or the significance of urbanisation across the country. The ways in which the statistics are compiled reveal some clear conceptual and methodological gaps. While many people still regard themselves as being primarily farmers, the significance of (at least seasonal) migration by household members, or part-time employment in non-agricultural production and employment, suggests that the majority of the Thai population is no longer exclusively rural. This becomes particularly apparent at the household level, with at least some members of farming households involved in off-farm activities.

This level of dynamism in household livelihood strategies is not easily captured in census surveys. As agriculture becomes less attractive to younger people entering the employment market, and as the balance of wage-labour opportunities shifts away from agriculture, it is reasonable to anticipate that this shift will continue, if not accelerate. The reliability of the classifications applied in such statistical analysis is itself an area that requires closer critical scrutiny.

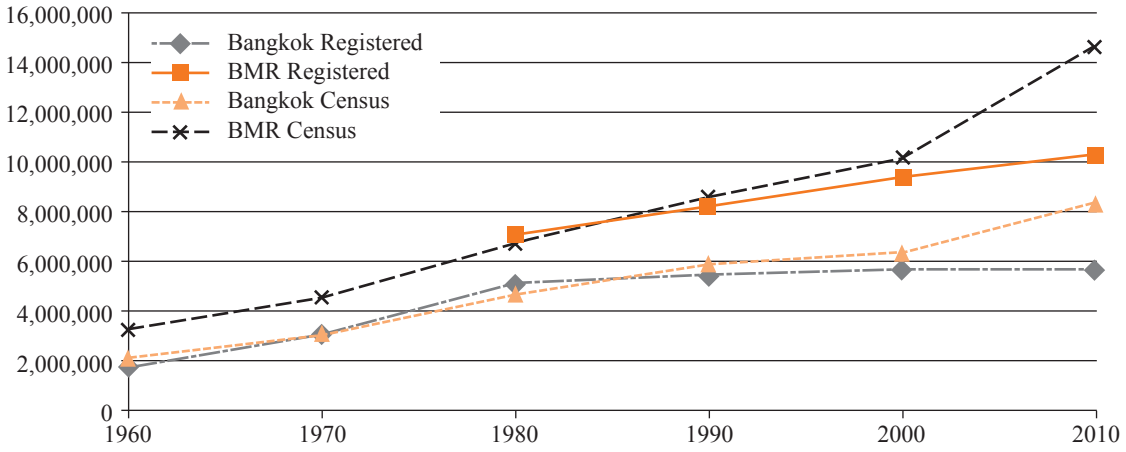
National statistics based on residence are equally problematic. Residence is determined according to where a person is registered and not where they reside or work. For example, a person registered in the provinces but working in Bangkok will appear as residing in the provinces. The classification of the administrative area in which a person is registered is also significant (see Table 4). There are several tiers of administration in Thailand, but it is only *Thesabarn Nakhon* that is classified as 'urban' – all other administrative units are classified as less urbanised and more rural. Tambon Administrative Organisation (TAO) is considered most rural. It seems reasonable to conclude that these factors contribute to an underestimation of the actual urban population. This is reflected in the case study of Bangkok (Lambregts *et al.* 2015), see Figure 2.

Categories of sub-national urban administrations

Table 4: The classification of Thai local governments (excluding the Provincial Administrative Organisation)

	Types of Sub-Provincial Administrative Units			
Criteria	**City municipality (Thesabarn Nakhon)**	**Town municipality (Thesabarn Muang)**	**Sub-district municipality (Thesabarn Tambon)**	**Sub-district Administrative Organisation (TAO)**
Population numbers	> 50,000	> 10,000	> 5,000	
Population density	Removed in year 2000	Removed in year 2000	Minimum 1,500 people per sq.km	
Revenue			> 12 million baht	

Figure 2: Registered and census populations for Bangkok and the BMR 1960-2010



Source: Lambregts et al., (2015) summarising *BMA Statistic Profile and NSO Population and Housing Census*

Despite the updating of these official statistics there is a well-established narrative that Thailand's rate of urbanisation remains low, and from some perspectives this low rate of urbanisation is highly problematic. This also seems to fit with a persistent cultural perception of the country as remaining largely agricultural and rural.

Looking to the future, it is increasingly clear that we are now entering a new phase of urbanisation for Thailand that is dramatically different from earlier historical phases. Urbanisation is projected to reach a rate of 72% by 2050. This is a phase of **rapid urbanisation**, and a phase in which the intensity of dependence on infrastructure and technology, and linkages to urban networks across the region will grow. Evidence from each of the case studies attests to an expansion of the urban area and increases in population, further demonstrated by rapid changes in land prices and patterns of speculative investment, and the movement of migrant labour from neighbouring countries, as well as a return of previous migrants to their hometowns. But critically, these trends are linked to regional flows of trade and investment, and the ways in which networks of transport infrastructure create linkages across the region.

Table 5: Average land prices in major cities in Thailand

City	Average land prices (THB / Tarang Wa (4 m^2))
Chiang Mai	84,000–250,000
Khon Kaen	40,000–200,000
Hat Yai	40,000–200,000
Udon Thani	30,000–150,000
Bangkok	20,000–800,000
Siam Paragon	800,000
Silom	700,000
Yaowarat	650,000

Source: data from the Department of Treasury (2012) and www.thaiappraisal.org (2014)

Each of the cities in these studies has its own history and particular context, yet the history of Bangkok looms large for many other cities. Bangkok is one of the early 'mega-cities'. It is often held up as being emblematic of both the best and worst of large contemporary cities. Within Thailand, the notion of the 'Bangkok syndrome' suggests much that is wrong with unplanned urbanisation – urban sprawl, traffic congestion and pollution. Indeed much of the current direction of urbanisation in Thailand is in terms of promoting secondary cities and growth moves beyond Bangkok.

Bangkok plays a pivotal role in the history of urbanisation in Thailand, and within a global story – becoming synonymous with the extremes of both economic success and of urban failings. Bangkok has a long history as the centre for national political administration, trade and commerce, dating back to the establishment of the capital in Thonburi. From its earliest inception, this has been linked to international trade and politics. Bangkok has come to dominate the national economy and is an almost archetypal primary city dominating all other Thai cities in terms of geographical area, population, or economic activity. Bangkok has also come to be the dominant city of mainland Southeast Asia. Despite this long urban history, Bangkok has gone through a period of dramatic change, with further expansion of the urban area of greater Bangkok being most notable in the last 20 years.

Urban sprawl and increased population have gone up and down. The rate of population increase in the decade between 1984 and 1994 was quite dramatic from a little over 5 million people to just over 8 million people, which was an increase of 60 per cent. The urbanised area declined by 8 per cent while population density increased by 75 per cent. Yet in the period since 1994, it appears that there has been a dramatic growth of 50 per cent in the urbanised area, with a population increase of only 18 per cent (see Figure 3).

Figure 3: Bangkok's population, urban area and density 1850-2002

Year	Population	Urbanized area (hectares)	Density (persons per hectare)
1850	160,000	580	276
1888	359,075	970	370
1900	600,000	3,480	172
1922	1,174,442	4,750	247
1953	1,560,520	10,500	149
1974	3,213,407	52,180	62
1984	5,158,434	96,500	53
1994	8,238,697	88,688	93
2002	9,761,697	133,515	73

Source: Angel *et al.* 2010

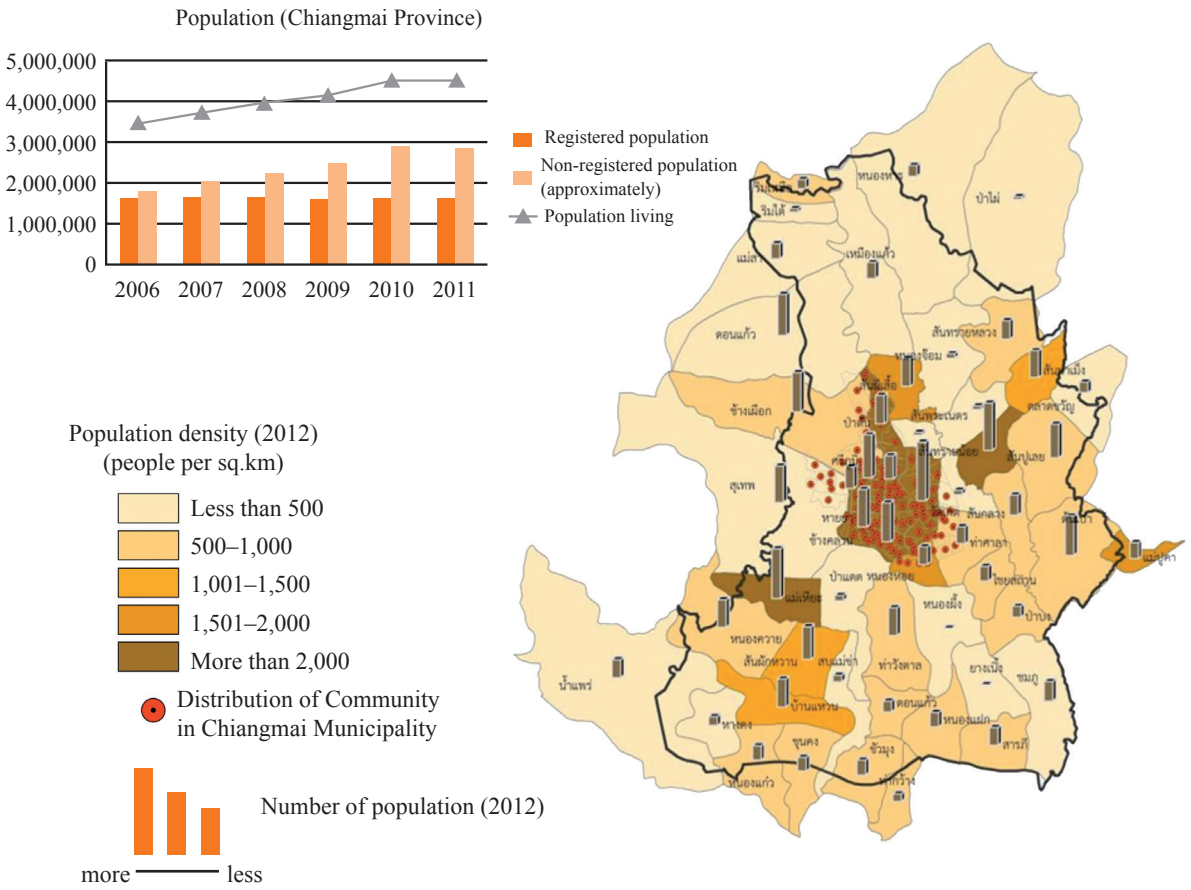
Chiang Mai, one of the case study cities, often stands out in the popular cultural imagination in marked contrast to Bangkok. As the second largest city in Thailand and the major city in the northern region, it has a distinct cultural heritage and is an alternative to Bangkok. Despite perceived differences between the two cities, there are remarkable similarities in the ways in which urbanisation is unfolding.

Urbanisation has largely progressed alongside economic development in Chiang Mai, which aspires to be an important business and tourism centre. The tourism sector caters both for domestic tourists, particularly from Bangkok, as well as foreigners. Services and industrial sectors are also growing in the city. Chiang Mai is looking to the opening of the

ASEAN Economic Community (AEC) in 2015, where it expects further opportunities for economic growth. Government policies, such as investments in mega-projects and support for economic zones, have been enacted to support this growth.

Chiang Mai has witnessed similar changes in population to Bangkok. While the registered population has remained more or less constant, but with a slight decrease in recent years, the non-registered population has been much higher than registered, approaching 3 million people. The combined population for 2011 is estimated at over 4 million people, an increase of 1.7 million people – or over 50 per cent - in only five years (see Figure 4).

Figure 4: Population in Chiang Mai

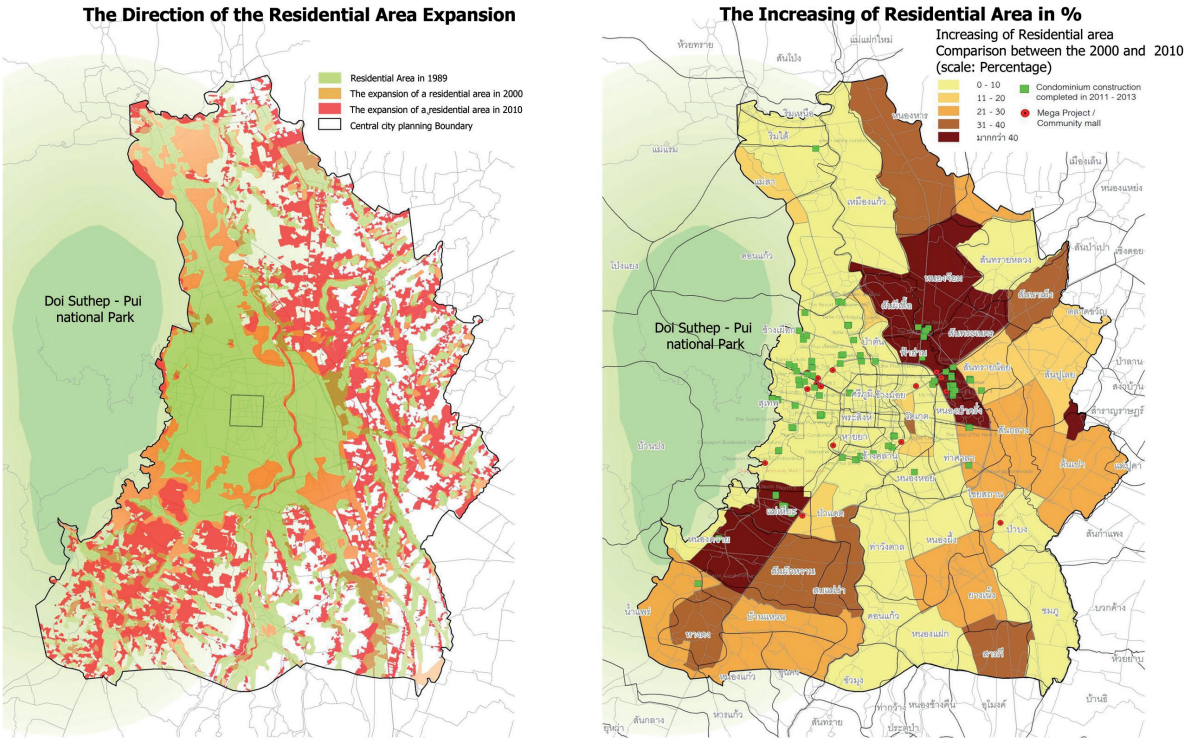


Source: Department of Provincial Administration, 2012

The chart on the upper left shows registered (blue), unregistered (red), and total population (green). The yellow shading on the map shows population density in the different sub-districts in Chiang Mai (people/m2). The bars on the map show relative population sizes, and the red dots indicate communities that are in the growing municipality.

The expansion of the urban area of Chiang Mai has taken place around the historic city centre that remains the heart of the tourist industry and the traditional cultural life of the city (Thiengburanathum *et al.* 2015). In the Comprehensive City Plan, specific areas around the city have been targeted for the expansion of residential areas, industry and education – based on the concept of satellite towns that would be linked to the centre and surrounded by green (agricultural) space (see Figure 5).

Figure 5: Two maps of Chiang Mai



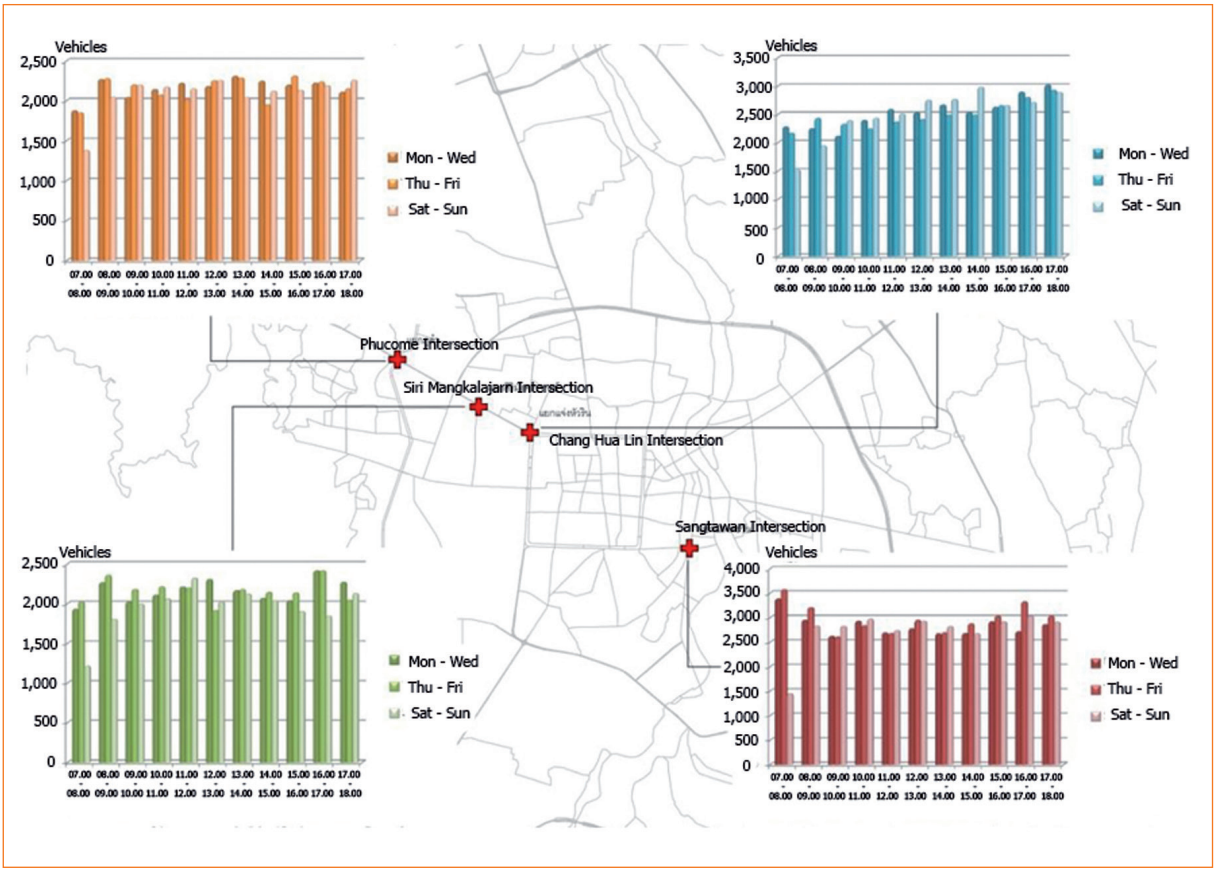
The map on the left shows the extent of developed land in 1989 (green), 2000 (orange), and 2010 (red). The map on the right shows percentage changes in urbanised areas between the years 2000 and 2010, with the darkest orange representing over 40 per cent growth in the urbanised area. The dots on the map indicate locations of new large developments such as condominiums (green) and community malls (red).

This pattern of single-use development – or specialised urban development – is well documented in urban studies literature, having become closely associated with the problem of urban sprawl that has been characteristic of much of urbanisation across the world. The central problem with this approach to urban development relates to mobility, which is the critical importance of being able to move between different zones of development, and the dependence of people on roads and private transport (cars and motorcycles) to be able to do so. The maps that illustrate the pattern of urbanisation clearly demonstrate that population density has increased most in the outer parts of the city centre, also encroaching on green space.

The extent of this intense development, and perhaps the driving force behind it, can be seen in the changing land prices for different areas around Chiang Mai, with some outer locations fetching double the peak prices of central areas. During 2012-2014, most of the new residential projects – whether townhouses or condominiums – as well as the mega projects, were located outside the city centre.

Population growth leads to increased numbers of cars and traffic congestion. Local authorities alleviate traffic congestion by commissioning new roads and ring roads to bypass the city centre. This in turn drives more urban sprawl as land along new roads is turned into housing development projects. Looking at the location of key facilities, services and employment centres in Chiang Mai, and the location of residential areas served by roads, we see constant peaks of traffic (see Figure 6).

Figure 6: Map of Chiang Mai showing traffic flows at target locations near key facilities, services, and employment centres



The heart of the problem of Chiang Mai lies in the combined influences of patterns of specialised spatial development and of transport that in turn push both ribbon development along the main roads that are put in to address transport, and the further encroachment of the green space that was originally intended to act as buffers between these centres of development.

This can also create a certain pathway dependency, unless the root causes are tackled. By this we mean that the current high levels of traffic congestion combined with the continued necessity for people to move from one specialised area to another, requires the further construction of transport linkages between the various centres, which in turn, creates more development along these routes, more traffic, and further traffic congestion. The initial dependency on specialised and geographically separate centres without effective public transport creates a cycle of further development that merely replicates the patterns of development that created the initial problem. As we discuss below, this concept of **path dependence** becomes manifest in the creation of climate-related risks, and the set of responses to deal with these risks.

However, current development plans for Chiang Mai appear to be steering a course that will further intensify these problems. With a greater interest in regional economic integration, and a continued commitment to private transport at the expense of public transport, and inadequate protection of public green space, it seems that Chiang Mai is committed to taking on the Bangkok Syndrome, while also espousing its commitment to avoid such an outcome.

In understanding the nature of urban sprawl in Thailand, it is important to consider the interplay of both transport and housing. This is revealed in the case study of Chiang Mai, and patterns of investment in road infrastructure and the privatisation of transport, and the nature of the critical core industry – tourism.

Hat Yai, in southern Thailand, has its own particular history of urbanisation (see Table 6). While it has never been an administrative centre, with the provincial capital remaining in Songkhla, the key transport connection that the railway provided both to Bangkok and Malaysia and Singapore, drove the creation of a core commercial centre around the railway station and along the railroad in Hat Yai. Significantly the early investment in road networks to link this commercial centre to the rural rubber-producing hinterland was driven by the private sector, with Chinese traders generating the finance themselves. Influenced by the Chinese trade and commerce community, public infrastructure and services were set up to support business operations and commercial projects. This concentration of commercial activity and road networks dictated early patterns of settlement, with little consideration for the flood risks of being situated in a low-lying basin. The establishment of the Prince of Songkhla University was the next significant development in the city, cementing its core business around commerce, tourism and education.

The pattern of private speculative investment has a rather special twist in Hat Yai, being directly related to the violent political unrest in the three Thai-Malay border provinces of Yala, Pattani, and Narathiwat (Choosuk *et al.* 2015). The ongoing unrest has encouraged those in the three border provinces who have savings and investment to place their capital in land, bricks, and mortar in the expanding urban area of Hat Yai, rather than keeping their capital in the more volatile and lower market returns in the border area. Such investment takes different forms, including speculative investment for rent and resale, as well as second homes, and second businesses. This type of investment reveals an important aspect of urbanisation and the links with capital – the need for surplus capital to move, but also to have a physical location that generates further surplus capital.

Table 6: History of urbanisation in Hat Yai

Year	Progress of urbanisation
1909	King Rama the 5th established a major railway junction in Hat Yai, connecting Thailand to Malaysia and Singapore
1917	Administrative area – Hat Yai district (Amphor) (area 5 sq. km)
1925	Hat Yai Tambon Municipality established (area 8 sq. km)
1949	Upgraded to Hat Yai Muang Municipality (area 13 sq. km)
1995	Became Hat Yai City Municipality (area 21 sq. km)
Before 2000	Expansion of residential areas occurs within the boundaries of the municipality (*Thetsabarn Nakorn).*
2000	Expansion of the rural area extends beyond boundaries of the municipality. New factories, industries, education centres, and other service centres are developed in the core of the city.
2010–2012	A ring road was constructed around the outside of the city, connecting Hat Yai to national roads in Thailand's three southernmost provinces.
2012–Present	Development of new residential areas occurred along the ring road, driving up land prices. Traffic increased along major roads as there was increased need for transportation between outer residential areas and facilities in the city centre.

Khon Kaen is the administrative capital of the northeastern province of Thailand, and has historically been listed as a priority city in national plans. The city has an established history as a centre for commerce and trade, originally serving as a key agricultural and services market, and hosts the largest university in the northeast, increasingly attracting students from neighbouring countries. Urban growth centred on these key areas has occurred rapidly over the years.

The city has experienced a rapid population increase, with people moving into the area in search of work at a rate of 3.95 per cent per year over the last ten years. At the same time, the urban areas have been expanding into the outerlying areas, which were previously agricultural areas.

An industrial estate is designated on a 4,100 *rai*[1] area in Tha Phra sub-district municipality, south of Khon Kaen city. Together with increased commercial, retail and housing projects, the planned industrial estate is driving up land prices, reportedly by 20-30 per cent over the last two to three years. The industrial estate is also driving urban sprawl as more shop/houses, townhouses, housing and commercial projects are developed.

Increasingly, Khon Kaen is emerging as an important regional hub. Located on the Mittraphap Highway linking Bangkok to Vientiane in Laos, the city is well-connected to other cities and towns in the northeast. It is relatively close to Mukdahan and by the bridge, to the Lao border town of Savannakhet, which links the growing coastal cities in Vietnam of Danang and Hue. It sits at the intersection of the east-west and central transportation corridors being developed under the Asian Development Bank's Greater Mekong Sub-Region programme, which connects it to Vietnam, Laos, Cambodia, and Myanmar. With the pending launch of AEC, and with regional trade expected to increase further, Khon Kaen will gain significance as a key node in the region (Promphakping and Phothaworn 2015).

1 A rai is a unit of area equal to 1,600 square metres (40 m × 40 m).