An Urban Political Ecology of Public Transit in Bangkok, Thailand

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Introduction

With a population of over 10 million people, Bangkok, Thailand is one of the largest cities in South East Asia. Despite its booming economy and success within the global market, Thailand as a whole still suffers from many of the issues that other developing countries face. Poverty, marginalization, pollution and numerous environmental problems are just a few of the major concerns for Thais. In order to combat these issues, the Thai government undertook a large scale public transit project, the Bangkok Transport System, (BTS) which opened its doors to the public in 1999. The Bangkok Transport System was designed not only to ease the traffic congestion on the roads, but to make the city more tourist friendly and sustainable.

The Third World urban environment is largely ignored by the interdisciplinary field of political ecology. As a critique, political ecology seeks to expose flaws in dominant approaches to the environment favored by corporate, state, and international authorities, working to demonstrate the undesirable impact of policies and market conditions, especially from the point of view of local people, marginal groups, and vulnerable populations (Robbins 2004). When discussing urban political ecology, much of the literature only examines First World situations (i.e. urban forestry in Milwaukee; Heynen 2003). Very little attention has been paid to urban political ecology in the developing world.

The urban setting of the developing world however, cannot be overlooked. Urban environments are the products of social and ecological forces, resulting in a hybrid form requiring vast inputs of capital and labor, yet still linked to and dependent upon biophysical processes. Exposures to environmental hazards and access to environmental amenities in urban settings are products of political, economic and ecological processes that produce a geographic pattern of uneven development and a corresponding social pattern of winners and losers (Neumann 2005).

Urban environments also play a large role in many contemporary discussions regarding international development, and more importantly, sustainable development. The term sustainable development first made headlines through the 1987 United Nations report titled *Our Common Future* (now referred to as the Bruntland Report). In the report, sustainable development was defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Since the release of this report, the idea of sustainable development has focused on the agendas of organizations from the World Bank to the United Nations, and even smaller development organizations. City planners and urban developers, when embarking on new plans for their urban spaces, are embracing methods and construction projects in the name of 'sustainable' practices.

There are however, numerous controversies and debates surrounding the term, the idea, and they way that it has been put into practice in the developing world. There are arguments over what it means to practice 'sustainability', versus 'sustainable development'. Various definitions of both of these terms are thrown around, to the point where the terms no longer have concrete meaning. Christopher Sneddon, however, states

that at the core of these debates lies in the dilemma of how to reconcile human social and economic activities with the long-term resilience, vulnerability and regenerative capacity of the local-global continuum of ecological systems. Political ecology critiques much of the current literature on sustainable development, and what sustainable development means for organizations and governments when embarking on large scale development projects (Sneddon 2000).

This paper will take this sustainable development critique and apply it to the creation of the Bangkok Transit System (BTS), a recently constructed public transportation system in the urban Bangkok. It will use an urban political ecology approach to analyze the implementation of the BTS and what that means for those living both in the main borders of the city, and in the city periphery as well. Public transit, like the urban setting, is an area that has also been widely ignored by political ecology, and this paper will therefore contribute to the literature by developing a case study on this topic. The first section of this paper will review the literature on both (urban) political ecology and sustainable development. It will aim to identify gaps in the literature and demonstrate the necessity for comprehensive work on urban political ecology. The second part of this paper will then develop a case study of the BTS that employs a political ecology framework and is critical of the mainstream sustainable development approach.

Political Ecology – A Review of the Literature

Political ecology provides a unique lens for examining human-environment interactions at local, national and global scales. Within these interactions arise themes of power relations and marginalization, which become useful tools when discussing urban

environments. In the emerging literature on political ecology however, little attention has been paid to the urban environment as a site of socio-ecological change. Similarly, discussions about global environmental problems and the possibilities for a 'sustainable' future commonly ignore the urban origin of many of the problems. The technical aspects of urban environmental management fail to acknowledge the intimate relationship between the capitalist urbanization processes and environmental injustices. Nevertheless, environmental issues have been central to urban change and urban politics for at least a century, if not longer (Swyngedouw 2003). It is important, however, to acknowledge that while literature exists on urban development, it is within a framework of the First World. There is very little scholarship on third world urban development and especially important for this paper, limited research on public transit within the urban environment.

In discussing environmental issues and concerns nonetheless, the critical innovation of political ecology has been the search for explanations that take account of both the natural and social sciences (Blaikie and Brookfield 1987). The appeal of such a synthesis is obvious, although the intellectual coherence is more questionable (Peet and Watts 1996). Raymond Bryant suggests two key themes running through the political ecology literature. The first is the way in which unequal power relations relate to conflicts over access to and use of resources; the second concerns the ways in which power relations are reflected in conflicting discourses and knowledge-claims about the environment and development (Bryant 1998).

Bryant also explains that a political ecology approach focuses on the interplay of diverse, socio-economic forces, and the relationship of these forces to environmental change (Bryant 1996). More importantly, he states that political ecology addresses

research into the contextual sources of environmental change and the general environmental impacts of the state and its policies, interstate relations, and global capitalism. In a world of increased political and economic interdependence, these topics signal the growing social and ecological influence of national and trans-national forces (Bryant 1996).

More importantly, political ecology understands that the environmental problems facing the Third World such as pollution and degradation, are not simply a reflection of national policy or local market failures (as, for example, the World Bank would have it), but rather, are a manifestation of broader political and economic forces (Bryant and Bailey 2000). Bryant and Bailey explain that these forces are associated with the worldwide spread of capitalism. The work of political ecologists has therefore, been largely an attempt to describe the spatial and temporal impact of capitalism on Third World peoples and environments (Bryant and Bailey 2000). One other key point is that political ecologists also emphasize the ways in which the state in the Third World may intervene in economic activity to promote environmentally destructive activities.

Obviously the environment itself is not neutral in its effects on the poor. Access to and the distribution of environmental ‘goods’ (be they cultivable land, fuelwood or clean air in this case) are uneven (Adams 2004). Piers Blaikie argues that in political ecology, it is vital to see these links between the environment, economy and society. However, each of these things is itself highly complex. In a crude sense, development both affects and is affected by environmental quality (Blaikie and Brookfield 1987, Adams 2004).

Urban Political Ecology

Because urban political ecology is a relatively new critique of development, its theoretical base is still being constructed. Swyngedouw and Heynen state however, that urban political ecology provides an integrated and relational approach that helps untangle the interconnected economic, political, social and ecological processes that together form highly uneven urban landscapes (Swyngedouw and Heynen, 2003). More importantly, this includes the resistance of the relatively powerless (poor peasants and urban dwellers), as they fight to protect the environmental foundations of their livelihood (Bryant, 1996). The important questions that then arise are, to what extent are environmental costs borne by socially disadvantaged groups, and how does this unequal burden affect existing socio-economic inequalities? Under what circumstances does unequal exposure to environmental change lead to political confrontation (eg. environmental movements) (Bryant, 1996)? Public transportation, for example, alleviates certain environmental problems (congestion, auto emissions, lead in gas fumes etc.). But it is important to understand who have been the primary actors in causing these environmental problems, what groups have been affected, and who are the solutions (mass transit) benefiting? These are a few of the questions that this paper attempts to address when discussing the impacts of introducing the BTS into the city of Bangkok.

What has been written about urban political ecology finds its roots in Marxism. Swyngedouw and Heynen say that urban political ecology recognizes that the material conditions that comprise urban environments are controlled and manipulated, and serve the interests of the elite at the expense of marginalized populations. The understanding of the changes that have occurred within urban environments lies at the heart of political

ecology research; they must inherently be understood within the context of the economic, political and social relations that have led to urban environmental change (Swyngedouw and Heynen, 2003). As a result of the inherently uneven processes that produce urban environments, Swyngedouw and Kaika suggest that "because of the capitalist, thus by extension, social processes that create and recreate uneven socioecological urban landscapes…it is necessary to focus on the political economic processes that bring about injustice…not the natural artifacts that are produced through these uneven social processes" (Heynen, 2003).

In his book Making Political Ecology, Roderick Neumann states that urban political ecology addresses many of the same concerns and brings to bear the same theoretical and methodological toolkits of 'classical rural Third World political ecology studies. Indeed, recent studies in urban settings have demonstrated that the 'chain of explanation[1]' approach can serve just as well as a framework for unraveling the ultimate causes of urban ecological problems as it has for explaining rural Third World problems such as soil erosion and land degradation (Neumann 2005).

Sustainable Development and Political Ecology

Within political ecology, lies a strong critique on the literature surrounding the idea of sustainable development. While much of this critique takes place within a rural context in the third world, it is useful for examining how sustainable development has become the overarching theme for numerous development organizations and has therefore affected the urban center in the developing world. Although it is an integral part

[1] Blaike and Bookfield use this approach as a feature of what they called a 'regional political ecology'. The chain of explanation begins with the individual 'land manager' – the person with direct relations with the land that the authors appear to equate chiefly with Third World peasants – and then traces the social relations of production outward and upward to the local, national and, ultimately, the global scale.

of human-environment interaction, much writing on sustainable development is ‘curiously devoid of politics’ (Bryant 1991). Assumptions are made about the state and societal actors that ignore political analysis. This is done through the discourse of ‘providing lasting and secure livelihoods that minimize resource depletion, environmental degradation, cultural disruption and social instability (Barbier 1989, Bryant 1991). The concrete difference between political ecology and the language of sustainable development is that political ecology takes politics seriously. It recognizes that if sustainable development is to transcend mere rhetoric, political questions must be central to an analysis (Bryant 1991).

By taking these political questions seriously, Bryant states that political ecology rejects the oversimplifications of human-environment interactions. The idea for example, that ecological degradation is a universal ‘evil’ affecting both the rich and the poor equally is discarded in political ecology. Rather, political ecology explores how such change is incorporated in concrete political and economic relationships, and the ways that it may be used to reinforce or challenge those relationships. It exposes the inadequacies of such relationships in order to suggest ways in which sustainable and equitable development may then take place (Bryant1991). Concerns about sustainable development as a mechanism for alleviating poverty is another critique examined by B. Ikubolajeh Logan in his book African Environment and Development: Rhetoric, Programs, Realities, written with William Moseley. Together, they question the ‘mainstream discourse’ that guides environmental policy in Africa, and how it often ignores the local realities (Showers).

In the book *Liberation Ecologies*, Peet and Watts explore the engagement between political ecology and postructuralism, emphasizing the importance of the politics of meaning and the construction of knowledge (Peet and Watts 1996). Discussing sustainability and sustainable development, Peet and Watts state that the meanings of these terms are contested, but the new 'lexicon' is so common that it appears with as much frequency in the literature of the World Bank as it does in the goals of grassroots environmental and community movements (Peet and Watts 1996). The problem that this poses is that the proliferation of environmental concerns linked to questions of development has other profound theoretical and practical consequences. It is necessary to include debate about the social construction of nature because in the end, those who gain from the benefits of projects undertaken in the name of sustainable development are often different (and more powerful) people than those who loose benefits from environmental problems such as air pollution, lack of water, etc. (Adams 2004).

What the literature states about development as a whole has profound impacts when analyzing a large scale infrastructure project, such as the creation of the Bangkok Transportation System. These are radically different methods, analyses and conclusions, in understanding development in the urban third world that need to be studied.

Case Study: Bangkok

Bangkok is an excellent example for applying urban political ecology to analyze development in the third world. Its classification as an "Asian Tiger" has brought it into the limelight in the economic sense, but many environmental issues often go unnoticed. Because of its status as a large metropolitan area, there are a host of environmental problems that can be examined through the lens of urban political ecology. There are a

series of urban and environmental processes that negatively affect some social groups while benefiting others; and this disparity will be the basis for the analysis presented in this paper. A just urban environmental perspective, therefore, always needs to consider the question of who gains and who pays and to ask serious questions about the multiple power relations – and the scalar geometry of these relations – through which deeply unjust socio-environmental conditions are produced and maintained (Swyngedouw and Heyenen, 2003).

Geography and Economic History

Bangkok is a relatively new city, having been founded by King Rama the First just over two hundred years ago. It was, and remained, a 'compact city' until after World War I, with commerce and housing concentrated along the Chao Phraya riverfront and *khlongs* (canals) (Moor and Rees 2002, Burgess and Jenks). The *khlongs* were created to transport produce and materials from rural areas to local docks along the river. During the nineteenth century, the city grew into densely populated town where people both lived and worked.

Due to the difficulty of acquiring private land for public uses, and given the absence of an official city planning law, Bangkok has a very low percentage of area devoted to roads and an absence of a secondary road network. Private landowners build *sois* (small side streets) to access their own property from the main roads, with few cross connections to adjoining plots. The manner in which the *sois* are laid out, is extremely confusing, with all odd numbered *sois* on one side of the main road, with all even *sois* on the other side. This pattern has exacerbated traffic congestion as even local trips frequently require U-turns on main roads (Moor and Rees 2002).

Bangkok is by no means a walking city. The climate and cultural factors do little to encourage people to walk and roads and streets are not properly equipped with sidewalks or leveled footpaths for pedestrians. Utility poles and street vendors often block narrow (if any) footpaths. Vehicles are used for almost every journey and the public bus system can take hours to negotiate even short trips. Economic prosperity in the late nineties, (before the 1997 economic crisis), spurred greater car ownership, and car use is further encouraged by low gas prices[2]. In 1991, the Thai government reduced import duties on small cars from about 300% to 20-30% to increase competition between local and foreign automobile manufacturers. One year later, Bangkok's car ownership rates ballooned to 200 cars per 1,000 residents, higher than most South East Asian cities. Today, Bangkok is one of the highest car-owning, car-using, and energy-consuming cities in the developing world (Cervero 1998). Hyper-congestion is now a fact of life for Bangkok residents.

The causes that led to the growth of Bangkok into a large urban center are similar to those in most other cities around the world. Looking through the lens of political ecology however, the capitalist history needs to be taken into account, as it is what led to rise as Bangkok as a major financial, social and cultural hub of Thailand. Before the 1997 financial crisis, Thailand's economy was flourishing. Capitalism had made its mark on the city, in much of the same ways as it had on New York, London and Tokyo. The economic boom of the early 1990s saw a quadrupling of capital flows of foreign investment into the South East Asia Region. The Thai government instituted a series of measures that solidified Thailand's status as a neoliberal economy. Thailand liberalized its foreign exchange regime, relinquishing exchange controls in 1990, and opening up a

[2] Have a blurb about the financial crisis

banking facility for foreign financial institutions in 1993. Much of the foreign investment went into Thailand's property market, and the explosion of high-rise development in Bangkok gave all the appearances of a 'globalized city' (Jenks 2003).

The government intervention in the car market was a result of the Thai economy opening up to the rest of the world. Foreign imports were overtaking the local industry; yet, the attempts made to revive the domestic car industry resulted in environmental degradation. Now that cars were being used more than ever, the environmental outcomes were absolutely detrimental to the Thais living in the city. Environmental concerns associated with automobile dependence included noise pollution, premature loss of farmland, wetlands, and open space (from auto-induced sprawl), soil pollution and contamination, water pollution from drilling and processing of petroleum as well as from drainage of automobile fluids and road salts, and the scarring of natural landscapes from scrapping vehicles and tires (Cervero 1998). Roadside monitors in Bangkok regularly record daily ambient noise levels of 75 to 80 decibels, considerably above the 65 decibel maximum considered safe for humans. While buses and trains are certainly noisier than the typical car or truck, the substitution of public transport trips for private motoring can substantially reduce ambient noise levels (Cervero 1998).

Air Pollution in Bangkok. Accessed at
http://www.sustainability.murdoch.edu.au/casestudies/Case_Studies_Asia/bangkok/bangkok.htm

For the poor in rural areas, problems of resource depletion are often more salient than those of pollution, but for the urban poor this is not the case. It is in cities that the most serious and intractable pollution problems in Third World countries arise. Air pollution, for example, is a major issue, causing both acute and chronic (low-level) health effects. There are several major sources of air pollution. Coal and woodfuel burning produce smoke or suspended particulates, including sulphuric acid and polycyclic aromatic carbons. Vehicle traffic and other hydrocarbon combustion produce photochemical pollutants. Other common air pollutants associated with vehicle use include carbon monoxide and lead. Respiratory disease is a major killer in Third World cities: in Bangkok there are estimated to be 1,400 deaths a year due to airborne particulates (Adams 2004).

The people most affected however, are those living in the slums and poor neighborhoods under the freeways, and by major arterial roads. Middle and upper class Thais have the luxury of retreating back to their high rise apartments, or houses outside of the city, thus avoiding the pollution and smog as much as they possibly can. The lower class inhabitants of the city have no such option. The majority of the slums within the city exist along, and underneath highways which feed in and out of the downtown area.

Slum existing underneath a major highway

Thais, who cannot afford taxis or their own cars, must ride in overcrowded, open aired buses, which cause them to be in the direct path of air pollution. As the traffic situation

worsens, more and more Thais were forced to use these buses, inhaling fumes of the cars around them for hours on end because of gridlock in and around the city.

The Thai government made small changes to their environmental policies, but none of them drastically affected the way in which Thais living in the city were being affected by industrial and air pollution. In an attempt to rapidly industrialize the country, they failed to pay close attention to the environmental affects of their policies during the years of heavy industrialization. Yet, the marginalization impacts of capital development could no longer be ignored (Forsyth 2000, Peet and Watts 2000).

Rhetoric of Sustainable Development

It was only after the 1997 financial crisis that the Thai government and city planners realized that a drastic change was necessary. The current pattern of growth was destructive for the city and its citizens, and a better transportation system was necessary in order for the city to survive. It was also understood that the high rates of population growth in Bangkok were not sustainable. The city was sinking slowly, due to excessive water extraction, power and water had to be imported from other areas, waste was piling up, and most areas in the rest of the country remained poor, because the majority of the new job creation was concentrated in Bangkok (Cervero 2004).

Ideas about sustainable development, and more importantly, sustainable *urban* development found their way into the city plans for Bangkok. The report of the Brundtland Commission in 1987 substantially accelerated global debate and discussion on the problems related to meeting “the needs of the present without compromising the ability of future generations to meet their own needs” (WCED 1987). Ideas of sustainability within Thailand however did not take hold with regard to urban setting

until massive pollution had already caused the city problems. It is also important to note, that until the 1990s, the rhetoric of sustainable development, environmental campaigns and international development efforts were only evoked in the northern part of the country. For the most part, local NGOs and other grassroots development actors were concentrated on issues such as deforestation, illegal logging, wildlife conservation and the building of dams.

In a report done by the World Bank shortly after the Rio Summit on Sustainable Development in 1992, ideas of sustainable urban transportation provided hopes of reducing the problems cities such as Bangkok were facing. The report stated that 'Economic and financial sustainability requires effective use of resources as well as appropriate use of assets. A sustainable environment and ecosystem requires sufficient consideration of the external costs of transport whether or not future development will be publicly or privately financed. Socially sustainable development requires acceptance of improved transport services by all levels of society' (World Bank 1993).

With the help of large multinational development organizations such as the Asian Development Bank and the World Bank, the Thai government embarked on creating plans for economic and social development. This included not only increasing basic road infrastructure, but plans for some form of mass public transportation (Rujopakaran 2003). While the rhetoric of sustainable development for the city of Bangkok was being used by the ADB and World Bank, the plans for Thailand began to change after the financial crisis in 1997.

The initial goal of the Thai government was to construct the BTS under the guise of sustainable development. Once the government realized however, that a 'quick fix'

was needed to revive the economy after the financial crisis, the government quickly turned towards projects of sustainable tourism. The two seemed inextricably linked, or so they thought. The government saw the tourist industry as a means of fighting the recession that the economy was facing after the financial crisis of 1997. The country has the natural resources and strategic location to attract tourists from all over the world, and the economy could not afford to loose out on the revenue generated by tourism. The government understood that as an air transport hub of South East Asia, Bangkok needed a transportation overhaul as tourists started to avoiding the city because of its pollution, traffic and poor public transportation. All efforts to turn Bangkok into a sustainable city were done with tourism in mind, including the construction of the BTS.

The Creation of the Bangkok Transit System

Bangkok has a long history of attempts to accommodate traffic, from the filling in of canals, large-scale infrastructure investment and the construction of major raised expressways, toll roads and flyovers (Bae and Suthinarat 2003, Jenks 2003). Yet, the impact that these projects have had on reducing pollution levels are minimal at best. Mass transit then arose on the political agenda as a way to decrease congestion and therefore pollution, spur jobs after the 1997 financial crisis, and help bring those living in the city out of poverty, all under the term of ‘sustainable development’.

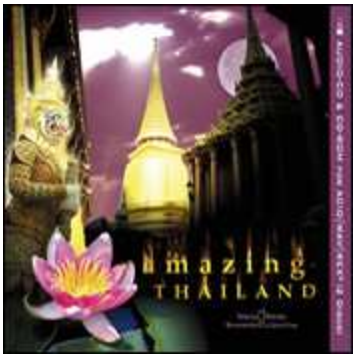
In 1995, construction began on two lines of elevated tracks. The plan aimed at having two different lines in hopes of reaching all major areas of the city, including the central business district, tourist attractions and shopping centers. After much public debate into the environmental consequences of huge elevated structures crossing the city, the lines were finally approved by the government and the skytrain was completed in

1999. The government, urban planners and transportation specialists, who were assigned to the creation of the BTS, believed that because the lines were elevated, the construction would cause the least displacement of people, and have less environmental consequences than if the system were to be a light rail for example. The rhetoric of sustainable development prevented any major negative environmental externalities, but it is the unintended results that often go unnoticed in this case study.

It is also extremely important to understand the overwhelming power of the Bangkok elite in this situation. Policy decisions bearing on governmental reorganization, fiscal and economic strategy, education and transportation all tended to reinforce the metropolis's functional and demographic dominance. In Bangkok, more than thirty government agencies are responsible for the city's transportation policy, management, and operations. Until the recession hit in early 1997, three different rail transit projects, each sponsored by a different federal ministry, were proceeding along toward implementation in hopes of relieving Bangkok of its traffic problems (Cervero 2004).

The Thai government contracted out the plan they saw as the best fit for the city, and within three years, the sky train was built, and within six years, the subway was completed. A large part of the reason for why the government continued on with the public transportation project even without widespread public approval was because of the power effect of the tourist industry. Most Third World states now realize that 'eco-friendly' policies can also be financially lucrative. Activities like commercial reforestation, eco-tourism and green business became a part of the agenda, but it is the fact that these activities are also big business that is proving increasingly attractive to Third World states. These point as well illustrated in the Thai context. Bangkok is the

hub for all traveling around Thailand, and having a tourist-friendly public transportation system lends the city to be more attractive to those coming from all over the world.



To coincide with the opening of the BTS in 1999, the Thai government undertook a massive tourism campaign known as 'Amazing Thailand' designed to maximize tourist revenue. The campaign was extended to the entire country, with hotel and air fare promotions concentrated in Bangkok. The government felt as though the only way to recover from the financial crisis was to interweave tourism with other aspects of development (Kontogeorgopoulos 1999). Tourism was identified as a source of employment, as well as a means of economic decentralization, environmental conservation, and infrastructural investment (Kontogeorgopoulos 1999). The sustainability goals of the city become inextricably linked with tourism as plans for the creation of a mass transport system materialized.

The result is a safe, efficient, clean and cool air-conditioned service, speeding passengers over the congested streets below. Trains run every 3.2 minutes at peak times, and the maximum journey time is 30 minutes – three to four times faster than traveling on the roads. For an extremely large urban center, the creation of the BTS was a momentous event in the history of sustainable development in the developing world. The Thai government proved that it was possible to create a mass transit system in order to reduce pollution, alleviate traffic and regain economic stability through the tourist industry. For all intents and purposes, Bangkok had become a sustainable city.

Through the Lens of Political Ecology – "The World Below the Line"

The skytrain has a strong physical presence in the city. The two lines (23.5km in total) and its 23 stations are all built over existing streets, and stops exist approximately every kilometer (Jenks 2003). The transit system itself uses the latest technology from Europe, overseas designers were employed, and maintenance inspections are carried out in collaboration with experts from the United States (Jenks 2003). What these experts and city planners failed to realize however, was that there was a completely different world living 'below the line' (Jenks 2003). Not everyone in the city was benefiting from the new sustainable transportation system.

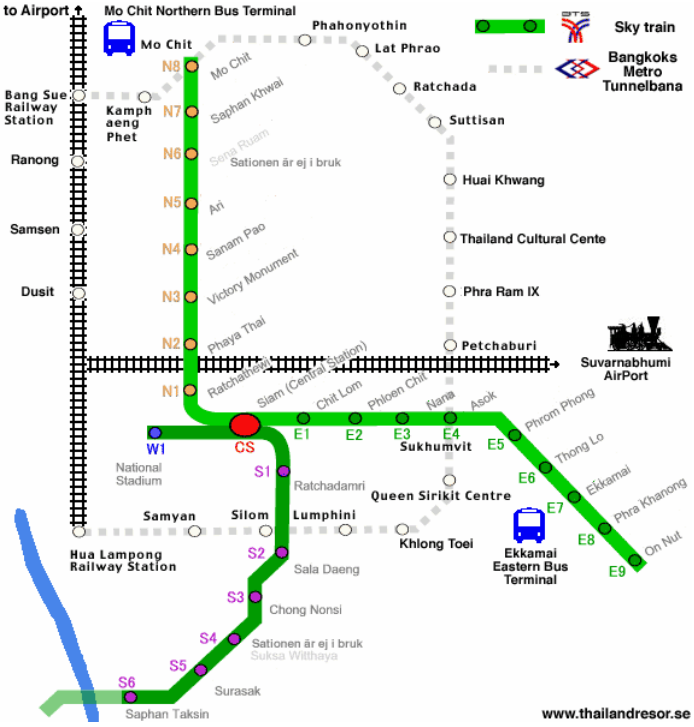
Current debates over sustainability vacillate between calls for consensus around single definitions that would ostensibly lead to concrete actions and assertions that it is perhaps best to abandon the concept altogether by reason of its vacuity and malleability (Carpenter 1994, Lele 1991, Sneddon 2000). This was most definitely borne out in the case of Bangkok. With such a large number of groups and organizations working to help build the BTS, there was no single concept of sustainability that each organization could adhere to. The multinational organizations that were involved including the World Bank and the Asian Development Bank also had their own definitions of the term, which they were trying to impose on the Thai government. Critics of sustainable development charge that the concept's ambiguous theoretical basis, its inattention to the structural forces that result in environmental problems, and its focus on achieving consensus among fractious social groups disable effective implementation and may lead to disastrous ecological consequences (Redclift 1987, Lele 1991, Frazier 1997, Sneddon 2000).

Christopher Sneddon states that ‘sustainable development’ appears as the logical extension of efforts to reproduce development in a form more acceptable to both the people being ‘developed’ and the multinational and domestic institutions attempting to reconcile semantically economic growth and ecological transformation as part of their development missions (Sneddon 2000). In the case of the BTS, not only was sustainable development being used a means of justifying development, but the World Bank and Asian Development Bank contributed to existing idea that it was possible to have economic growth and ‘sustainable’ development, in one nice package. Increasing economic productivity through the use of sustainability projects was the goal for the Thai government

This is a possible explanation for the change in policy from sustainable development, to tourism development, as the government believed they could maximize revenue and undertake methods of sustainability. This shift, unknown to the Thai government, had implications that need to be examined. Through the lens of political ecology, it is important to see who ‘wins’ and who ‘looses’ in this situation, as this has yet to be addressed in the context of sustainable development.

What resulted in the case of Bangkok was a diversion from the distinct definition of ‘the ability of future generations to meet its own needs’ in the form of public transportation, to sustainable ‘tourism’ development. This could be due, in large part, to the lack of a concrete idea of what sustainable development truly meant for the city. The change in goals of the Thai government resulted in a policy that failed to combat the massive amounts of pollution, traffic jams and a mass transport system that was accessible to all Thais. Its separation from the local Thais is reinforced not only by its

physical elevation, but also by the connections to many of Bangkok's international facilities. Eight of the elevated stations have high level direct connections (known as sky bridges) to international hotels or major shopping malls. The skytrain thus gives direct access either at the same level, or in close proximity to stations, to 32 international hotels, 17 shopping malls and to two night markets (aimed at tourists) and 1 weekend market (Jenks 2003). Of interest to the general public is access to local markets for everyday subsistence, schools, universities and places of work. With the exception of those in the service sector of the economy, few Thais benefit from connections to upscale malls and hotels.



The presumption of the Thai government was that the new mass public transit system would give everyone access to safer, faster and cleaner modes of transportation. What they did not realize however, was that the number of passengers required to offset building costs, were three times more than originally thought. This translated into an increase of the originally stated price of train fares, even though by 2001, usage numbers estimated that the skytrain was carrying 25,000 people per day (BTS 2002). With daily operating costs of 5 million baht against revenue of 4 million, and an additional 8 million baht per day to service the loans given by the Asian Development Bank, the necessity to attract more passengers was imperative (Sundaravej

2001, Jenks 2003). This demonstrates that even within situations of sustainable development, there is an inherent tension between the needs of a private company to cover its cost and achieve profitability, and the government in trying to undertake a large scale development project.

Increased prices however, meant that the lower class Thais did not have access to this supposed ‘mass’ transit system. A singly journey on the skytrain was between 10 and 40 baht, which represented 14% of their monthly income, as opposed to the public bus, which only represented 10% of their monthly expenditure (Jenks 2003). This spike in costs was too much for the locals, who were able to just about meet their basic needs.

Currently, for those who cannot afford to ride the skytrain on a daily basis, they have no other alternative. Traffic jams still occur and congestion has hardly for two reasons. One, with the high costs of riding the train, Thais continue to ride open aired, crowded buses which are major contributors to air pollution. Two, the lack of local stops have made using the train superfluous for people traveling to areas that are not tourist atractions. Those who need to get to places outside the area of the BTS still drive, and with so many people owning cars, driving still continues to be the chosen option. This combination of running busses stuck in traffic jams caused by too many cars, contributes to the air pollution that still exists within the city today.

The local Thais, those who cannot afford to ride on the skytrain, have 'lost' in creation of the BTS. They were the ones who were affected the most by the excessive air pollution, and the new transport system excludes them completely. The policy of mass transit that the Thai government undertook did not account for the constraints of the lower socio-economic class. There are no development alternatives that address the fact that Thais do not have an environmentally friendly method of transportation that the tourists now have in Bangkok. Environmental degradation is still occurring at the cost of the local Thais. There is a clear problem that those who gain the benefits of the policy are different than those who are forced to maintain their status quo. The rhetoric of sustainable development ignored the 'local realities' on the ground, resulting in a policy that has no real effect on those who needed change.

In this situation, the tourists are the obvious winners. Through the 'Amazing Thailand' campaign, and even with the creation of the BTS, Bangkok has without a doubt become a more tourist friendly city. One can argue that sustainable development is a result of the government advocating policies that were aimed at maximizing revenue, yet their lack of acknowledgement for the local Thais leads to the conclusion that the government valued economic development over sustainable development.

The government was also a clear winner in this case. They were able to impress the world with their creation of what seems to be a sustainable method of transportation. Tourism revenue increased, and international organizations praised Bangkok for its ability to build mass transit system. Tourism still continues to boom in Thailand, and remains one of the largest industries, thanks in part to the creation of the BTS. The

economic recession is long gone, and the effects of the financial crisis are hard to find. The government had ‘won’ this case.

Conclusion

The Bangkok Transport System started out as a sustainable development policy designed to combat pollution, alleviate traffic congestion, and provide a new, better form of public transportation for the Thais living in the city. What resulted was a policy that ignored the locals, furthering urban marginalization. Bangkok understood that in order to recover from the 1997 financial crisis, a new form of development would need to take place. This situation is not unique in developing countries that aim to maximize revenue through the tourist industry, especially in urban areas. It is therefore important to identify this gap in the literature, and provide a concrete case study that highlights just how necessary urban political ecology is for the developing world.

Through the lens of political ecology, especially within the urban setting, it is essential to understand how the Thais in the city interact with their urban environment. For them, public transportation is the only means for travel, and despite its degradation on the environment, they have not been given any other choice. The ‘mass’ public transport system is inaccessible and therefore marginalizes them from the discourse of mainstream development. Much of the literature on sustainable development fails to address these vital issues.

Urban political ecology attempts to examine the important, underlying questions that often go unnoticed in large scale development practices. There is a need for substantial literature regarding urban political ecology in the third world, as the case in

Bangkok is by no means an isolated situation. As more and more urban environments in the Third World are facing similar issues, it is necessary that development policy makers and practitioners understand the consequences of their development projects.

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