# MALAYSIA SUSTAINABLE CITIES

MIT-UTM International Scholars Program

# 2014 DRAFT Research Agenda: A Report of the January 2014 Practicum

March 7, 2014

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## MIT – UTM Malaysia Sustainable Cities Program 2014 DRAFT Research Agenda: A Report of the January 2014 Practicum

#### Introduction

Launched in September 2013, the MIT-UTM Sustainable Cities Program (MSCP) is a five-year effort supported by the Malaysian government. It is aimed at improving the quality of instructional materials available to college and university faculty around the world that teach about sustainable city development.

This report is a jointly proposed research agenda prepared by faculty and students of the Universiti Teknologi Malaysia (UTM) and the Massachusetts Institute of Technology (MIT), based on a graduate course practicum that took place in Malaysia between January 8 and January 25, 2014. Two faculty-led committees from MIT and UTM are currently in the process of reviewing applications from candidates seeking one of 10 Visiting Scholar appointments with the Malaysia Sustainable Cities Program for the 2014-2015 Academic Year (beginning September 2014). Visiting Scholars who actively teach at universities and colleges in G-77 developing countries are invited to pursue one of the many questions presented in this research agenda. The selected Visiting Scholars will spend September - December, 2014, based at the Institute Sultan Iskandar of Urban Habitat and Highrise at UTM in Johor Bahru and then travel to Cambridge, MA, USA from January - May, 2015, to complete their program in the MIT Department of Urban Studies and Planning. While at UTM, the Visiting Scholars will conduct extensive field-based research related to their selected research agenda question(s). At MIT, they will work with MIT faculty and doctoral students to transform their research findings into online teaching packages that will be distributed free-of-charge via MIT's global educational media outlet. MCSP is a five-year program, running until May 2018. Four rounds of Visiting Scholars will take part annually, building on an impressive body of research dedicated to understanding Malaysia sustainable cities.

For the Visiting Scholars to be able to produce usable findings, they must begin with manageable questions that match their interests, as well as the expertise of UTM and MIT faculty. The Research Agenda presented in this report reflects the best recommendations of the January 2014 Practicum regarding the questions likely to yield interesting results in the coming year. In addition, the report contains potential institutional contacts the Visiting Scholars may wish to approach as they initiate their field-based research.

#### Description of the January 2014 Graduate Course Practicum

Fourteen MIT Masters Students, two MIT Doctoral Teaching Assistants, one professional photographer and the MIT program administrator arrived in Johor Bahru (JB) on January 8, 2014 with MIT Professor Larry Susskind. They were joined during the subsequent two weeks by MIT Professors Balakrishnan Rajagopal and J. Phillip Thompson. Twelve UTM graduate students and the two UTM program administrators joined the group, along with UTM Professor Mohd Hamdan Ahmad and Associate Professor Shuhana Shamsuddin. During the first week the full group received briefings from government agencies, city officials, UTM faculty, private organizations and individual community activists in Johor Bahru (JB), Malacca, Putrajaya and Kuala Lumpur (KL). During the second week, the Practicum divided into four sub-groups that engaged in

impromptu discussions with a wide range of individuals, groups and organizations in KL, JB, Penang, and Kuching (East Malaysia). Each sub-group produced a field report. Their findings and suggestions have been incorporated into this report and proposed Research Agenda.

The Practicum itinerary for the first week is attached as Appendix A. The itineraries of the four sub-groups are attached as Appendix B.

#### Selecting the First Set of Visiting Scholars

A *Call for Applications* for MIT-UTM Visiting Scholars was published on December 15, 2013. Electronic versions of the announcement were distributed through a number of international scholarly networks. An advertisement was placed in the on-line version of the *Chronicle of Higher Education*. The Program web site (malaysiacities.mit.edu) includes not just the Call for Applications but an on-line application form as well. Applications are due by March 1, 2014. We hope to receive at least 30 applications from qualified individuals who hold academic appointments in colleges and universities in G-77 countries.

The MIT Faculty Program Committee for the MIT-UTM Program includes Lawrence Susskind, Ford Professor of Urban and Environmental Planning; Balakrishnan Rajagopal, Associate Professor Law and International Development; J. Phillip Thompson, Associate Professor of Urban Politics and Public Policy; Gabriella Carolini, Ford Career Development Assistant Professor of Urban Studies and Planning; and Miho Mazereeuw, Assistant Professor of Architecture and Urban Design). The UTM Faculty Program Committee for the MIT-UTM Program includes [ ADD FULL UPDATED List of UTM faculty]. The two groups meet regularly via video link. During March, after the application deadline, members of the UTM committee will travel to MIT for a joint meeting to select the first set of Visiting Scholars.

On April 1, 2014, up to 10 Visiting Scholars will be notified that they have been selected. Each will be asked to indicate which research question from the final version of this Research Agenda they would like to pursue while they are at UTM and MIT. The focus of their research will reflect each researcher's expertise, abilities, and interests. Once the relevant matches are made, each Fellow will be assigned an UTM faculty mentor and an MIT faculty mentor. Each will also be matched with a UTM doctoral assistant and an MIT doctoral assistant. We will seek letters of agreement from relevant organizations, such as the Iskandar Regional Development Authority (IRDA), that might provide a base of operations for one or more of the Visiting Scholars.

The UTM university administration will process the relevant faculty appointments for the scholars involved. The same individuals will be appointed as Visiting Scholars at MIT. UTM is planning an orientation for the Visiting Scholars at the end of August 2014.

#### Scope and Style of the MSCP Proposed Research Agenda

We have formulated questions that a researcher working on their own for four to five months could successfully address. We have also emphasized questions likely to produce "actionable findings" relevant across the developing world.

Our reason for focusing on Malaysia in the first place is that the country has made rapid progress in moving from developing to developed country status, with the goal of being fully developed by 2025. Malaysia has an intergovernmental planning system in place that lists sustainable development as one of its goals. It is a country that has made enormous strides in reducing

poverty, providing high quality universal education, and offering publicly supported health care to all its citizens. It has achieved global visibility for its commitment to become a low carbon society and to improve water and air quality, protect mangroves and fisheries and encourage historic preservation. It has been able to catalyze substantial private sector investment in housing and commercial development while maintaining its natural resource and agricultural base.

At the same time, Malaysia faces underlying racial tensions because of its complex political history. Its heavily top-down approach to planning and plan implementation raises questions about the prospect of more substantial public involvement in local decision-making over time. Heavy emphasis on tourism creates a great deal of pressure on historic areas and competing pressures for development and conservation in desirable areas, particularly along the coast. The country's approach to taxation, intergovernmental revenue sharing and federal financing of almost all infrastructure investment may make it difficult to capture and apply the value created through new investment at the local level. The mechanisms of plan implementation appear to fall short of what will be needed to ensure sustainable development over time. Finally, there are also challenges related to congestion, automobile dependence, limited walkability and a short of public transit options.

These challenges are not unique to Malaysia; they are shared, in different ways, by almost all developing and developed countries. However, a key assumption underlying our proposed Research Agenda is that there are opportunities to learn from what Malaysia has, and has not, done, as well as what it could do in the future.

Each question on our Research Agenda is framed in terms of "something" (an independent variable) that may be affecting "something else" (a dependent variable). We want to learn which forces or actions can and be harnessed to enhance sustainability, and which should probably be left alone. In our discussion of each question, we share the reasons it seems interesting or important to us. We also identify relevant research findings (to the extent we are already aware of them). Finally, we try to include "links" to people, organizations, agencies and institutions that might make the research more manageable.

# MSCP RESEARCH AGENDA Questions and Discussion Items

### Georgetown, Penang



#### Question 1

# How does UNESCO status impact the preservation of "intangible" heritage in Malaysia?

#### **Themes**

Historic preservation; Urban design

#### Discussion

The UN Convention Concerning the Protection of the World Cultural and Natural Heritage outlines the UNESCO mission: "to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity." The cities of Melaka and Georgetown, Malaysia received World Heritage status in 2008 but are struggling to preserve the identity of their historic districts. While strong efforts are underway to preserve the architectural and aesthetic ("tangible") heritage of the historical UNESCO sites, there is a lack of conservation programs that successfully target historical uses and tenants ("intangible heritage") in core areas.

Gentrification in these core areas and an influx of tourism industries has changed the heritage sites of both Georgetown and Melaka. Although architectural renovation and preservation projects have successfully restored the aesthetics of the building stock in these areas, there has been a loss of cultural identity as boutique hotels, souvenir shops, and cafes have replaced local shops, family homes, and traditional restaurants.

Although some communities have seen positive changes including infrastructure upgrading and increased revenues, other areas have seen rapid commercialization and displacement. While some have become tourist attractions, many of the Clan Jetties in Georgetown have seen marked improvements in infrastructure (water provisioning, boardwalk upgrading) that have not come at the expense of gentrification. Some traditional uses have been sidelined, but the majority of residents appear to have retained their fishing lifestyles. In Melaka, and increasingly in Georgetown, however the Chinese shop houses have lost both their original tenants and functions to the burgeoning tourist trade.

According to interviews with Georgetown World Heritage Incorporated and Think City, there is a significant lack of programs and initiatives to address intangible heritage. Georgetown World Heritage Incorporated is currently in the process of conducting surveys to assess the state of intangible heritage in the core but has not yet implemented any programs.

There is a significant opportunity to examine the following areas/sub-questions in both heritage sites:

- What has been the shift in land use and tenancy before and after UNESCO World Heritage classification?
- What programs are in place to maintain the intangible heritage of both Georgetown and Melaka? How do the two sites compare? What are their strengths and weaknesses?
- What are additional opportunities for intangible heritage conservation?
- What lessons can UNESCO and future heritage sites learn about preserving intangible heritage from the Georgetown/Melaka case study?

The answers to these questions will help ascertain the current state of intangible heritage programs in Melaka and Georgetown. Researchers could conduct this study through interviews, land use and property information database analyses, observations, and historical record reviews.

Both the state and federal governments in Malaysia will find the research useful in identifying areas for improvement. Moreover, Georgetown World Heritage Incorporated expressed a strong interest in partnering with the MIT-UTM initiative to conduct this research. Finally, this research can provide insight into intangible heritage preservation in other parts of the globe.

#### Possible case study sites

Georgetown: Clan Jetty fishing pier communities, Chinese Shop Houses

Melaka: Chinese Shop Houses

#### **Published Resources**

List of relevant resources to Penang heritage conservation: http://www.gtwhi.com.my/index.php/resources

UNESCO World Heritage listing for Malacca and Georgetown: http://whc.unesco.org/en/list/1223

Melaka Historic City Council/ Heritage Office: <a href="http://www.mbmb.gov.my">http://www.mbmb.gov.my</a>

#### **Question 2**

# What empowers civil society in Penang to influence sustainable development decision-making?

#### **Themes**

Public participation processes; Role of civil society

#### Discussion

Penang is known for its vibrant NGO and civil society community relative to other states in Malaysia, though these groups claim to have limited voice in government decisions, especially in issues of property development. As Malaysia advances towards its vision of a developed nation with a world-class democratic governance system, it must do so while simultaneously supporting the emergence of an active and engaged civil society. This will serve to ensure that development decision-making processes are inclusive of multiple voices, better meet public interests, and achieve social, environmental, and economic goals.

The case of Penang Hill redevelopment provides an interesting example of the role civil society has played and can continue to play in Penang in influencing sustainable development decision-making. Penang Hill is a large natural heritage site in the center of the island, and an ecologically fragile region providing critical flood prevention and water catchment functions. In the 1990s, the unification and activism of civil society and their influence on public awareness succeeded in diverting an extensive tourism redevelopment proposal for the land. Recently, however, a similar plan has been proposed to bring hotels, more cable cars, and commercial activities to Penang Hill that could result in environmental consequences (such as landslides and pollution) and will stress existing congestion, resource management, and price increase issues on the island.

Therefore, the Penang Hill redevelopment case raises several relevant issues for researchers studying the role of civil society and public participation in governance and decision-making. These include:

- Factors the enabled civil society groups in the 1990s to successfully align and divert the development plan
- Barriers that remain to civil society engagement in decision-making
- The role of state and federal government in incorporating public participation processes into decision-making outside of traditional end-of-process complaint hearings

Researchers can conduct a series of interviews with leaders of local NGOs, the Penang planning council, and the Penang Hill Development Corporation. In addition, surveys of local residents and diverse community group representatives can provide further insight on public opinion regarding Penang Hill redevelopment and other sustainable development and public participation issues on the island.

#### Possible case study sites

Georgetown: Penang Hill redevelopment proposal

#### **Published resources**

FMT opinion letter by Mr. Mohd Idris, President, Consumers Association of Penang (December 19, 2013) <a href="http://www.freemalaysiatoday.com/category/opinion/2013/12/19/penang-hill-draft-plan-threatens-ecology/">http://www.freemalaysiatoday.com/category/opinion/2013/12/19/penang-hill-draft-plan-threatens-ecology/</a>

#### **Question 3**

How has Malaysia's national food security policies affected Penang's environmental and economic sustainability? In particular, to what extent is aquaculture in Penang a sustainable solution to address issue of Malaysia's national food security?

#### **Themes**

Food policy; aquaculture; coastline management

#### Discussion

In 2008, the world faced a food crisis with prices increasing almost 45% over the course of nine months. Developing countries, like Malaysia, were hardest hit, with basic necessities such as rice, fish, and other staples increasing 15-40%.

While the reasons for the increase in food prices were the result of many confounding factors including oil shocks, commodity speculation, and droughts and shortages, the problems in Malaysia were heavily influenced by two additional trends: the use of productive agricultural land for palm oil production, and decreasing food imports.

After 2008, the Malaysian government undertook a number of initiatives to protect the country against the possibility of another food crisis, implementing a National Policy on Food Security, which was intended to increase rice production. In addition, the government also promoted a number of high-impact projects, such as the Aquaculture Industrial Zone, as a means of increasing the supply of fish.

Penang, in particular, has seen an increase in the number of aquaculture projects. This has come in the form of farms dedicated to producing various strains of non-native salt and fresh water fish and shrimp.

While aquaculture offers Malaysia a chance to improve its food security, questions arise as to whether Penang's environmental sustainability is compromised. Fish farming, when performed incorrectly, has been linked to the destruction of mangroves and damage to surrounding soil and water due to effluent and chemicals. As a result, activists argue that industrial aquaculture could worsen Penang's own food security while also adversely affecting the livelihood of fisher-folk who are already facing challenges due to pollutants from land reclamation, tourism and high-tech factories.

Aquaculture in Penang poses interesting and important questions on a number of different planning related issues including:

- The influence of national level food security policies on local food security
- The influence of national policies on local environmental and economic sustainability
- The relationship between national level environmental regulations and state level implementation. Researchers exploring aquaculture might choose to undertake scientific analysis to assess the impacts of fish farming on mangroves and wildlife along coastal areas. Alternatively, researchers might choose to look at the economic and social consequences of dwindling fisheries, increasing pollution levels and aquaculture on local fishing communities and fish consumption amongst poorer residents in Penang.

#### **Question 4**

How do the institutional and governance structures in Malaysia impact the capacities of local/state governments' effectiveness in implementing sustainability initiatives in Penang? What are the implications of Malaysia's intergovernmental assignment of authority and shared responsibility for sustainable city development?

#### Themes

Institutions and governance; decision-making; sustainable transportation; resource management

#### Discussion

In Malaysia, power resides in the federal executive and judicial branches of government, leaving local and state governing bodies with little capacity for oversight, implementation, and delivery of critical services. In fact, many services, such as transportation, waste management and electricity, are centrally controlled by the federal government, constricting local decision-making.

Despite the existence of credible regional and national sustainability plans, local entities in Penang, as in much of Malaysia, lack the capacity to function independently of the federal government, leaving questions about how sustainability plans will be implemented. For example, the Penang Institute, the public policy think tank of the state government of Penang (established in 1997 as the Socio-Economic and Environmental Research Institute) has produced some exciting state sustainability plans. However, oversight of critical, local services, such as public transportation and waste management, is outside the state's direct authority, so the chances of their sustainability plans being put to work seem remote. To complicate matters, the Penang state government is currently governed by the political opposition party (unlike the majority of states in Malaysia), contributing to a sense of distrust and disenfranchisement between local officials in Penang and federal entities in Putrajaya.

Given Malaysia's highly-centralized government planning and resource allocation, Visiting Scholars could perform case studies in Penang that would correlate to much broader institutional and governance matters across Malaysia. For instance, waste management policies are nationalized. In Penang, over forty different waste collection companies operate in the Georgetown area, which is arguably very inefficient, but local authorities are unable make changes to improve the impact of overarching policies on local systems. There is a similar problem around transportation planning. The state is only empowered to decide where public transport stops will be located, yet it has little-or-no jurisdiction over financing and policy.

Finally, because local and state governments in Malaysia do not have the authority to create their own tax structures, the process of revenue generation is static. In Penang, for example, the only tax revenue the state is able to raise is through selling its land for development. This incentivizes the state to sell valuable resources to private investors in order to fund the public service and development initiatives it wants to pursue. The potential long-term cultural, economic, and environmental impacts of such exchanges need more consideration than the current governance structure allows.

Specific challenges facing Penang:

- Traffic congestion and increased personal vehicle use
- Increasing housing prices
- Increasing food prices

Initiatives that have been proposed, but not yet implemented, in Penang:

- Limiting the entry of tour buses into certain streets & areas
- Closed roads campaigns (Car-free Sunday morning)
- Limiting development to that which suits the character and needs of certain areas
- Publicizing buses around city and across the bridge
- The food waste pilot: 100 machines converting food waste into energy
- "Cleaner Greener Penang": umbrella awareness campaign for sustainability initiatives
- Penang Green Council aiming to close waste stream loops

#### In the context of Kuala Lumpur transportation:

Similar governance challenges exist in the city of Kuala Lumpur. The Mayor of Kuala Lumpur is directly appointed by the federal government, yet, even so, DBKL cannot rapidly implement ambitious transportation improvement plans, such as ten new rail projects the planning council told us they hope to launch. Kuala Lumpur is the epicenter of a larger metropolitan region, and because a significant volume of traffic flows between the city and other surrounding cities, interaction with the neighboring state of Selangor needs taken into account in reconfiguring changes in transportation policy and systems management. Yet there is some question over which governing entities are empowered to work together to produce and execute complex interstate, regional plans. Thus, a variant case study question might be:

How does the federal approval process impact the ability of local authorities in Kuala Lumpur and neighboring regions of Selangor to plan, finance, and implement sustainable transportation improvements? Does the federal-local relationship get in the way of efficient and rapid implementation, or are there other more significant barriers that the national government is best suited to overcome?

#### Possible case study sites

*Georgetown*: The state of Penang transport and/or waste management initiatives/issues. *Kuala Lumpur*: Impact of federal approval processes on local decision-making and jurisdiction.

#### **Institutional Contacts: Georgetown, Penang**

Aliran (Q1, Q2, Q3, Q4)

Website: <a href="http://aliran.com">http://aliran.com</a>

General E-mail: aliran.malaysia@yahoo.com Contact: Anil Netto, Honorary Treasurer Contact Phone: 604.658.5251

Consumers Association of Penang (Q2, Q3)

("Friends of Penang Hill" campaign)
Website: http://www.consumer.org.my
E-mail: consumerofpenang@gmail.com
Contact 1: Mr. Mohd Idris, President
Contact 1 E-mail: smmohdidris@gmail.com

Contact 2: Ms. Uma

Contact 2 Phone: 604.829.9511

Georgetown World Heritage, Inc. (Q1)

Website: http://www.gtwhi.com.my/
Contact: Lim Chooi Ping, General Manager
Contact E-mail: limcp@gtwhi.com.my

Heritage Department, MPPP (Q1)

Contact: Mohd Razif Mohd Yusoff, Engineer

Contact E-mail: <a href="mailto:razif@mppp.gov.my">razif@mppp.gov.my</a> Contact Phone: 604.259.2020

#### Mr. Dato Seri Lim Chong Keat (Q1, Q4)

Chairman, Hotel Bellevue Sdn Bdh Publisher/Editor: Folia malaysiana E-mail: penbell@streamyx.com

Tel: +604-229-0923

Mr. Lim is a 1957 MIT Architecture alum, and he has extensive historical knowledge of Penang and he designed some buildings in Penang. He also may have knowledge about the state political climate and some possible contacts on planning in Penang. He told us he was looking to connect back with MIT. This is maybe a chance to reconnect and utilize his experience of Penang.

#### Lembaga Kamajuan Ikan Malaysia -LKIM (Q3)

Website: http://www.lkim.gov.my

E-mail: info@lkim.gov.my Phone: +603 26177000

(Fisheries Development Authority of Malaysia)

#### Malaysian Nature Society (Q2)

http://www.mns.my

General E-mail: mns@mns.org.my

Phone: (6)032287 9422

#### Melaka Historical City Council (Q1)

http://www.mbmb.gov.my

General E-mail: melakawhsb@gmail.com
Rosli Bin Haji Nor, General Manager
Contact E-mail: roslinor@hotmail.com

Contact Phone: 606.232.6411

#### Melaka World Heritage

Website: melakawhsb@gmail.com

Contact: Rosli Bin Haju Nor, General Manager

E-mail: roslinor@hotmail.com

Phone: 606-232-6411

#### Municipal Council of Penang Island (Q2)

Website: <a href="http://www.mppp.gov.my">http://www.mppp.gov.my</a> Ms. Che Noaini Binti Abdullah, Senior Officer Contact E-mail: <a href="mailto:noraini@mppp.gov.my">noraini@mppp.gov.my</a> Contact Phone: 604.259.2149

#### Penang Forum (Q2)

Coalition of 11 civil society organizations in Penang advocating for sustainable development

planning

Website: http://penangforum

#### Penang Heritage Trust (Q2)

http://www.pht.org.my

General E-mail: <a href="mailto:info@pht.org.my">info@pht.org.my</a> Telephone: 604.264.2631

#### Penang Angling Association (Q3)

Website: <a href="http://pmpp.org">http://pmpp.org</a>
E-Mail: <a href="pmpppoline@gmail.com">PMPPppline@gmail.com</a>

Contact: KC Yong

E-mail: yongkc98@gmail.com Telephone: +601 25737557

#### Penang Institute (Q2, Q3, Q4)

Website: <a href="http://penanginstitute.org">http://penanginstitute.org</a>
E-mail: <a href="mailto:enquiry@penanginstitute.org">enquiry@penanginstitute.org</a>
Stuart Macdonald, Head of Urban Studies <a href="mailto:stuartmacdonald@penanginstitute.org">stuartmacdonald@penanginstitute.org</a>
Contact Phone: 604.228.3306 Ext 227

#### Penang Transport Council (Q4)

Website: http://ptc.penang.gov.my

#### Think City (Q1, Q4)

Website: http://www.thinkcity.com.my
General E-mail: enquiry@thinkcity.com.my
Contact: Hamdan Abdul Majeed, Director of

Investments

Hamdan.majeed@khazanah.com.my

Phone: 604.222.6877

#### World Fish Center (Q3)

Website: http://www.worldfishcenter.org

E-mail: worldfishcenter@cgiar.org

Phone: 604.626.1606

### **Kuala Lumpur and Putrajaya**



#### **Question 5**

In Malaysia, how does the transition of people from interconnected public spaces (parks, plazas, pedestrian streets, outdoor markets, etc.) to self-contained indoor shopping malls affect their interactions?

#### **Themes**

Public space; malls; community development; democratic decision-making

#### Discussion

As more and more people converge in malls around the world it is important to find out whether this should be a matter of concern for governments or not. Concern could arise over congestion, or pollution caused by mall development. Our interest is in something a little bit different: how relationships among people change in the Malaysian context depending on whether they are in malls or in traditional outdoor public spaces. Who are the people interacting in malls, what are they interacting around and what level of interaction are they having? Have some community-building dynamics been lost as public interaction has moved in doors to commercial centers?

If the answer to the question reveals that there is a matter for concern, it is important to suggest a series of solutions that in the developing world context could help prevent the type consequences resulting from this shift. Should city governments halt the increase in malls, should they attempt to create other kinds of public spaces, should they demand that malls provide spaces for "better" interaction between among citizens and customers (of different ages)?

The experience of the recent "rolezinhos" in Brazil where poor teenagers have been flooding malls as a form of protest might serve as an interesting point of reference.

The lack of functional outdoor public spaces in Malaysia and many other developing countries has forced people (especially the middle classes) to concentrate in malls. The interaction

between people in malls is different from the interaction they have in outdoor public spaces for many reasons. Not everybody can enter a mall (the poor for example are conspicuously excluded), not every activity is allowed in malls (political activity is explicitly banned) and the interaction among people appears to be somewhat shallow (mostly buyers and sellers interact). Therefore, a society where malls are the only alternative for people to interact with strangers is essentially a more socially and ethnically divided and politically passive context than one in which a richer array of interactions take place in well-designed plazas, outdoor parks and pedestrian-oriented streets.

Malls could be designed to promote more complex types of interaction among customers but the matter of exclusion of certain types of people and certain types of behavior would then have to be addressed.

#### **Published resources**

UTM Professors Tang Hoay Nee and Tareef Hayat Khan's paper: "Revisiting strategies to enhance social interaction in urban public spaces in the context of Malaysia" (2012) in the *British Journal of Arts and Social Sciences*, vol. 8, no. II. Available for download at <a href="https://www.academia.edu">www.academia.edu</a>.

The mall society: illusion, exclusion, and control in the urban center by former MIT DUSP graduate student Daniel Glenn (1989) <a href="http://dspace.mit.edu/handle/1721.1/74348">http://dspace.mit.edu/handle/1721.1/74348</a>

Brave New Neighborhoods: the Privatization of Public Space by Margaret Kohn (2004).

<u>Preferences For Interior Public Spaces In Kuala Lumpur Shopping Malls</u> by UTM graduate student Fazilah

#### **Question 6**

In Putrajaya, how does the lack of an elected local government impact planning for sustainability? In the absence of substantial public participation and representation, how can municipalities still provide services that are necessary for urban sustainability and matched to local needs?

#### **Themes**

Governance and sustainability; urban services; decision-making

#### Discussion

In Malaysia, citizen involvement in local decision-making is limited. In Putrajaya, there is no elected representative government, so the Putrajaya Corporation has launched its own outreach program in an effort to solicit input from the residents. When we visited, the Putrajaya Corporation spoke candidly about the difficulties of involving the public in the planning process on a regular basis, but they cited numerous campaigns to encourage people to attend meetings, provide feedback, and voice complaints.

The nearby municipality of Shah Alam has an elected government. There, the channel for citizen engagement is primarily through formal voting and lodging complaints. "Problem-solving" meetings that involve the public and community gatherings to discuss or debate public concerns are not common. The sustainability implications of the lack of citizen involvement in governance and planning in Putrajaya is important to evaluate.

While development in Putrajaya has produced some highly visible sustainability features (e.g. wetland water filtration), the Putrajaya Corporation has had difficulty offering the kind of basic public services that the populace arguably needs, which also contribute to greater sustainability— such as adequate buses from the residential housing areas to government offices and shaded walkways. Putrajaya is entirely dominated by private automobile transportation. Its vast, beautifully groomed parks and plazas, while splendid, do not invite human activity because of the lack of nearby amenities, places of relative privacy, and shelter from the sun and heat.

In the case of Shah Alam, the municipality has impressive volunteer mobilization strategies to keep its properties and waterways clean, but there is further opportunity to focus on reducing the energy consumption of buildings and incorporating low-energy transportation. The Deputy Mayor of Shah Alam told us that they spend 20% of their annual city budget on park maintenance, and that he does not see a need for transportation modeling because congestion is not currently a problem, though they have ambitious plans for population and industry growth.

Increased public participation may lead to more sustainable outcomes in Malaysia, but this premise has yet to be tested. It is likely that the population will be more interested in short-term sustainability measures that are easy to implement, save money (energy or transportation savings), and /or increase personal quality of life (walkable and bicycle-friendly pathways). Discussions with community members in Putrajaya and Shah Alam could test this assumption to see what types of sustainability measures matter most to their residents.

Would increased, mulilateral civic participation create more local advocates of Malaysia's master plans, thereby ensuring that evolving development patterns actually match the intentions of the master plans? Is there really a void between the visions contained in the master plans and what is actually implemented? Might greater citizen input into the making of master plan create more of a constituency that will fight to ensure that original planning vision will be implemented effectively? What would be the impact of more citizen participation in both Putrajaya and Shah Alam on the prioritization of sustainability initiatives?

#### **Published resources**

Bukit Jelutong Residents Association website: http://www.bjra.com.my

News article from May 2012 listing Shah Alam City Councilors: <a href="http://www.nst.com.my/top-news/shah-alam-local-councillors-to-swear-in-today-1.56895">http://www.nst.com.my/top-news/shah-alam-local-councillors-to-swear-in-today-1.56895</a>. As of May 2013, three new Councilors joined: Papparaidu Veraman (DAP), Anizan Othman (PKR), and Fariz Abdullah, from the Setia Alam Hawkers Association.

Putrajaya Corporation website provides lists of all resident association chairmen for each community precincts in Putrajaya: <a href="http://portal.ppj.gov.my">http://portal.ppj.gov.my</a>

#### Question 7

# What impact on traffic mortality rates does the increase in private vehicle usage have in Malaysia?

#### **Themes**

Public transportation; traffic accidents; motorcycles; regulation

#### Discussion

There are a number of reasons why experts believe the most sustainable cities in the world should prioritize public transportation over the widespread use of private vehicles (cars and

motorcycles). A variety of public transportation options combat congestion, sprawl and pollution. In transportation planning discussions, a reduction in traffic mortality and injury is sometimes forgotten as a significant benefit when considering sustainable alternatives. Certain modes of transportation are *cleaner* but not necessarily positive or even more sustainable, such as electric cars and motorcycles, as increases in private vehicle use are directly correlated with increases in traffic-related fatalities each year.

Clearly there are many factors affecting the number traffic accidents and deaths in a city. The "modal split" (i.e., how many people use cars, how many use buses, how many use motorcycles for each segment of their journey to work and back how) is a very important consideration. Comparing modal splits and mortality rates across different Malaysian cities could be very productive at this juncture in its development. In such studies, it is possible to control for differences in legal regulations, culture, and types of vehicles It might also be interesting to compare these figure within public and private transportation. For example, how many traffic deaths are accounted for by a 1% increase in the modal share that uses motorcycles versus a 1% increase in the share who use cars, or BRT or metro?

Taking human lives into account in figuring the cost of increasing investment in certain mode of transportation might help cities to consider more carefully the value of every dollar they invest in public transportation.

#### **Published Resources**

Data on Road and Traffic Accidents <a href="http://fab.utm.my/research/research-areas/">http://fab.utm.my/research/research-areas/</a>

#### **Question 8**

In areas of increasing urban population growth, what "squatter management" policies and strategies are most effective at moving squatters into housing, and what is the relationship between squatter management and the government's provision of affordable housing?

#### **Themes**

Affordable housing; squatter management; informal settlements; population growth

#### Discussion

Unlike many other cities in the developing world, squatters and informal squatter settlements are not as readily visible in the urban core or on the fringes of development in Malaysia, particularly in its largest city, Kuala Lumpur. The Kuala Lumpur City Council (DBKL) cites "squatter management" policies as one of its successes. Members of the DBKL purport that they have successfully moved nearly all squatters from homelessness into government-sponsored low-cost housing. Housing the urban poor is a serious issue in larger cities worldwide such as Mumbai, Jakarta, and Karachi, so understanding whether or not a city of 1.7 million like Kuala Lumpur actually has managed to drastically reduce its squatter population through the provision of low-cost housing, and how it planned for, financed, and executed this program, is extremely important.

Further, in the nearby city of Shah Alam, population 700,000, the city council claims that they have a "zero squatter" population. Although in that city, the government provides little low-cost housing. What policies did they put in place to achieve a significant reduction in squatters? How does the government reconcile building so few affordable units with their goal of keeping squatters out? Understanding the experience in Shah Alam, as a smaller, wealthier city as compared to Kuala Lumpur, could help illuminate different approaches to the same problem.

Two sides exist to the story: That of city council members who speak of their success in building low-cost housing and moving squatters off the streets, and that of the people themselves—low-cost housing residents, those waiting to get into a low-cost unit, and squatters who still have to make do. This question deals with how affordable housing is provided in the country—whether by the private or public sector, which requires further research and understanding—and how the provision of affordable housing is or is not directly linked to the removal of squatters.

#### **Published Resources**

Kuala Lumpur Structure Plan 2020 – Housing Section: http://www.dbkl.gov.my/pskl2020/english/housing/

Kuala Lumpur public housing offices by zone available at: http://dbkl.gov.my

Information about low-rise Cheras public housing:

http://rubanisation.org/index.php?option=com\_content&view=article&id=84:cheras&catid=35:projects&ltemid=57

News article about high-rise public housing, Bandar Tun Razak:

http://www.thestar.com.my/News/Community/2013/12/02/Bandar-Tun-Razak-MCA-aiming-to-get-10000-signatures-by-Dec-17.aspx

#### **Question 9**

Can government-planned rearrangement of urban development and space usage be effective at facilitating environmentally sustainable transportation patterns? How has the movement of government offices from Kuala Lumpur to Putrajaya impacted congestion, travel patterns, and modal split? What are the likely future trends, and what lessons can be drawn from Malaysia's experience? More generally, what are the environmental and social impacts of Malaysia's efforts to concentrate development in themed clusters (e.g. Cyberjaya, Putrajaya, EduCity, etc.)?

#### Themes

Transportation; spatial planning

#### Discussion

The concept of cluster development is being promoted globally by organizations such as UNIDO, as well as municipal governments in developed countries and the developing world alike. Therefore, it is important to understand Malaysia's experience with cluster development and share the outcomes with other countries pursuing cluster strategies. Several regions of Malaysia are enthusiastically promoting cluster development and rearranging their city centers, some

aiming to alleviate pressure on transportation infrastructure of overdeveloped regions (e.g. Putrajaya), while others are aiming to create favorable business climates for new investment in specific industries and bolster regional competitiveness (e.g. Cyberjaya, and Iskandar's flagship developments). The question of the impact of these decisions on vehicle fuel consumption (both from idling and mileage traveled) is important given that transportation accounts for a significant fraction of urban fossil fuel-derived CO2 emissions.

Promoting clusters of companies in specific industries can create density at nodes that are already accessible by public transit (as in the case of Boston's innovation district, or Munich's various technology cluster developments). Or in other cases, clusters can be formed in areas that have easy connectivity by private transportation (like Boston's biotech ring along the Route 128 corridor). Malaysia has created both types of clusters, by positioning Putrajaya close to an existing mass transit line and positioning EduCity and other IRDA developments far from transit or other development. Given the recent migration of all federal government offices to Putrajaya, there is a unique opportunity to observe the early impacts of such transitions. Alleviating congestion can lead to induced demand and higher total car volumes but it can also reduce the fuel wasted by idling cars.

The efforts to alleviate congestion in Kuala Lumpur by relocating the government to Putrajaya may not lead to a significant reduction in overall mileage traveled. Because of Putrajaya's inability to achieve mixed use development that will attract its workers to its own town center for dining, shopping, and recreation, it is likely that Putrajaya workers travel to Kuala Lumpur and other localities for leisure in addition to driving to work. This may have the effect of reducing the peak burden on Kuala Lumpur's highways, while potentially adding new off-peak trips.

Furthermore, the incomplete transit link to Putrajaya center is resulting in a situation where newly relocated Putrajaya families must have enough cars to get all adult family members to work, leading to potential problems with "automobile lock-in." Given the ease with which Putrajaya's government employees can drive to work (as evidenced by the wide roads and ample parking), and the inconvenience of public transportation, the vast majority of government employees are driving to their offices. With so many individuals owning cars, achieving Putrajaya Corporations goal non-automobile mode split of 70% of trips will be very challenging.

Finally, at of the time of our visit to Putrajaya Corporation in January 2014, the city had only attracted ¼ of its planned population, despite the fact that all the government offices had been moved there. It is possible that commute distances for many of the remaining ¾ of the workers have increased.

#### **Published resources**

**Developments of Clusters and Networks of SMES:** 

http://www.unido.org/fileadmin/user\_media/Services/PSD/Clusters\_and\_Networks/SMEbrochure\_UNIDO.pdf

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### **Kuching, Sarawak**



#### **Question 10**

# Which guest worker policies most benefit the development goals of Malaysia and the wellbeing of the workers?

#### Themes

Physical planning; GIS; climate change; economic development

#### Discussion

Kuching (and possibly all of Malaysia) has adopted policies to capitalize on labor from neighboring Indonesia. Many migrant workers are working legally but with special passes limiting their ability to move around Malaysia. Others are working illegally. The movement limitations resulting from both of these scenarios have specific and measurable implications for Malaysia.

Because many workers have limited movement or are illegal, much of their earnings are remitted back to Indonesia. It is possible that, if they had greater freedom of movement, Indonesians would inject more of their money into the local economy. This objective could be furthered by adopting more progressive housing policies to allow these workers to rent or own regular houses..

In addition to housing, there are other social policy arenas affected by guest worker policy. In particular, healthcare is presumably a major concern for workers in the fishing and palm oil industries. Finally, how does the presence of guest workers distort local labor markets? Indonesians take jobs that Malaysians are unwilling to take. Presumably, the industry would be

economically infeasible if the private sector had to pay wages that had to be acceptable to Malaysian workers. How can Malaysia capitalize on the availability of migrant labor without introducing unnecessary depressive pressures on the labor market for Malaysian citizens?

#### **Question 11**

How do state and international laws such as Free Prior and Informed Consent (FPIC) affect the scope of indigenous engagement in land and property disputes in Sarawak, East Malaysia?

#### **Themes**

Indigenous law, natural resource management; governance and sustainability; democratic decision-making;, public participation processes

#### Discussion

While growing natural resource industries can be a boon for an economy, these industries must be managed responsibly so as to avoid undue damage to the environment and the way of life of people who rely on the land. Indeed, the industrialization of rural areas can rapidly change the cultural and economic context indigenous groups operate in, threatening the continued viability of diverse tribal cultures. The ability of indigenous groups, the state, and private actors to adapt productively to new situations ultimately affects the social sustainability of natural resource industries.

In 1977, the government of Sarawak, East Malaysia created the Majlis Adat Istiadat. The purpose of this body is to record, preserve, and promote the customary laws of the indigenous groups of Sarawak. This group and its extensive resources are consulted when government or private actions might infringe on cultural norms or properties. This type of consultation compliments the idea of Free Prior and Informed Consent (FPIC), recognized as a right by the International Labor Organization and the UN Declaration on the Rights of Indigenous Peoples. This effort by the government of Sarawak is interesting in that it does not merely preserve indigenous cultures as static phenomena, but integrates their cultural codes and values into the modern legal system, creating a space for mutual adaptation and cultural change.

This research question is designed to address the potential advantages or limitations of such a policy. That is, does the codification of indigenous law and the expectation of FPIC ultimately limit the focus of participation and consent, or create opportunities for expanded participation? In the time available, a Visiting Scholar might be able to work with the Majlis Adat Istiadat to study cases of indigenous involvement in natural resource industry negotiations in Sarawak. As the Majlis Adat Istiadat is a government organization with strong indigenous connections, the researcher would have access to both official and "on-the-ground" opportunities for research.

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(The contacts at Majlis Adat Istiadat and the Friends of the Sarawak Museum expressed strong interest in hosting or offering help to a foreign researcher.)

### Johor Bahru, Johor



#### **Question 12**

What tensions and levers exist in the relationship between Johor Bahru and Singapore? What untapped opportunities are there for Malaysia to benefit from its position as a developing country bordering a developed country?

#### Themes

Economic development; border policy; politics

#### Discussion

In many instances around the globe, a developing country shares a border or is otherwise geographically proximate to a much wealthier neighbor. Examining the relationship between Johor Bahru and Singapore offers a valuable opportunity to learn from and explore how two states in these circumstances have interacted historically and how they continue to engage in the present day, especially with regard to economic incentives (i.e. labor and taxation) and transborder natural resources (i.e. water and land).

A Visiting Scholar might choose to approach the question from a number of different angles. For instance, the researcher could postulate an ideal symbiotic relationship between Singapore and Johor Bahru/Malaysia, and compare and contrast this to the current relationship that exists. The researcher might also choose to focus on one of various sub-topics:

**Port:** Currently, Singapore is home to the largest port in the world. Johor Bahru's complex of ports is not as extensive, but the government desires private investment to increase its port capacity. In theory, Johor Bahru could "piggyback" off the trade coming through Singapore, or even take over responsibility for certain types of trade. A Visiting Scholar could explore potential differences in the regulatory environment that might cause Johor Bahru to end up housing some of the more or less desirable industries (waste, polluting manufacturing, etc.).

Water agreements: In the past, Singapore has relied heavily on Malaysia to provide fresh water. To prevent Malaysia from using its control over Singapore's water supply to its advantage, Singapore has made major investments in water self-sufficiency, constructing six major desalination/water treatment plants and converting rivers to reservoirs, with the goal of being fully independent by 2061.

**Land/border:** Johor Bahru provides homes, often situated in large, gated communities, for wealthy Singaporeans, who want more property than they can obtain in their home country. Under Johor Bahru law, foreigners cannot buy houses for less than 1,000,000 ringgits (recently increased from 500,000 ringgits). What are the benefits and costs of Johor Bahru functioning as a bedroom community for Singapore?

**Taxation/value capture:** Singapore is a source of much of the capital coming into Johor Bahru. Is there a way to capture some of the global capital flowing into this environment for local residents? Singaporeans pay minimal property tax, just on the land, and no income tax since they are not Malaysian citizens. How can Malaysia make foreign money that is coming in more "sticky" for local and middle class people?

**Transportation/cross-border commutes:** Singapore controls the flow of people from Johor Bahru by charging cars and buses to cross the border. Each day, thousands of Malaysians cross into Singapore to reach their jobs, many of them traveling by cars. Since Singapore sets the fee for entering the country, how does this also influence patterns of car ownership and traffic flow in Johor Bahru? There has been discussion of building a train from Johor Bahru to Singapore, and a high-speed train from Kuala Lumpur to Singapore. What would the effects of such train travel be?

**Jobs:** Based on preliminary research, Johor Bahru has made a deliberate effort to sustain commercial vitality in the city core, especially the night market, providing employment for some residents. However, many people who live in Johor Bahru commute to Singapore each day, and Singapore relies on this flow of inexpensive labor.

**Tourism:** What are the opportunities for increasing tourism in Johor Bahru? How has the Johor Bahru government tried to attract tourists from Singapore (potential examples of Legoland, shopping malls, and rural villagers hosting home stays for Singaporeans)? What has been the outcome of these efforts? Where are there opportunities to develop dynamic public space (e.g., day-lighting the city's river)?

#### **Question 13**

How does the Iskandar regional plan address spatial development now and in the future? How can Malaysia's Low Carbon Society plan be implemented in concurrence with the physical location of regional economic clusters?

#### **Themes**

Physical planning; spatial planning; policy implementation; economic development

#### Discussion

The role of the Iskandar Regional Development Authority (IRDA) is to plan for development of the Johor region. The agency has a very ambitious plan, with the stated objective of creating "a strong, sustainable metropolis of international standing" by 2020. Preliminary discussions with IRDA and the Johor Bahru City Council revealed to us that in addition to working toward economic sustainability, the government also seeks to implement a Low Carbon Society plan that will reduce the Johor area's carbon footprint (by decreasing personal vehicular use and increasing reliance on public transportation and walkable neighborhoods).

Currently, the primary planning mechanisms being emphasized in the Iskandar region are economic, rather than physical or environmental. New development nodes, which are promoted by IRDA as central to the region's success, such as EduCity (a complex of academic buildings belonging to international universities), Pinewood Film Studios, and Legoland are located in areas far removed from the existing urban fabric. They stand apart, as large, mono-functional complexes linked by massive highways. Internally, their physical design suggests that the most effective way for users to engage with these spaces is by private vehicle. Even EduCity, which is supposed to function as a student campus once it opens next year, has been constructed on such a scale that it is difficult to imagine its users walking from one location to another on the ground. Further, no space on the grounds appears to be dedicated to commercial development, reflecting a general trend towards separation of uses across the region.

This fragmented and car-dominated landscape seems to stand in contrast to Iskandar's stated goals regarding sustainability, ecological protection, and a carbon-neutral society. Currently, employment and residential centers in the area are too spread out to make a comprehensive public transportation system feasible. Although IRDA expects the number of residents in the Iskandar region will grow from 1.6 million today to 3 million in 2025, it is unclear whether this population uptick will in of itself create the necessary rise in density needed for a widely used and economically viable public transit system.

In light of these conditions, a Visiting Scholar might consider examining the current patterns of residential and commercial development in the region, and then model how Iskandar is likely to physically evolve over the coming years, based on a range of possible economic and demographic inputs. By creating a range of scenarios, the researcher will be able to identify the most likely patterns of development and analyze them with regard to any or all of the following: transportation (non-motorized and motorized), housing, commercial development, densification, and continued or reduced separation of uses. More generally, the researcher could provide insight into the question of if and how Johor Bahru's Low-Carbon Society Plan can be implemented in conjunction with the physical placement and planning of the existing and proposed regional economic clusters. In addition, the researcher could examine potential economic and regulatory incentives capable of shifting demand (population) and supply (development) to support particular alternate futures.

#### **Question 14**

How does Iskandar's port complex expansion initiative mesh with Singapore's plans for continued development of its port? What is Johor Bahru's vision for its port complex in relationship to

# Singapore's port complex? Will private-sector expansion of the port produce sustainable development?

#### **Themes**

Economic development; infrastructure; public-private partnerships; economic competition

#### Discussion

Part of Johor Bahru's port complex is located at Pasir Gudang, in southeast Johor. It was built by the Johor Port Authority, and privatized in August 1995, when management was taken over by Johor Port Berhad. Currently, Johor Bahru does not seem to have a master plan in place for its port. In preliminary discussions with the Pasir Gudang City Council and the Port Authority, our MIT-UTM team determined that while the Port Authority manages the complex and retains nominal authority over it, private owners own their facilities. Further, although at the level of IRDA (Iskandar Regional Development Authority), the port expansion is considered imminent; the Port Authority is willing to wait for the private sector to take the lead in driving and financing infrastructural updates.

This reality raises several key questions with respect to the future of the port. First, will the project move forward at all, given the lack of public funds available for port expansion and the reluctance by the local government to view the expansion as an essential public work? Further, if the private sector takes the lead and raises the funds necessary to pursue port development, what sort of concessions might be required of the public sector? Third, how can development be coordinated so that it achieves collective benefit, is economically and environmentally sustainable, and accounts for positive and negative externalities? Lastly, given the size of the infrastructural investments involved, how can long-term planning be enabled?

In considering the question of the Johor Bahru port complex, a Visiting Scholar could explore any or all of the themes below. While some may be addressed productively in isolation, others will perhaps be best-served by comparative analysis, either to Singapore or other port development and expansion projects in the developing world.

**Financing:** Johor Bahru seems to be relying on the private sector to fund the port complex expansion, instead of planning large public investments. What are the impacts of this financing strategy, in terms of ultimate control and management of the port? Will the port belong to those who have financed it indefinitely, or for specific terms? In addition, is there any capacity to provide greater public sector funding? If yes, why has this option not been pursued?

**Competitive advantage:** How will Johor Bahru differentiate itself from Singapore and compete for traffic? How does the physical, financial, and regulatory environment shape the type of traffic that JB can receive?

Ownership and management structure: Who will own and manage the port?

**Environmental planning:** What is the best way to balance economic and ecological priorities, considering the port's proximity to mangrove forests and fishing communities?

Climate change adaptation/mitigation and disaster management: Who controls, coordinates, and participates in disaster management at the Pasir Gudang Industrial Area? How effective is this program at anticipating, and managing the effects of, potential disasters?

The JB government does not appear to be taking action in regard to climate adaptation/mitigation.

**Decision-making processes and success metrics:** How are decisions about the port complex expansion being made and community? How can/should the performance of the port expansion effort be measured?

#### **Question 15**

Who benefits from and how by IRDA's catalytic economic development projects? How has the government used MOUs and other tools to capture and distribute the benefits of development? How effective have these efforts been?

#### **Themes**

Economic development; equity; wealth transfer; decision-making; negotiation

#### Discussion

The Iskandar Regional Development Authority (IRDA) is a Malaysian Federal Government statutory body that plays a pivotal role in the development of Iskandar Malaysia. Following the official launch of Iskandar Malaysia in 2006. IRDA was incorporated in 2007 by a Federal Act of Parliament. IRDA's overarching task is to transform Iskandar Malaysia into a metropolis of international standing, and its work focuses on four goals: 1) social development and quality of life improvements, 2) environmental conservation and carbon reduction, 3) strong and resilient economic growth, and 4) one strong region. As indicated by the third goal, economic development is widely viewed as a key ingredient in the region's transformation. To achieve this goal, IRDA is focusing on nine economic sectors: electronics, oil and petrochemicals, food and agro-processing, financial services, tourism, education, logistics, healthcare, and creative arts.

In the last few years, the region has experienced significant private and foreign investment. According to the Iskandar Regional Development Authority Annual Report 2010, between 2006 and 2010, the region received cumulative committed investment totaling RM69.48 billion. Some of this investment was in the form of a series of catalytic development projects, including Legoland Water Theme Park and Legoland Hotel, EduCity, and Pinewood Studios. These companies received significant financial incentives to invest in Iskandar Malaysia.

There have been some efforts at IRDA to capture and distribute the benefits of these catalytic development projects. For example, IRDA has MOUs with developers to secure conditional employment offers for local Malay workers. These employment opportunities offer fair compensation, and initial research indicates that companies seem to be willing to hire local workers, provided that government-training programs help locals meet company requirements.

However, despite the employment opportunities secured by the MOUs, the extent to which the benefits of development are equitably distributed is unclear. Improving understanding of the magnitude and distribution of the costs and benefits of these projects is key, given both the public financial incentives at stake and the potential adverse social and environmental impacts of development. To this end, further research on the topic, using some of the catalytic projects as case studies, would be beneficial. Important questions include:

Who decides if and whether a catalytic development project takes place? How are the negotiations with developers being carried out? Who is represented at the negotiation table?

What are the costs and benefits of these projects? How are the costs and benefits from these catalytic economic development projects currently distributed? Have MOUs and other tools been used effectively to capture the benefits of development for lower- and middle- income people? Who is considered a "local" and thereby eligible for IRDA's training and placement efforts?

#### **Published Resources**

Iskandar Regional Development Authority Annual Report 2010: http://www.irda.com.my/pdf/IRDA Annual Report 2010-EN.pdf

#### **Question 16**

How does the governance structure (local, state, and federal) affect mangrove management along the Iskandar coastline? What economic, social, and environmental incentives exist to protect mangroves or to encourage development on mangrove occupied land? How do mangroves fit into future plans to "optimize" Johor Bahru's waterfront land?

#### **Themes**

Coastline management; climate change; governance and sustainability; economic development; policy implementation; mangroves

#### Discussion

Mangrove forests are critical coastal habitat for supporting diverse ecosystems to commercial activity such as fisheries that buttress traditional local economies. Additionally, they protect coastal populations from storm surges and other threats associated with climate change, as well as nutrient loading and pollution. As the State of Johor continues to develop, economic pressures have led to the removal of some mangrove forests along the coastline and put the status of other mangrove forests in question. The distribution of power between different levels of government seems to have significant implications for mangrove management.

On paper, three mangrove sites in the Iskandar Region have been given international Ramsar designation - Sungai Pulai, Pulau Kukup, and Tanjung Piai. However, several interviewees shared with us that the State of Johor will not recognize Ramsar sites due to jurisdictional disputes. Pulau Kukup and Tanjung Piai have also been given National Park status, but the management of Sungai Pulai is less clear. As the largest riverine mangrove system in the State of Johor, Sunagi Pulai could serve as a case study for investigating mangrove management and governance in the region. How is this area being managed between different levels and agencies of government? What economic, social, and environmental incentives exist to protect mangrove occupied land or to encourage development?

State officials have primary jurisdiction over the land use and natural resources of forestlands in the Iskandar region, which provides some buffer against development of mangrove forests. However, a reported loophole in state policy has been used by developers in recent years to remove mangroves for so-called domestic purposes. The Iskandar Regional Development Authority (IRDA) has received citizen complaints about the loss of mangroves, but their ability to intercede appears to be limited. IRDA also has an extensive coastal management plan, but does not have direct authority to implement or enforce the plan. Federal and state forestry laws, as well as the regional coastal management plan, all outline principles and plans for mangrove

protection, but what governance and management dynamics shape the mangrove forests in Johor?

#### **Published Resources**

JUSOFF, K., BIN HJ TAHA, D. Managing Sustainable Mangrove Forests in Peninsular Malaysia. *Journal of Sustainable Development*, North America, 1, Feb. 2009:

http://www.ccsenet.org/journal/index.php/jsd/article/view/1475/1416

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#### Mangrove Action Project - MAP (Q16)

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#### MIT Department of Civil Engineering

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#### NUS Department of Geography (Q16)

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#### **UTM Faculty of the Built Environment**

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