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Abstract

Transportation-related decisions, like many other public policy issues, are complex. They involve multiple stakeholders, often with conflicting interests, and influence multiple sustainability dimensions over space and time. In response to this complexity, governments often make decisions based mainly on advice from experts, offering limited opportunities for public participation in the decision making process.

This study examines stakeholder involvement in a transportation plan in Penang, Malaysia. The study employs a qualitative methodology and uses select indicators to evaluate the engagement process. Despite a concerted effort to engage the public, the government failed to resolve conflicts with key stakeholder groups. Three key findings emerge from the assessment: first, a poorly designed process can be counterproductive, resulting in delays and loss of trust; second, involving stakeholders at a later stage limits opportunities for meaningful stakeholder contribution; and third, stakeholder groups can mobilize and shift the balance of political power. For all these reasons and more, decisions in the public arena must go beyond meeting the mandated requirements, and move towards a deliberative process aiming for shared decision-making. The study proposes a set of recommendations for a more effective process.

Introduction

Urban transportation decisions involve multiple stakeholders and agencies, often with conflicting interests. Increasingly, policy makers are faced with the challenge of balancing immediate concerns—for example, improving mobility—with long-term sustainability concerns. While transportation investments are expected to enhance mobility and subsequently generate positive economic and social impacts, these may also cause unintended adverse impacts. Transportation decisions affect individuals differently based on the socio-economic status of

those individuals (Geurs, Boon, and Van Wee 2009), which makes representation of all stakeholders critical for achieving a socially just outcome.

Principle 10 of the 1982 Rio Declaration on Environment and Development called for states to "facilitate and encourage public awareness and participation by making information widely available" (UNEP 1992). This was reaffirmed in Goal 16 of the 2015 United Nations Sustainable Development Goals, which calls for promoting and building peaceful and inclusive societies and institutions. A key target of Goal 16 is to ensure "responsive, inclusive, participatory and representative decision-making at all levels" (United Nations 2016).

In practice, the decision-making process for transportation networks, systems, and infrastructures is often top-down, managed by policy makers in consultation with technical experts. Like most other public policy realms, however, transportation projects involve multiple actors (private and public), thereby making them "wicked" problems (Head 2008; Cascetta and Pagliara 2013). Therefore, technological solutions may not truly represent the needs and expectations of certain constituencies, especially those in disadvantaged groups. With the evolving nature of transportation planning involving multiple agencies, sectors, and modes, traditional decision-making structures are less relevant in the changing context (Nijkamp and Blaas 1994; Booth and Richardson 2001). This calls for strengthening people's participation to ensure more democratic decisions that are acceptable to all parties.

In practice, engaging stakeholders is complex, especially in developing countries where the practice of stakeholder engagement is relatively less mature. In such contexts, the capacity of the governments in designing the processes, schedule, and costs of the process, and—more important—the ability of the participants to understand what is expected and be willing to contribute, are important considerations (Marzuki 2008; Nadeem and Fischer 2011).

Malaysia presents one such context. As the country advances from a developing- to a developed-country status, urban areas are witnessing large-scale transformations as they become "world-class" cities. With financial and technical resource limitations, support by the private sector is sought to fund and deliver mega-projects. The top-down, private-developer-driven planning and implementation processes raise questions about the extent of public inputs and environmental considerations in local decision-making. This could also exacerbate existing inequalities, as stakeholders feel marginalized in large-scale privately led public projects. And since these decisions involve long-term lock-ins, exclusionary processes can create lasting social inequalities.

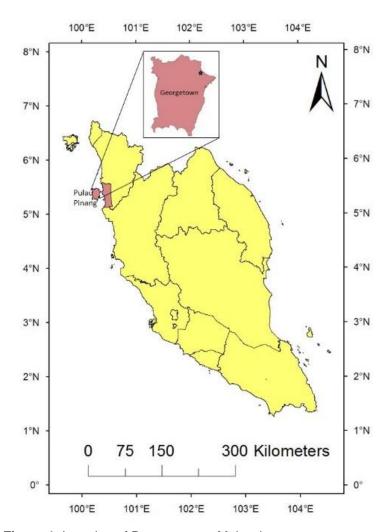


Figure 1. Location of Penang state, Malaysia

As federal regulations regarding citizen participation continue to evolve, subnational governments in Malaysia are increasingly seeking public inputs. Simultaneously, as communities are becoming more aware of the impacts caused by mega-projects, they are demanding greater government accountability. This study looks at stakeholder engagement for a mega transportation plan in Penang, Malaysia (Figure 1). Given the rapid development context of Malaysia and amid an evolving regulatory climate of public participation, the paper attempts to answer the following question: How effectively did the government engage stakeholders in transportation planning? The policy prescriptions for a more inclusive and participatory stakeholder engagement process outlined in the paper may be useful to guide future stakeholder engagement for other cities in Malaysia and related contexts.

Stakeholder engagement in decision-making

The arguments in favor of soliciting public inputs in decisionmaking include meeting legal requirements, leveraging local

knowledge, and realizing democratic principles of fairness and equity. It is argued that citizens, especially the most vulnerable, have a right to know and be consulted on policies that affect them (Enserink and Koppenjan 2007). Citizen involvement can help leverage local knowledge, lead to creative decisions, and produce better plans. Since the decisions are co-owned, these have a higher rate of implementation and stability in the long run (Susskind and Cruikshank 1987; Burby 2007). But the the benefits of public participation in planning have been the subject of debate. Counter-arguments state that participation can be expensive, time-consuming, and lead to intractable conflicts, delay, and mistrust (Innes and Booher 2004). Poorly designed processes can result in failure or delays in implementation, lawsuits, or stalemate situations¹. There is also a view that technical decisions are best made by governments and their advisors, and listening to citizens may lead to bad decisions.² Participation processes can range from genuine outreach and search for significant inputs to inform the plan to tightly controlled processes aimed mainly at satisfying relevant legal requirements, with little concern for the opinions of the majority.

Based on the drivers of participation, Susskind and Elliott (1983) highlight three forms of engagement:

- paternalism, where the elected officials dominate the participation process;
- ii. **conflict** between citizens and elected officials to seize control of resource allocation or policy decisions; and
- iii. **co-production**, where policy makers and residents make joint decisions.

Arnstein's (1969) ladder of participation is among the most cited works on public participation. It outlines eight levels of public participation, based on the degree of citizen influence. Arnstein classifies unidirectional information-giving and consultation processes as low forms of participation. The ideal state of citizen empowerment, according to Arnstein, is characterized by processes which involve partnerships and where people have a higher control over decision-making (ibid).

As an extension of Arnstein's ladder, the Spectrum of Public Participation proposed by the International Association of Public Participation (IAP 2017) outlines five stages, starting from the information-giving stage at the lower end, followed by the "consultation" stage where public feedback is sought and a more progressive stage of direct "involvement" and "partnership" with people. The most desirable stage empowers people as decision-making agents.

Again, this view has been challenged by a group of practitioners who argue that final decision-making powers should in fact rest with the authorities and not directly decided by people. They propose an alternative to the IAP spectrum, outlining five stages: inform, consult, advise, decide, and implement. Here, consensus building is the core element at each step, as the collaborative approaches finally result in

multi-party agreements to implement joint action (Orenstein, et al. 2008).

While there is a significant body of literature discussing the methods of participation and their effectiveness in different contexts, few studies discuss findings from developing countries. This study, which evaluates the public engagement process in Malaysia, attempts to address this gap. Such an evaluation can help to provide insight on how well government policies are translated in practice, and to aid in the design of more effective processes (Charnley and Engelbert 2005). The following section discusses the evaluation criteria.

Evaluating stakeholder engagement

The evaluation of stakeholder engagement can include an assessment of the process, the outputs of the engagement, or the outcomes, and—in some cases—a combination of these (Rowe and Frewer 2000; Rowe 2004). "Outputs" are the policies, projects, or plans resulting from the process would be. "Outcomes" include long-term impacts, such as enhanced social, intellectual, and political capital; institutional evolution; innovative approaches; and environmental outcomes (Mandarano 2008). From the temporal perspective, an evaluation could include a short-term or medium-term assessment of a process or a long-term reflective evaluation of outcomes—for instance, evaluation of environmental outcomes such as ecosystem regeneration.

Key evaluation indicators in literature on stakeholder engagement include stakeholder mapping and representation, the stage of involvement, the overall design of the process, transparency, and the level of information shared with citizens (Brody, Godschalk, and Burby 2003; Rowe and Frewer 2000). Walls, Rowe, and Frewer (2011) also identify the degree of influence of the process on the outcome as an important criteria.

An evaluation of stakeholder-engagement presents challenges of setting the boundary of the assessment, choosing the indicators, and accessing the relevant data and information. Since the stakeholder engagement process is still underway in Penang, it was not possible to include indicators that assess the outputs or long-term outcomes of the engagement process. The assessment in this study is therefore limited to assessing the process of engagement. The availability of data and information for measurement was also a consideration in selecting the indicators. The initial set of indicators was adapted from Rowe and Frewer (2000) and Mandarano (2008). These indicators are relevant to the objectives of the study as they captured all of the key attributes of stakeholder engagement: representation, transparency, influence, feedback methods, and resources. The initial criteria were discussed with selected stakeholders and their inputs shaped the final criteria (Table 3).

The political and planning context in Malaysia

Malaysia is a federal constitutional monarchy with a three-tiered governance structure. The federal government retains power over several resources and responsibilities, including transportation, while the states control land, forests, and water. The planning, regulation, and enforcement of transport in peninsular Malaysia is overseen by Malaysia's Land Public Transport Commission or *Suruhanjaya Pengangkutan Awam Darat* (*SPAD*). The National Master Plan sets the targets, strategies, and policies that guide public transport planning throughout peninsular Malaysia, and the state authorities oversee implementation of the Plan. Although states and local authorities can develop and fund their own transport plans, major transport projects require federal approval. For instance, the state is responsible for improving pedestrian and bicycle infrastructure and has jurisdiction over bus stops and terminals, but relies on cooperation with the federal government to operate the bus system, or implement new rail systems.

Public participation is mandated for rail projects, town and structure plans, and any projects that may cause significant environmental impacts³. In mid-2005, the federal Department of Environment (DoE) formally mandated all Detailed Environmental Impact Assessments to include at least one opinion survey and one public dialogue⁴. The choice of the methods to be used, however, is left to the consultant. Earlier studies highlight challenges to public participation in Malaysia, such as inadequate capacity and limited information on the processes, limitations of methods used, and the capacity and attitude of the people (Marzuki 2008). Despite administrative and enforcement issues, the EIA process continues to function and evolve (Briffett, Obbard, and Mackee 2004).

Interest represented	Number of people interviewed
Government	
Federal government	5
State government	5
Local government	2
Business groups	
Private consultants	4
Developer	4
Taxi/Uber operators	4
Academia/Think tank	5
NGOs	5
Heritage experts	5
Fishermen	6
Independent	8
	53

Table 1. Breakdown of interviewees

Data and methods

The paper follows a qualitative methodology using the inductive approach (Burnard et al. 2008). An initial literature review of government reports, publications from think tanks and NGOs, blogs, and newspaper articles helped frame the research problem and identify the initial interviewees.

The second component was a field survey involving interviews with stakeholders. Fifty-three detailed interviews were conducted with representatives from government, academia, environmental and civil society organizations, and private organizations in Penang and Kuala Lumpur. These interviews were conducted between September 2016 and January 2017. Table 1 shows a breakdown of the people interviewed. Government officials included representatives from the Members of Parliament at the federal level, elected representatives of the state government, and local councillors. Other groups included private business representatives, fishermen, environmental experts, members of heritage organizations and NGOs, and independent activists. The initial list included key stakeholders who had taken a public position on the issue. Subsequently, the snowball method was used, where the first round of interviewees helped identify the next group. While the questions followed a broad structure common for all respondents, interviews were open-ended to capture the understanding of different categories of stakeholders.

The study followed an iterative process, in which interviews were analyzed in parallel. This process allowed for, and necessitated changes to, the identification of interviewees and the interview questions. The questions were posed to elicit information on how stakeholders viewed the proposal in question, their interests, and their assessment of the process related to the selected indicators (Table3). Answers were then summarized to understand the sequence of events between 2008 and 2017, and to capture the different stakeholder positions. Figure 2 outlines the key timeline of events as they unfolded.

Case study: Penang Transport Master Plan The case study area

The state of Penang is located on the northwest coast of Peninsular Malaysia (Figure 1). Its capital, George Town, is designated as a UNESCO World Heritage Site. Its population of 1.7 million is divided between the island and the mainland. With 2,372 people per square kilometer, the population density on Penang Island is the highest in the country. The demand for land on the island has outpaced supply for development,⁵ resulting in developers seeking to build by reclaiming coastal land. Two reclamation projects are currently under construction in the north of Penang Island, a decision that has created controversy due to its impact on the local environment and fisheries.

Penang is led by an opposition coalition of the Democratic Action Party (DAP) and Parti Keadilan Rakyat (PKR). The opposition was elected in 2008 after defeating the Barisa National (National Front) that had dominated regional politics for more than three decades. The federal control over transportation and the political tensions between the state and federal governments poses challenges for planning and implementation for urban transportation. Penang has a strong and active civil society that has historically played an important role in pressuring the government to promote the interests of pedestrians, cyclists, public transport users, and mobility-impaired groups (Rasagam, 2000)⁶. In 2008, a loose coalition of civil society organizations came together as the Penang Forum to advocate for sustainable development in Penang.

The Penang Transport Plan

Propelled by the national push to promote the car industry in the 1980s, and also supported by increasing population and economic growth, Penang has witnessed a rapid increase in vehicle ownership. Penang has the highest annual vehicle registration growth in Malaysia (Mohd 2012) and the second highest per capita vehicle ownership in the country, after Kuala Lumpur (Chee and Fernandez 2013). In 2010, Penang's public transport met only 3 percent of the total travel demand, while the remaining 97 percent was met by private transport (Penang Monthly 2015). This resulted in severe congestion, as well as negative environmental and health impacts.

In response to inquiries from NGOs that were keen to address the pressing issue of congestion, in 2011 the Penang state government appointed a team of consultants led by Halcrow Consultants to develop a transport master plan strategy. After conducting a detailed public engagement process⁷, the Halcrow strategy was adopted as the Penang Transport Master Plan Strategy, and government officials issued a Request for Proposals to develop the Halcrow strategy into an implementable plan. The winning consortium was appointed as the Project Delivery Partner (PDP). The PDP modified the Halcrow strategy,8 proposing the alternative "Penang Transport Master Plan" (PTMP), involving highways, roadways, new rail infrastructure (Light Rail Transit [LRT] and monorail), a Bus Rapid Transit (BRT) network, and electric trams in the heritage zone (PTMP 2015). The total estimated cost of the new plan was 11 billion USD. But lacking authority over public transportation budgeting (a federal-level concern) and having only limited financial resources of its own, the state government pursued the sale of land to finance the plan. Given the scarcity of land on the island, the proposed funding model was based on coastal reclamation of three islands on Penang's southern coast. These would be auctioned by the state as land parcels to fund the PTMP.

	2017	I
		Project construction is postponed
State government decides to shift transport hub away from Siah Boey		
heritage market		
	ı	Business groups voice support for
	2016	the PTMP
l	2010	Fishermen group organizes protest
	i	against reclamation
December: EIA consultants present		
draft findings about impacts on reclamation. Fishermen stage		
organized protest		
Destruction and a socialization for a	l	Stakeholders build coalitions
Protest over land acquisition for a highway construction for land		
belonging to Chinese girls high		
school		
		State government organizes public presentation to respond to Penang
		Forum's concerns
July: NGOs release alternate plan		
"Better, Cheaper, Faster"		Penang Forum voices concerns
A Penang forum member submits		1 chang r cram veloce concerne
request to UNESCO expressing		
concern over potential harm to Siah Boey, an old heritage market		
200), an old nonlage mainer	I	April: Launch of the official PTMP
March: Submission of LRT for	ĺ	website
federal approval		
	2015	
		December: Public briefings are initiated
October: EIA consultants are		Illitiated
appointed		
		August: The state government appoints SRS Consortium as the
		Project Delivery Partner
	2014	
A request of proposals is announced to select consultant to		
implement the Halcrow plan		
-	2013	
		Chief Minister officiates the Penang
	2012	Transport Master Plan Strategy
Halcrow and team release reports		-
outlining Penang's Master Plan		
Strategy	l	

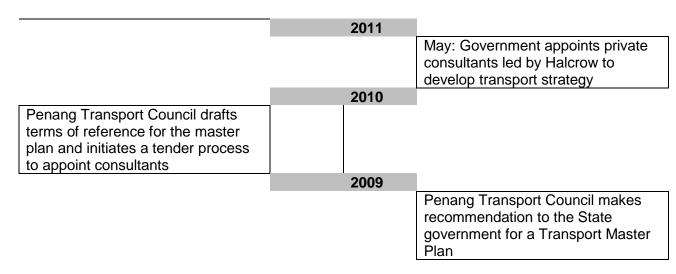


Figure 2. Timeline of key events

The consultation process

After announcing the plan, the state government and the PDP sought public input during town hall sessions, one-to-one engagement, and through online and print media (Annex Table 1). Between December 2015 and September 2016, 26 town hall meetings were conducted for different groups of stakeholders, including business groups, residents, local government, and fishermen groups, among others. These typically involved a presentation followed by a brief question-and-answer session. The stakeholder groups included the groups that would be directly impacted by the project.9 The environmental impact assessment (EIA) and Social Impact Assessment (SIA) consultants carried out on-the-ground engagements¹⁰ with affected stakeholders through focus groups and interviews. The government launched an official website providing information about the plan where people could also submit online feedback. Service centers were opened to address specific concerns of the fishermen community and other locals to submit queries or feedback.

	Concerns						
	Costs	Environment	Fisheries	Aesthetics & heritage	Other	Stakeholder suggestions	Stakeholder positions
Residents		Preserving the environment for future generation Highway construction may affect hills		Impact the social and cultural values Impact on heritage Construction activities Physical and cultural sustainability	Concerns over property acquisition Concerns over affordable housing in the new plan	Compensation for property acquisition	Contrasting views State government report indicates that a number of people support the project Some are unsure
Business					Concerns over property acquisition	Could possibly include measures for alternate and cleaner vehicles Construction activities should not lead to congestion	Congestion is a major issue and will aggravate in coming years Will deliver economic development benefits Support the

			1	1		1	· · · ·
NGOs	Very high capital investment Penang does not have resources to support the O&M costs. No clarity on the O&M No Carity on the O&M No Carity on the O&M	Long-term irreversible environmental impacts from reclamation Current plan prioritizes cars instead of public transport Environmental resources compromised for business interests	Impact on fisheries will be a threat to Penang's food security Will increase cost of fish, a staple food for locals	Direct impact on heritage sites from construction Decline in George Town's heritage value	Project will benefit a select few and may not solve congestion	Proposals should be suited to the local context Proposed an alternate plan: Instead of elevated LRT and monorail which are more expensive, an integrated plan combining at-grade rail systems, trams, integrated with buses water transport, nonmotorized transport and demand management measures to reduce car use	project The proposal is too ambitious Do not support
Environ- mental groups		Reclamation would lead to siltation Impact on coastal ecosystems biodiversity Hill cutting may lead to landslides or erosion		The value of some beaches will be lost Construction of highways will impact Penang hills		Funding options that do not require reclamation If reclamation is required, consider other alternative options to minimize environmental impacts, such as extending the coastline instead of creating islands	The present plan is environment-ally unsustainable, especially the impacts from land reclamation Do not support
Fishermen		Pollution from dredging and construction activities	Will lose access to the sea Loss of livelihood, especially for full-time fishermen Marginalization due to influx of foreign workers Marine pollution			Development that does not impact housing or livelihoods Alternatives to compensate fishermen for loss of livelihood Replacement area for fishing boats	Group 1: Do not support Group 2: Support Group 3: Support provided proper compensation is offered
Heritage organiza- tions				A planned transportation interchange will affect the old heritage market		Consideration of alternatives that are more compatible with Penang's heritage status Instead of elevated LRT, consider bus systems, trams	Existing plan is not compatible with Penang's heritage Do not support the plan in its present form
Local council	Not adequate state and local resources Local council not consulted					Local governments should have more say in decision- making Proposals should be more integrated with local efforts towards improving non-motorized transport, as well as existing systems	Several local councilors are not in support of the plan Need more evidence before lending support
Think tanks/ academics	Costs inflated due to high population and ridership projections Project design did not integrate local knowledge/ experts	Possible alternatives to land reclamation not considered Proposed projects could compromise local environment			Higher focus on property development than transport Plan not farsighted fails to include low carbon considerations, accessibility, demand management	Plan should be more holistic—integrated between island and mainland, integrated across modes, make better use of existing transport systems (buses, ferry) An independent review of the technical and financial viability of the transport master plan	New proposals losing sight of original aim No position

Table 2. Matrix showing key issues of concern for stakeholders

Stakeholder concerns

Although official reports indicate support from a majority of residents and business groups, the plan is opposed by two key stakeholder groups: the fishermen and NGOs. Table 2 summarizes different stakeholder groups and their concerns as identified through the interview process.

The proposed reclamation area serves as fishing ground for traditional fishing communities that operate along the south coast, where the main catch is prawns and crabs. The fishing community in the area, comprising around 1,000 fishermen, is concerned that reclamation will limit their access to the sea. They argue that this would be the final blow to their livelihood, which is already under pressure from declining catch in recent years due to marine pollution and reclamation elsewhere on the island. This is especially a concern for the marginal fishermen with small boats that limit their access to deeper waters.

NGOs have been the most vocal critics of the transport master plan. Fully expecting that the Penang Transport Master Plan would address their longstanding proposals for reducing congestion, civil society was taken by surprise with the announcement of the PTMP and its funding model. Their main concern is that by emphasizing highinvestment rail lines, the state missed the opportunity for cheaper and more sustainable options, including improving the existing public transport systems and non-motorized transport infrastructure. Major investments in highways and roadways without complementary measures for demand management, according to NGO representatives, would fail to curtail private automobile use. Heritage organizations have voiced concerns over the impacts of the transport plan on the George Town heritage sites. Environmental experts are primarily concerned about the potential impact of reclamation on coastal ecosystems. They argue that altered sea water flow, change in sea bed conditions, and marine pollution would adversely affect the region's biodiversity and fish production, threatening Penang's food security.¹¹

Independent experts and think tanks have questioned the scale of these projects, especially as they will be carried out through private-sector contracts. They feel the plan is too ambitious, and contest the population and ridership assumptions for PTMP. The viability of property development on reclaimed land as a reliable funding model has also been questioned.¹²

Collective action from stakeholder groups

Not satisfied with the official responses to the concerns they had voiced in the town hall meetings, the Penang Forum released a alternate plan titled "Better, Cheaper, Faster" as a counter plan to the PTMP (Penang Forum 2016). The plan presented modern trams and dedicated bus lanes as the preferred way forward, instead of the high investment rail-based systems proposed by the state. According to the

Penang Forum, compared to the PTMP, their plan was "better"—in that it promoted higher accessibility and lower environmental footprint— "cheaper" in terms of investment and operating costs, and "faster" to construct. The state government publicly dismissed the alternate plan as a conceptual idea that did not include any economic or technical feasibility considerations.

Concerned about the negative impact of the PTMP on George Town's heritage sites, a Penang Forum member sent a letter to UNESCO to draw their attention to the heritage risk. One of the objections was over a planned transport interchange that overlapped a historic market in the city. After several public exchanges, the government conceded to the demands of the NGOs and agreed to relocate the transport hub, though the Penang Forum continued to voice strong objections to the larger plan. In May 2016, the state government made a public presentation to respond to all the issues raised by NGOs. The resulting back and forth exchange between the NGOs and the state government was heavily publicized in local newspapers and social media. NGOs continued to mobilize and draw attention of the people to the potential adverse impacts of the PTMP.

A group of opposing fishermen first staged an organized protest against the proposed reclamation in December 2015. 13 Subsequently, the PDP and the state government engaged in discussions with the fishing community and proposed potential alternate employment opportunities (e.g. as boat operators, tourism, etc.) from the project. According to the fishermen, there had been no meaningful engagement and they did not trust the government, in part reflecting a recent reclamation project in the north of the island which had resulted in very low compensation being given to the local fishermen. The fishing community remains divided, however; some fishermen anticipate the project will bring better infrastructure and new employment opportunities, and are therefore supportive of the project.

One of the interviewees, who heads the Fishermen's Association in one village, voiced strong concern:

"Currently, our average income per month is very low. We work hard for our living. With our main resource being taken for land reclamation, we will lose our only source of income. With the islands we may have to go a bit further than this area. However, our boat has only a small engine. We will oppose the project, no matter what happens."

Official reports by the state government indicate a majority approval from residents and the business community. According to the report, the percentage of fishermen supporting the project has increased from 3 percent in the first survey to 41 percent in the second survey. Members from academia and think tanks, however, have questioned these findings. A leading senior civil rights activist's frustration was apparent:

"The people have to be aware of the costs and the best thinking on the topic. You cannot judge by popular vote. We are going to the worst kind of populism—it appears manipulative."

In late 2016, the state government and the PDP held a public hearing to present preliminary EIA findings to fishermen. In response, led by the Head of the Fishermen's Association, a large number of fishermen staged a protest using banners written in Bahasa Malay saying "Save our fishing activity areas" and "Penang fishermen crushed by greedy reclamation project." In 2017, members of the Malaysian Business Council voiced support for the project, but the fishermen and NGOs continued to oppose it. With federal approvals pending, project construction had reached a roadblock.

Lessons from Malaysia: Toward a meaningful stakeholder engagement process

Most interviewees agreed that the stakeholder engagement process for the PTMP was the largest ever for a transportation project in Malaysia. They particularly noted experiences from Kuala Lumpur and elsewhere, where similar projects were implemented with little or no participation. Interviewees commented that though that participation was limited, the state government had displayed flexibility in accommodating requests from special groups. ¹⁶ Table 3 summarizes the findings of the study.

Category	Criteria	Questions/attributes	Assessment from the case study
Member	Representation	Were all stakeholders/groups identified and represented?	The government made efforts to invite diverse stakeholder groups
		Were the chosen representatives agreed upon mutually?	The government attempted to invite organization heads or senior people. For one to one surveys, the representatives include resident groups, local business community leaders, etc. However, for town hall meetings, it is unclear if the choice of representatives was mutually agreed upon
	Incentive for participation	Were stakeholders provided with incentives to participate?	No incentives were provided
Process	Clarity on timing and level	At what stage of decision- making were inputs sought?	The government sought public inputs after announcing the plan
	of engagement	Was there a clear strategy outlining the goals, methods, and implementation?	There was some preparation regarding the methods and facilitation; however, a coherent strategy outlining the goals and expectations was missing
		Was the nature and scope of the engagement exercise agreed upon by all the	The government did not offer clarity on its expectations regarding the process

		stakeholders?	
	Resources	Did the participants have enough access to details (plan documents/studies/impacts/alternatives) to make informed opinions?	Information on the proposed alignments for public transport and highways was provided on the website. Participants did not have access to additional detailed information, such as the consideration of alternatives and key assumptions
		Was technical information communicated to stakeholders in a simplified way?	Details were not made publicly available
	Transparency	Were the discussions and decisions related to the plan transparent?	No. Several interviewees commented on a lack of transparency, as they were unsure of the methodology of surveys and how the decisions were made
	Communication	Did the process encourage the search for creative alternate solutions?	Alternatives were not discussed
		Was the language of communication understandable to the participants?	Yes, the sessions were conducted in three languages, including the local language
		Were the participants given sufficient opportunities to provide feedback? Were they informed about whether their concerns were incorporated? If feedback was not incorporated, were reasons given and were these acceptable?	Several avenues were provided for giving feedback. The questions were answered during the town hall sessions. There was no clarity on if and how the feedback was incorporated
		When conflicts arose, how were the contending interests managed?	In several cases, the state government made efforts to resolve conflicts through direct dialogue with relevant organizations. Several issues, however, remain unresolved
	Independence	Was the process independent of dominance by more powerful parties? ¹⁷	With the private developer and the state jointly conducting the engagement, some stakeholders felt the process was not independent
Outcome	Influence	Did the final agreement adequately represent the interests of the participants?	Several groups feel the plan does not incorporate their interests

Table 3. Summary of findings

The state government's intentions in conducting the engagement process were to inform the people about the project and gain political legitimacy. The process complied with federal requirements, and reports indicate approval from a majority of participants. Clearly, the government thought that a broad stakeholder buy-in could help accelerate federal approvals. Quite the contrary

happened. Consultations brought conflicts out in the open, and widened the distance between the perceived positions of the government and opposing stakeholders. The following section outlines dominant themes as they emerged from the analysis of the qualitative interviews, and proposes suggestions for handling these differently.

Stakeholder mapping and analysis is a key first step

Mega projects such as the PTMP will most likely have multiple stakeholder groups with differing, and often conflicting, interests. The study finds that despite efforts made to identify stakeholders, reach out to them and plan these engagements, the process appears reactionary and—to some extent—short-sighted. While involved stakeholders included the obvious groups, the interests of indirectly affected stakeholders¹⁸ or special groups (elderly, disabled, women, low income groups, etc.) do not appear to be adequately represented. Achieving the objectives of equity and inclusion requires significant efforts to ensure that the needs of more vulnerable groups are given due consideration (Geurs, Boon, and Van Wee 2009; Elvy 2014). Using the appropriate stakeholder mapping technique to identify all stakeholders, especially the less obvious and the least powerful stakeholders and their interests, should form the basis for the engagement process (Prell, Hubacek, and Reed 2009). Bryson (2004) identifies several techniques useful for public managers. Put simply, stakeholder mapping involves identification of all key stakeholders, and their interests, as a basis for working on solutions that can best meet everyone's interests.

Early and continued engagement provides better opportunities for deliberation

One of the interviewees commented that stakeholder engagement was initiated as an afterthought after some "back benchers" in the state government raised an issue over lack of transparency. By the time the town hall meetings were initiated, there was only room for making minor improvements, such as considering changes in alignment of the proposed highway and public transport routes. This "decide, announce, defend" approach has been critiqued earlier. In line with Lash's tripartite model of the people, politicians, and planners (Lash 1976; Legacy 2010), the study stresses the importance of deliberation among the three parties at the process design stage as a more effective way to advance acceptability of a plan.

Set out the strategy and objectives up front

The absence of a clear engagement strategy led to ambiguity, as stakeholders did not clearly understand the objectives of the process and what was expected of them. A key lesson that emerges from the Penang case is that short-term and top-down planning of stakeholder engagement sessions can lead to inordinate delays or a

stalled project. Stakeholder engagement processes need a clear strategy about the aims of the exercise, and a discussion about which issues are negotiable and which are not (Booth and Richardson 2001). Collaboratively framing the rules in advance ensures transparency, and can maintain greater trust among parties and avoid adverse outcomes at a later stage.

Access to timely, relevant, and adequate information

One major critique of the process was the lack of information easily available to the public. Basic information on the plan was provided on the official website and during the town hall presentations. The NGOs demanded access to detailed studies including the assumptions behind the process, alternatives that had been considered, etc., all of which were kept confidential. The government reasoned that the contract with the private developer depended on federal government approval, and the documents could not be made public before the approval. Some participants critiqued the close-ended survey questions²¹ which, according to them, did not provide participants with enough information to make an informed decision. The engagement process and survey methodologies was also not shared publicly. An interviewee from civil society noted:

"We don't know how they generate the finding that there was a high level of support or how they determine that the fishermen object. We don't know what questions were asked. We only get to see the top line."

Adequate, timely, and simplified information on possible alternate options and their benefits and potential costs/risks is a precondition for receiving relevant and meaningful inputs. Another point of contention was the appointment of the EIA consultants by the developer. According to some, this was an obvious conflict of interest and defeated the purpose of an open EIA process. The stakeholders had little faith in the data and findings, as many felt the government was "hand in glove" with the developer. Instead of relying on experts to present data and findings, it is suggested that stakeholders and the government work collectively to establish scientific information. Referred to as "joint fact-finding," the process involves all parties working together to identify critical scientific and technical questions; the information needed to answer these; and appoint experts to carry out studies (Karl, et al. 2007). In Penang's case, this could have helped derive a common understanding of the impacts and increased people's trust in the consultants (as their appointment would be mutually agreed upon), resulting in enhanced transparency overall.

Effective process necessitates deliberation

In a couple of instances, the government was able to engage in dialogue with relevant stakeholders and arrive at consensus. However,

the efforts were largely geared towards convincing the public to accept the plan, rather than working with them to arrive at a mutually beneficial solution. Open hearings in town hall sessions did not allow sufficient time for deliberation, and stakeholders felt marginalized in the process. One interviewee, an experienced member of a prominent think tank in Penang, expressed his dissatisfaction with the town hall sessions:

"The engagement has been one-way, and is about information sharing. Can't call it engagement, more about informative approach. The extent to which this engagement has influenced decision-making or to the extent that this engagement has shaped any changes in the plan is very unclear."

The Penang government's efforts to use more traditional approaches for achieving a broad buy-in obviously did not work. When groups with fundamentally different interests are opposed to a proposal, interactions need to be structured differently. Processes where time and opportunity is given to deliberate on interests and concerns have been referred to in different ways—as partnerships, mediation, community-based planning, consensus building, shared decision-making, and co-management (Healey 2012; Susskind and Cruikshank 1987). A common theme of these processes is structured interactions that allow all participants an opportunity to voice their concerns, think creatively about possible options, and jointly agree on facts and solutions that best meets everyone's interests. Since decisions are co-produced and co-owned, these are most likely to be implemented and sustained over time. Development of new partnerships, knowledge, and mutual trust emerge as ancillary benefits.

Competence and resources of stakeholder groups has a major influence on outcomes

A unique and important factor in Penang's case was the ability of civil society to come together and collectively propose alternate plans and explore different ways to push the government. Several groups, including NGOs and fishermen groups, were able to mobilize and thwart the plan. In similar instances elsewhere, organized collective action from community groups has achieved successful outcomes (Mcandrews and Marcus 2015; Innes and Booher 2004). The success of such an effort largely depends on the capacity and resources of stakeholder groups. In Penang's case, by not taking stakeholders on board, the government missed the opportunity to leverage the local knowledge and skills that these groups possessed. Involving these groups actively in the planning process could have added value to the proposals, and perhaps created new and less expensive solutions more suited to the local context.

Empowering subnational governments

The distribution of powers and responsibilities among different levels of the government and their coordination has a significant

bearing on the delivery of national and local sustainability objectives (Matsumoto, et al. 2014). The federal control over transportation planning in Malaysia and the political tensions between the federal and state governments posed significant constraints on the state government. This, in turn, caused an increased dependence on the private sector in setting priorities and funding these projects. In the long run, constitutional reforms—such as devolution of powers to lower levels of the government—would provide higher autonomy to state and local governments, and enable more efficient delivery of public services.

In the short- and medium-terms, state and local governments should be empowered both in terms of technical and financial capacity. For instance, state and local governments should develop capacity to design and develop participation facilitators, tools, and methods towards more effective engagement. Therefore, while the stakeholder engagement process for PTMP is low on the spectrum of a good stakeholder process, its evaluation should be seen in light of its political, institutional, and cultural contexts.

Conclusion

In line with several other reported case studies, the Penang case reiterates the failure of the traditional "top down" process of consultation. It also highlights the pitfalls of a poorly managed and executed participatory process. An inadequate engagement process further alienated stakeholders, as they felt the government was insensitive to their interests. Such conflicts are especially inevitable in cases such as Penang, where private interests appear to dominate.

Governments presume that consultative processes can serve dual purposes of meeting the regulations and gaining political legitimacy. Revisiting the classic planning debate of whether public participation leads to desirable outcomes, the study illustrates that participation by itself is not useful. In fact, poorly designed engagement exposed the weaknesses of the process, allowing opposing groups to mobilize and thwart the plan. For engagement to be purposive and meaningful, stakeholders should be involved at an early stage, in a transparent and deliberative manner. This can reduce the time and costs, enhance government credibility, improve trust, and help develop long-term relationships between the government and stakeholders. Such a process would not only address the principles of fairness and equity; in all likelihood, the solutions would have a higher probability of implementation.

Malaysia is on a rapid development curve. Urban and economic development is expected to result in unprecedented demand for investment in public infrastructure. The insights from the study offer timely and relevant inputs for designing inclusive and efficient participatory processes. The paper sets out key elements as a way forward.

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Engagement activity	Stakeholders	Facilitation	Status
State government led engagements	Business groups, Penang Transport Council, professional groups, general public, fishermen	 Town hall meetings conducted jointly by the State government and the PDP A presentation on the project was followed by a question and answer session 	 Over 2,700 people attended 26 sessions between December 2015 and October 2016 Official reports indicate 25 sessions were positive and 1 session with the fishermen ended in conflict These sessions were discontinued
Official PTMP website		 A central source for information on PTMP Brief information on the Transport Master Plan, including modes and alignments, and selected information on public engagement sessions 	 People can submit feedback/queries online 277 individuals provided feedback State will continue to update the website and respond to queries
On-ground engagement • LRT • Pan Island Link Highway • Southern Land Reclamation	 People directly affected by the proposed projects E.g. for the LRT line, it included surveys of people in George Town as well as people living in proximity to the proposed line The EIA for reclamation included the fishermen who would be directly affected 	 These were conducted by the EIA/SIA consultants Methods included focus groups and interviews involving closed questions on whether they support the project Specific concerns were recorded 	 In all, 9,340 people were consulted Reports indicate majority approval in all the surveys The consultants have prepared EIA reports for submission. The reports are not yet available in public domain
Mainstream media		The media strategy included using newspapers and online media to: • Address issues on a macro level (to manage issues raised by NGOs) • Share positive updates with the public to boost confidence	 The Support Penang Master Plan Facebook campaign received over 13,000 positive responses Online media pages updated with recent news and information on

		 Leverage the voices of people who support the project 	the project
Fishermen's service centres	• Targeted for fishermen	 The fishermen outreach centers set up to allow fishermen and visitors to provide feedback and register for jobs CSR activities included providing assistance to local children, organizing competitions, tree plantation drives, etc. 	 Visitors included 283 fishermen and 1,065 other visitors. Over 300 individuals provided feedback Activities will be continued Plans for more outreach centres

Annex Table 1. Penang Transport Master Plan engagement framework²²

Notes

¹ In San Francisco, environmental groups protested the transportation plan, holding it up for a year. In another instance, a road-widening project in the Bay Area met with protests and in the absence of efforts for problem solving, the congestion worsened, leading to all sides as aggrieved parties (Innes and Booher 2004).
² Ibid

³ Town and Country Planning Act, 1976

⁴ Public participation inputs should be sought once during the preparation of the EIA study and later after the EIA report is available for public viewing.

⁵ New development is further constrained by the presence of historic buildings in George Town and sensitive environmental areas.

⁶ https://penangforum.net/about/ Accessed March 7, 2017

⁷ A series of meetings and workshops with representatives of government bodies, non-government organizations, and interest groups and public consultation activities followed. After receiving public inputs on two alternate strategies, the consultants produced a Penang Transport Master Plan Strategy in 2013.

⁸ The original Halcrow strategy had proposed a combination of trams and BRT, highways, and non-motorized transport. The Halcrow report also suggested demand management measures to reduce private transport use.

⁹ For instance, for the LRT, this included people staying in proximity to the proposed rail line. For the reclamation project, this included the fishermen and residents from nearby areas.

¹⁰ The EIA is in process and therefore discussion in this paper is limited to the information available from interviews.

¹¹ Interview with Dr. Leong, Head Penang Green Council and Anil Netto, Aliran

¹² Ibid

¹³ http://www.theedgeproperty.com.my/content/penang-land-reclamation-assemblyman-claims-protesting-fishermen-welcomed-plan Accessed March 3, 2017

¹⁴ Penang Transport Master Plan Strategic Communications. Briefing to Strategic Communications Working Committee. Presentation date 12 October, 2016

¹⁵ http://www.thestar.com.my/news/nation/2016/12/18/reclamation-will-affect-livelihood-says-group/ Accessed January 27, 2017

¹⁶ A girl's high school protested over the highway that would take up part of the school's land. An online petition was initiated which received thousands of supporters on social media and the support of a local state assemblywoman. Following a negotiation between the state government and school authorities, the state government announced that they would not acquire the land belonging to the school.

¹⁷ This could mean parties with more resources or political power.

- ¹⁸ A large population on the mainland was not consulted, since they were not directly living along the planned routes. Many of these groups do not have access to transportation networks.
- ¹⁹ Members of the state government include 7 Executive Committee Members (ExCOs) who have more executive powers relative to the remaining 40 members, who are referred to as "back benchers." ²⁰ Interviewees commented that the decision was exclusive—i.e., that it was taken by the State Executive Council (ExCO)²⁰—and the rest of the state assembly members were informed later. One interviewee noted that the process of deciding on the PTMP felt like a "black box" operation.
- ²¹ For example, one of the survey questions included "Do you support the Light Rail Transit"- yes or no.
- ²² Source: Penang State Government