Trapped between institutions and politics
The role of politics and social dynamics in institutional performance for flood defense management in Jakarta, Indonesia

Imelda Simanjuntak¹, Niki Frantzeskaki²*, Bert Enserink¹, Wim Ravesteijn³

1. Delft University of Technology, Faculty of Technology, Policy and Management, Policy Analysis Section, Delft, The Netherlands, e-mail: Imelda.simanjuntak@gmail.com & b.enserink@tudelft.nl
2. Erasmus University Rotterdam, Faculty of Social Sciences, Dutch Research Institute For Transitions, Rotterdam, The Netherlands, e-mail: frantzeskaki@fsw.eur.nl (corresponding author)
3. Delft University of Technology, Faculty of Technology, Policy and Management, Technology Dynamics Section, Delft, The Netherlands, e-mail: W.Ravesteijn@tudelft.nl

Abstract
Flood defense management in Jakarta is a critical governmental activity given that Jakarta is a low-lying delta metropolis and trade center which relies on its safety for the continuity of the economic activities. Despite the urgency for action flood defense policy implementation was a lengthy and strenuous process that lasted 30 years (1973-2003). The policy alternative of the Eastern Flood Canal was available and gained consensus early during the policy design process but it was only enforced when institutional and political changes were coupled in 2003. Earlier evaluations pointed at the lack of financial resources as a cause of delayed implementation; we explore the causes of the delay beyond budgetary reasons. In our research we use Kingdon’s Stream Model to structure the policy design and implementation process of the Eastern Flood Canal project and analyze the co-evolution of politics (political stream), policies (solutions stream) and socio-ecological context (problem stream). We synthesize data from desk research on legal documents, and field research (18 in-person interviews). Our research revealed three critical causes for the implementation delay: (a) Institutional misalignment between local and national level. This misalignment of institutions created miscommunications and ill-coordination between municipal and ministerial authorities. (b) Absence of critical actors in the policy process. Actors such as Provincial authority and Ministry of Finance were not invited in the policy design process despite the fact that they hold critical financial and administrative resources for the realization of the flood defense infrastructure; and (c) Implementation was feasible only when political and institutional developments coupled.

Keywords: infrastructures, policy implementation, water management, politics, decentralization.

1. Introduction

Jakarta is a city located in low delta area and exposed to flood attacks annually. Of the 65 000 ha area of Jakarta, about half is situated in flood prone areas. According to the current data of the Jakarta Public Works Agency, there are about 78 areas in Jakarta that are prone to flooding (www.pu.go.id). Until today, flood risk remains a threat to Jakarta. The magnitude of floods is amplifying over the last decade (e.g. flood events on 1996, 2002 and 2007) and flooding impacts widespread areas inducing huge economic and social damages (NEDECO, 2002; Bappenas, 2007). According to prior studies, one factor contributing to the worsening of the floods in
Jakarta is inadequate flood control infrastructures (Steinberg, 2007). Flood control infrastructure programs have been on the government agenda since 1970. However, most of them have never been implemented due to political and public resistance.

One of the flood control infrastructure programs the implementation of which has been delayed for more than 30 years was the Eastern Flood Canal (EFC). The EFC project plan was first presented in the Master Plan of Drainage System and Flood Control for Jakarta in 1973. The Master Plan 1973 was constructed by Ministry of Public Works in collaboration with the Dutch Government. Even though the EFC design was finished in 1973 and its construction was planned to be completed before 1980 (NEDECO, 1973), the implementation of the project was just realized in 2003.

Many contradictive opinions appear regarding the delay of the EFC implementation. In the public media, the Indonesian government claimed that the land acquisition was upholding the implementation of the EFC. On the other hand, some research documents charged that Jakarta’s local authorities had a significant role to the delay of the EFC implementation (Caljouw, et.al 2004; Steinberg, 2007). According to Caljouw, et. al (2004) the budget allocation which was not used to its purpose was the main factor contributing to not implementing the EFC in the past. Steinberg (2007) claimed that the delay of the EFC implementation was due to the difficulty to attract investors, which lead to the inadequate budget for its implementation.

Our research revealed that the delay of the Eastern Flood Canal is beyond the budget limitation. In fact, many infrastructure projects in Indonesia which required high budgets were implemented in the past. Therefore, according to us, it is important to find the decisive causes of why the EFC policy making process was confronted with lengthy time. Given the aforementioned explanation, the research intends to give an answer to the following research question: What are the decisive causes of the delays and opposition faced by the Jakarta’s city government regarding the Eastern Flood Canal implementation?

The causes of delay and opposition are searched in two areas: (i) the transition of institutional structure in Indonesia from centralization to decentralization, and (ii) the way in which the decision making process of the EFC was conducted. The evaluation of the institutional structure and its changes and the policy making process of EFC will indicate the issues causing the delay and resistance.

In addition, the research will also give an analysis of the reasons for the renewed attention for the EFC from Indonesian government in 2002. In line with this, we will explain why the EFC was considered an appropriate solution for dealing with the flooding problems in Jakarta. Understanding why the EFC was eventually implemented might help us to find a strategy to gain stakeholder support for the realization of flood control infrastructure projects in Jakarta in the future.

1.1 Research methodology

We conducted desk research and in-person interviews for data collection. First, the desk research about the history of the EFC and the institutional development in Indonesia regarding water
management prepared a background paper on the EFC prior to the visit in Jakarta, Indonesia (field research). The materials reviewed during the desk research were journal and scientific papers and legal documents of the Jakarta’s government (e.g. Master Plans) that provided information about the process of the policy design and implementation (See Appendix A, Table A.1).

Second, semi-structured in-person interviews were conducted in Jakarta, Indonesia in April-May 2010. The interviewees were selected based on their relation to the implementation process of the EFC and included a total of 18 interviewees such as authority officials, NGO spokespersons and citizens who live nearby the canal (See Appendix A, Table A.2). The in-depth interviews to citizens were conducted to get more insight and to understand the causes (and motivation) of their opposition. The semi-structured interviews to authority officials and other stakeholders were conducted with a focus on understanding the formal institutional structure and interactions at district, local and national levels that affected the implementation process of the EFC and the performance of the EFC matters that were closely within the knowledge of the interviewees.

For structuring and analyzing the data, we applied the Kingdom’s (1985) Stream Model. The selection of the Stream Model as suitable for our case and research objective is based on two reasons: (a) the Stream model has an explicit focus on the politics of the policy process that makes it integrative in its analytical capacity and suitable to capture the institutional reality in Jakarta’s water management sector, and (b) a starting assumption of our research is that windows of opportunity played an important role on the development of the policy process concerning the EFC.

**The Stream Model**

Kingdon stated that the confluence of three streams (problem, political and policy streams) is the precondition for getting a matter on the agenda. Kingdon (1985) identified three streams: a problem stream, a solutions stream and the stream of political events. According to Kingdon, issues get on the agenda when “a problem is recognized, a solution is available, and the political climate makes the time right to change. The confluence of these streams at critical junctures or “policy windows” which are open only for a short time when condition are right, is the precondition for getting a matter on the agenda (Mucciaroni, 1992).

Kingdon describes two more categories of windows; problem windows and political windows. The problem window stem from problems that arise exogenously to the political stream and demand a policy response. The latter occur due to political events: changes of government, shifts in the "national mood," and the rise and fall of political fortunes (Lipson, 2005). Political windows occur when problem stream and policy stream meet but no connection to the political stream is present; if the latter remains absent the opportunity for problem solving passes by. However, open policy windows do not automatically bring about policy change. There must be deliberate efforts to seize the opportunity and push the problem onto the agenda before condition change. This is done by policy entrepreneurs. "Policy entrepreneurs" play a critical role in "coupling" problems and solutions during such windows of opportunity (Mucciaroni, 1992). In effect, the streams model turns upside-down the traditional rational model of policy making, which sketches a sequence of agenda-setting and analysis of the problem, followed by the development and selection of the solution based on unambiguous and explicit criteria. The streams model affords scope to problems looking for solutions as well as to solutions looking for
their problems, participants looking for problems and/or solutions and choice opportunities looking for participants (Enserink et al. 2010).

2. Analysis of the institutional context of the water management in Jakarta, Indonesia

2.1 The macro context of the Eastern Flood Canal Policy Making Process

The policy processes of the Eastern Flood Canal cannot be separated from the Master Plans development of Flood Control and Drainage system in Jakarta (see Table 1). The idea of the Eastern Flood Canal construction originates from the Dutch engineer Van der Beer in 1918. His idea was to control the water volume discharged on Jakarta through 13 rivers. The run off of these 13 rivers will be diverted through the left (Eastern Flood Canal) and the right side (Western Flood Canal) of the city towards the sea.

After the Independence Day (17 August 1945), the flood management in Jakarta has received attention by the central government due to Jakarta’s strategic importance as an economic and governance center. In 1965, the central government established the Commando project of Flood Control ("Kopro Banjir") which focused on infrastructure solution. The Kopro Banjir was managed by the central government and focused on infrastructure development and fully funded and implemented by the central government.

Given the vulnerability to flooding in Jakarta, flood prevention was given priority in the initial stage of the flood Control Master Plan development. In the 1970s, the idea of Van der Beer was adopted by NEDECO that collaborated with Indonesia’s government and was presented in the new Master Plan of Flood Control and Drainage System for Jakarta. In the Master Plan I, the Eastern Flood Canal was recommended to protect the flood prone area in the eastern part of Jakarta. However, even though the Eastern Flood Canal’s design was finished in 1973, this recommended solution was not directly adopted by the Indonesia’s government.

After the development of flood control master plan, several studies were carried out until 2003 to formulate long term solutions for Jakarta’s flood control (see Table 1). Those studies were conducted by the central government in collaboration with several donor communities (especially the Netherlands and Japan). The studies produced several perfections of previous master plans and new master plans (Master Plan II (1991), III (1997) and IV (2002)). In every master plan, the Eastern Flood Canal is present as one alternative solution to control flooding in East Jakarta. During the development of the Master Plans, the design of the Eastern Flood Canal has gone through several revisions and perfections.

As presented in Table 1, the policy process of the EFC has been carried out for more than 30 years before it was implemented. Two distinct phases can be distinguished in the macro context of the EFC policy process. First, the EFC Master Plans were constructed during Soeharto’s regimes when the government practice in Indonesia was highly centralized and autocratic and the public infrastructure development funds relied on external loans. Second, at some stage in the process of the EFC design, the transition from centralization to decentralization of administration system in Indonesia took place in around 1999. We simplify the policy process of the Eastern
Flood Canal in Figure 1. In Figure 1, we see what the government produced regarding the Eastern Flood Canal before and after decentralization. Figure 1 shows that the agreement to implement the Eastern Flood Canal and start construction was reached only after the institutional shift.

**Table 1. Master Plan Development of Eastern Flood Canal, Jakarta, Indonesia.**

<table>
<thead>
<tr>
<th>Year</th>
<th>National Level Events</th>
<th>East canal events</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>Establishment of Jakarta flood prevention Project by the central government (&quot;Kopro Banjir&quot;)</td>
<td>Plan and construction of flood infrastructure under the authority of the Ministry of Public works</td>
<td></td>
</tr>
<tr>
<td>1969-1998</td>
<td>General Suharto’s New Order Government in Power</td>
<td>Water resources and other governmental functions consolidated to central government</td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>Master Plan I (Master Plan of Flood Control and Drainage System for Jakarta, NEDECO 1973)</td>
<td>Master Plan I is produced by the Department of Public Works and Electricity (central) in collaboration with the Netherlands Engineering consultant NEDECO</td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>Water Law No. 11</td>
<td>According to this Law, the flood control infrastructure project was fully funded and implemented by the central government (Ministry of Public Works)</td>
<td></td>
</tr>
<tr>
<td>1991-1993</td>
<td>Master Plan II</td>
<td>The collaboration between the Department of Public Works and the Japan International Consultant produced a new master plan (Perfection of previous master plan)</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>Severe flood inundated almost all Jakarta’s land area especially in North and East Jakarta.</td>
<td>New study about Jakarta flood was conducted by central government in collaboration with the Netherlands Government</td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>Master Plan III</td>
<td>The collaboration between Department of Public Works and Japan International Consultant produces a new master plan</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Fall of Suharto’s regimes</td>
<td>The transformation from centralization to decentralization is initiated</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td><strong>Decentralization Law 22/1999 and Fiscal Equalization Law 25/1999</strong></td>
<td>Eastern Flood Canal plan is integrated with the spatial planning of Jakarta 2010</td>
<td>Change of institutional arrangement in water sectors. Provincial government has autonomous power in regulation and policy related to water and flood management.</td>
</tr>
<tr>
<td>2002</td>
<td>Severe flood attacked Jakarta. It was recorded that disastrous floods affected 10000 ha of Jakarta’s build-up area</td>
<td>Master Plan IV</td>
<td>More stakeholders involved in developing the Master Plan IV MoU between central government and provincial government to implement Eastern Flood Canal was signed</td>
</tr>
<tr>
<td>2003</td>
<td>Kick-off of flood canal construction by President Megawati Soekarno Putri</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>New water Law no 7 First direct election</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Another devastating flood hit Jakarta; one of the worst floods ever experienced.</td>
<td>Central government increased their commitment to accelerate the completion of Eastern Flood Canal by allocating more budget than before.</td>
<td></td>
</tr>
</tbody>
</table>
2.2 Water management institutions and their role during the Eastern Flood Canal Policy Making Process

During the development of Master Plan I, II and III when the government system in Indonesia was centralized, water resources and other governmental functions were consolidated to central government (see Table 1). The administrative arrangements related to the water sector and flood risk management were characterized by a command-and-control type of regulatory rules that leave administrative actors with limited discretion and flexibility.

The water control and water management were regulated based on Law No 11/1974. According to this law, the power resides with the Central government and more specifically, with the Ministries for planning and policy making for strategic flood control management. In the third section of this law it is stated that the Ministry of Public Works has the authority and responsibility to coordinate the macro planning, technical planning, supervision, and implementation power related to water resource management. Related to the flood control infrastructure development, the Ministry of Public Works has supervisory control of implementing institutions that are appointed by the Ministry of Public Works. All flood control management and activities were centrally controlled and had to be approved by the Ministry of Public Works.

For implementing legislation of Law no. 11/1974, Government Regulation No. 22/1982 was issued. According to this regulation, the development plan on Water Resources is provided by the Ministry of Public Works. Moreover, the Ministry of Public Works had the authority to appoint and establish institutions and organizations in national or regional level to perform certain tasks related to water management including flood control infrastructure development and management. The Regional level authorities (provincial government and lower level) were responsible to perform specific administrative task delegated by the central government.
After the fall of Soeharto’s regime, the structure of the relation between central government and provincial government or lower level is changed from centralized and co-administration to a more decentralized governmental system through the establishment of Law No. 22/1999. In the water sector, the Regional governments now get the authority to enact their own regulations, formulate their own plans, programs and fiscal policies, raise and retain revenue and exploit natural resources including the water sector (Bhat and Mollinga, 2009).

The autonomy and decentralization laws put a greater pressure on the Provincial authorities in many aspects of flood control and management. The institutional changes imply that the provincial authorities are now ultimately responsible for flood control management and addressing flood damage in Jakarta where before the responsibility was handled by the central government. In addition to that, river basins that lie inside a province and are not nationally strategic should be managed by the Province (Bhaat et.al, 2005). Related to the flood control development, the public work agency (provincial level) has authority to give permission or approval for the development plan of public infrastructure services including the flood control infrastructure (Capacity Building of Drainage Management of Jakarta, WJEMP, 2002).

The Provincial authorities also have responsibility for the operation and management of flood protection infrastructure and for the Flood Forecasting and Warning System (FFWS). Moreover, the provincial government has the responsibility to conduct activities of all relevant agencies providing information concerning water-related and flood risk issues. Agreements exist between the province and the district regarding how to manage floodwaters.

In summary, decentralization implies that the Regional government has gained the power to direct a policy related to the flood control management and Regional governments became responsible for dealing with flood issues.

3. Findings concerning the implementation delay of the Eastern Flood Canal

In the next section we will discuss the three decisive causes for the implementation delay of the EFC: (i) Institutional misalignment between local and national level, (ii) absence of critical actors in the policy process, and (iii) actual implementation was feasible only when political and institutional developments coupled.

3.1 Institutional misalignment between local and national level caused delays at both decision and implementation phases

Indonesia experienced an institutional shift from centralization to decentralization that affected the policy design process of water management infrastructures. In our analysis, we examined causes of delay and opposition in both centralization and decentralization periods.

Starting with the centralized period, we had as a working hypothesis that during the first phase of the policy process of the Eastern Flood Canal (1973–1999 -centralization period), the central government would take control of the policy making process given that the power and responsibilities resided on it for planning and policy making relating to flood control infrastructure (Bhat, et. al, 2005). Hence, the implementation of the programs in the Master Plans
(e.g. the EPC) relies on the clear command and commitment of the central government to provide budget and provide legitimacy supports (such as laws, regulations, procedures, etc) to the organizations responsible for the implementation.

Our research revealed that the central government did not provide clear command and procedure to the local governments for implementing the EFC. The Master Plans were submitted to the local governments, but the critical resources to realize the implementation of the canal were not adequately provided by the central government to the regional-local governments. The central government who is responsible to provide the critical resources (e.g. budget, legitimacy support, human resources, etc) for the implementation neither showed commitment nor prioritized nor provided resources for solving the flood problem in Jakarta. Even when resources were provided, they were insufficient for initiating the infrastructure projects that were planned. In addition, the master plans did not have legitimacy support (e.g. clear procedure, budget schemes, regulations, laws) to realize the programs in the Master Plans (Interviewees).

For instance when the cost of all works set up in the 1973 master plan amounted to Rp 592 million, the annual budget for the project in the mid 1970s was only approximately Rp1.5 million (Soenarno and Sasongko, 2000). Our research revealed several root causes of the non-availability of adequate budgets for the project, which resulted in the implementation delay:

1. During the policy making process of the Eastern Flood Canal, the role of provincial authorities was not settled and limited. Since the province was knowledgeable about the flooding problem of Jakarta, it was expected that during its attendance in decision-consultation meetings it could have exercised pressure to the decision maker to take actions regarding flood issues in East Jakarta by revealing the real facts about the flooding. On the contrary, we found that the regional level authorities had very limited influence in the decision making process. For example, the provincial government initiated the establishment of the governor’s decree in order to implement the EFC. This action however could not be followed up due to the Ministry of Public Work’s direction to disrupt its operation (interviewee).

We also observed that the province itself had low commitment to push and promote the implementation of the EFC. The provincial government when attending meetings to finding alternatives to the problem, it was present only for formal reasons therefore did not reveal new facts about the flooding problems to the central government. The notion of formal presence can only be perceived from the fact that the provincial government did not provide adequate data and information about Jakarta’s spatial planning during the development of the master plan. The aforementioned statement is supported with the fact that the content of the majority of the master plan studies are similar and only consider technical design revisions (Master Plans 1973). Even though several studies were conducted, the new studies or master plans did not provide any answer on how to deal with land-use issues. This lack of commitment from the provincial government may be related to the institutional structure of this period. Prior to 2002 the provincial government saw itself as the representative of the central government and not as the representatives of the citizens. During the centralized period, the provincial government did not have the power to influence the central government given the fact that the assigned administrators were easily replaceable. This situation made
the provincial authorities less interested in providing better public services to their community and more interested in sustaining their position.

2. The government did not perceive the implementation of the EFC as urgent because most of the decisions reflected central government interest and not public interests. Therefore, it was difficult to gain political support during this period, if the project would serve the public interest only. Given the fact that the EFC provides flood protection to 20% of the areas of Jakarta (MPW, 2002) where mostly low-income households are settled (NGO’s interviewee), the government saw that the construction of the Eastern Flood Canal did not give any benefit to the government.

3. The priority for implementing the EFC at the level of the national government was low because the national government was not convinced right away that the Eastern Flood Canal was a promising alternative to control flooding in Jakarta. This is the result of the fact that the flooding in Jakarta was caused by many factors and the EFC could only provide protection to a part of the Eastern Jakarta. Moreover, only five rivers are included in the Eastern Flood Canal system, whereas flooding in Jakarta is caused by many rivers. Additionally, the implementation of the canal would imply that many people and houses would have to be removed from the canal areas and this works -according to central government- was not easy and was of high cost (Provincial government interviewee).

4. The limitation of press freedom resulted in limited broadcasting of flood events by the media. There were few critics about the failure of government in providing solutions against flooding. The impact of floods to society was not much opened to debate either. All disasters related to floods were hidden by the government and the news that was broadcasted in the public media was regulated and directed by the authorities. Even though the citizens have experienced devastating floods for many years, they did not have the opportunity and power to raise their voice since the governmental system of Indonesia during this time was characterized with closeness, military power and elimination of resisting elements in society.

As we show in Figure 1, after the decentralization, the EFC construction was finally kicked off by the central government in 2003. The transition from centralization to decentralization brought about relevant changes in the governance style of the public administration, including the water sector e.g., the additional powers and responsibilities at the regional level, freedom of press, and public powers influencing the decision process of the Eastern Flood Canal.

The decision to construct the canal was taken in the transitional period and carried out with limited public participation. The working groups were dominated by the actors from the government with limited participation from the stakeholders such as citizens, NGOs, local parliament. Moreover, the result of the master plan was only accessible to the central government and the provincial government without declaring them to the public (interviewee). This lack of transparency and openness lead to a lack of accountability of the policy process result causing strong resistance from the public during the implementation. Transparency and accountability are good governance principles belonging to the practices of the decentralization style, but that were not applied by the government when they decided to construct the canal. Consequently, opposition from citizens rose when the decision to implement the Eastern Flood Canal was published, since after the decentralization people have more power to voice their concerns and defend their interests and demand their rights (while the decision had been taken without consulting the public opinion). The people living nearby the canals tried to block the
government’s decision by holding their lands. This upholding then blocked the construction of the canals.

The lack of communication and coordination between the central and regional government were also indicated as a root-cause for the implementation delay. The lack of coordination led to the unclear plan about the construction and failing land acquisition. Land availability is a critical factor to accelerate the completion of the canal. Before 2003 the provincial government was responsible to provide the land. But the land availability is not well prepared and managed by the provincial government and until today there are still designated construction areas that remain to be freed from dwellings. Due to this condition, the lagging land acquisition process and the physical construction activities of the EFC are executed in parallel.

This problem has arisen because the decision to implement EFC did not involve the district government. Ideally, if the (national) government plans to construct the canal, they should involve the district and local authorities in that decision because the municipality has full acquaintance of the current condition of the Eastern canal areas. Rather than involving the local authorities, the land acquisition process was done top-down. The governor established a decree about the procurement of land for the canal construction in 2003 (in the same year when the construction of the canal was kicked-off by central government), which must be followed by the municipality. Two problems arise here: First a lack of coordination between central and provincial government to the status of land supply for EFC and second, the decision of the governor does not fit with the concept of local autonomy derived from the concept of decentralization. In effect the land use sector is left entirely to local autonomy, which means the governor has no authority to override the land management plan of the Municipality.

The land acquired to the construct the EFC spans across 11 villages in East Jakarta municipality and two villages in North Jakarta municipality and thus the cooperation of both East Jakarta and North Jakarta municipality were very important. During the interviews, it was found that this condition raised a new problem. The designated lands have been utilized as mostly informal settlement areas (70%) and for business, agriculture and public and social facilities. It means that the land acquisition has become a very complex problem due to the lack of spatial planning of DKI Jakarta. Actually in the Master Plan 1997 where the eastern canal was planned to be constructed, it was also mentioned and emphasized that the land regulation needed to be conducted and enforced so that the land acquisition will not hinder the implementation of the eastern canal in the future. This master plan was not followed by the provincial government. Real problem emerge after 1999 when the land affairs is decentralized and the decisions on land use planning are given to the district government. Therefore, by the time the EFC is being constructed, the land which should have been allocated to the canal has changed into settlement areas. It was found that even after the construction works started some of the designated lands are under development to be residential real estate.

3.2 The absence of the critical actors

As can be read from the previous sections our analysis shows that several actors who were holding important resources were not involved throughout the policy design process. Based on our findings, we can list several of these so-called critical actors (Enserink et al., 2010) that
should have been involved due to their direct involvement with the implementation procedures, due to the resources they control, and due to their interests in the success of the infrastructure project. These actors that had needed to be involved include: the Spatial Planning Agency, the Ministry of Finance, and the Municipalities. These actors have critical resources and their support is very important to assure the success of the EFC Implementation.

According to De Bruijn and ten Heuvelhof (2008) critical actors who are not involved during the decision making process may try to use their resources or power to block the decision. They might try to redefine the decision, postpone implementation or implement the decision in a different way from the one intended. Moreover, they might also adopt a passive attitude and do not give much attention and support during the implementation phase. Such a behavior of the critical actors was also observed (and evinced) during the implementation phase of the Eastern Flood Canal. The absence, for example, of land owners in the problem framing and planning phases caused high opposition during the implementation phase. The land owners tried to block the government’s decision by holding their land. Since the land owners know that the EFC cannot be implemented without the availability of land, they use this condition to secure their interest by requesting very high compensation from the government. Another illustration of how the absence of critical actors delayed the implementation of the EFC can be derived from a spatial planning aspect. The plan to implement the EFC had been decided upon in 1973. However, this plan had not been communicated well and integrated into the spatial planning of Jakarta. Consequently, areas or lands that should have been designated to the construction of the EFC changed and became settlements and industrial areas.

3.3 Implementation was feasible only when political and institutional developments coupled

If we look at Table 1, we see that the consensus on construction of the EFC was reached after the flood aftermath in 2002. In this section we intend to specify the mechanisms by which the flood in 2002 became a unique event that brought huge government attention and response when compared to previous flood events. The actual decision to implement the EFC in 2003 is related to the changing contextual conditions during this period. Drawing on Kingdon’s model, we conclude that in the preceding years a political window opened as consensus was gained after the institutional and political changes in Indonesia and the political stream had coupled with the policy stream. The flood event was the catalyst that opened a policy window, where problems, solutions and politics could meet.

Using Kingdon’s Stream Model for analyzing the EFC policy process, the evolution of the EFC can be explained in terms of the coupling within policy windows, problem windows, and politics streams. Figure 2 shows three streams as identified by Kingdon related to the Eastern Flood Canal implementation process. The flood events and severe floods that hit Jakarta can be positioned within the problem stream that opened a problem window. The development or construction of Master Plans that provided several alternatives to respond to the flood problem in Jakarta constitute the solution stream. The decentralization, democratization and the associated freedom of press, as well as the societal movement of freedom of expression (after the fall of Soeharto’s regimes) constitute the political stream. The Provincial government and the media can be characterized as policy entrepreneurs who tried to seize the opportunities to couple those three streams. This coupling resulted in the fact that the central government was forced to
recognize the urgency of the Eastern Flood Canal implementation. Each stream depicted in Figure 2 and the role of the policy entrepreneurs will be further discussed in the following paragraphs.

**Problem Stream:** The flood problem in Jakarta has been recognized for many years. The regular severe flood events (1970, 1979, 1996, and 2002) hit Jakarta and paralyzed the city for weeks. The disastrous floods have claimed numerous victims and caused huge economic losses, nowadays accounting to an estimated 1 billion dollars for the 2007 flood only. (www1) There was a general agreement that the impacts of flooding in Jakarta increased significantly and a widespread concern rose for Jakarta’s flood defenses. In addition to that, the areas that were exposed to floods increased due to city growth, rapid subsidence and lately expected sea-level rise. Flooding has since long been recognized as a serious problem. During the floods in 1996 and 2002, the figure of 78 areas of Jakarta’s without flood protection was widely discussed. The situation drew attention of the policy makers of Indonesia to flood management in Jakarta, which led to the development of the problem stream. The annual flooding kept the problem stream alive, while the severe flood events functioned as focusing events to open up problem windows whenever new policies and Master Plans were initiated. The 2002 flood was a critical event for opening up a policy window for the EFC as problems, solutions and political stream met.

**Policy Stream:** The first additional insight is that the alternative of the EFC existed long before being placed on the political agenda of the Cabinet in 1973. Already in 1918 this idea has been proposed by the Dutch consultant engineer Van Der Beer. According to him flooding in Jakarta can be controlled by diverting the water flow from rivers by constructing a Western and Eastern Canal.

---

*IRSPM XV 2011 Conference “Value, Innovation and Partnership”  
11-13th April 2011, Dublin, Ireland*
Years later, the EFC as an alternative was taken up again by the Dutch consultant (NEDECO) on the development of the new Master Plan of flood control for Jakarta. After the severe floods in 1970s, Jakarta was assisted by the Dutch government that provided a solution for Jakarta’s flooding. Although the EFC design was finished in 1973, it was not directly adopted by the Indonesia’s government as a recommended alternative. After the development of the flood control master plan, several studies were carried out until 2003 to formulate long-term solutions for Jakarta’s flood control. Those studies were conducted by the central government in collaboration with several donor communities (the Netherlands and Japan).

The studies produced several perfections of previous master plan and new master plans (Master Plan II (1991), III (1997) and IV (2002)). In every master plan, the notions of acquiring flood control infrastructure appeared and the EFC is always adopted as one alternative solution to control flooding in East Jakarta. During the development of the Master Plans, the design of the EFC was gone through several revisions and perfections.

With regard to the policy stream, we can categorize the policy process round from 1973 – 2002 that we showed in previous chapter as the policy stream of the EFC. The EFC was mentioned as the alternative every time the flood events occurred in Jakarta. The regular flood events can be conceptualized as the problem window to the appearing of the Eastern Flood canal on the Jakarta’s flood management agenda. However, there were no links with politics until 2002 and the EFC proposals were turned down by the central government. The fact that the EFC proposals were not getting political attention may link with the political conditions during the policy stream development. During this period, most of the decisions taken were serving the interests of the autocratic government and not public interests. Moreover those mostly affected by the flood events were the poor and relatively powerless citizens. The government saw that the construction of the EFC did not give any benefit to them because EFC’s function was only to provide flood protection to some 20 % areas of Jakarta (MPW, 2002) dominated by poor settlements areas (interviewee).

**Political stream:** The institutional shift from centralization to decentralization after the fall of Suharto, was followed by the better functioning of the democratic system in Indonesia and was characterized by shared power between different governmental layers; local, regional and national; by direct free elections, freedom of press and an increasing power of civil society and citizens. All these political and institutional changes can be conceptualized as elements in the political stream.

The new division of power and responsibilities between governmental bodies opened the political window within which the problem of uncontrolled flooding was linked to the EFC alternative by the provincial government. The changes of the role and position of the provincial authorities enabled them to push the central government to give (financial) support for the implementation of the EFC. The provincial government emphasized that the central government should contribute to the realization of the EFC with budgeting support.

The new freedom of press was also important when linking the flood problem with the alternative. The discussion on the causes and solutions for Jakarta’s flood problems between intergovernmental bodies, academics, and professionals were also held several times in the
media. During the flood event in 2002, various media (e.g. television channels, Newspapers) published the reality of the flood impacts and criticized the government’s failure in providing adequate public flood infrastructure in Jakarta.

The increase of society’s power due to the direct elections is conceptualized as an important element belonging to the political stream. We can see this by the fact that that the agreement between central and provincial government were announced in 2002 and the EFC was kicked off in 2003. The time for taking decision and kicking off the EFC construction is quite close to the first direct elections. We content that these direct elections in 2004 (might have) increased the government’s commitment towards servicing the public’s interests; to be elected politicians needed and wanted to show to the public that the current government has both the willingness and the commitment to speed up the implementation of flood control infrastructure for ensuring Jakarta’s protection against flooding in the future. This political determination was a precondition for a successful political campaign for the future election period.

**Policy Entrepreneurs:** In Kingdon’s model, coupling of issues within a policy window is accomplished by policy entrepreneurs – advocates of particular policies who will seek to advance them on the policy agenda. Policy entrepreneurs are strategic actors. Kingdon claims that disparate actors can play the role of policy entrepreneurs, and that different actors play this role at different times and in different decision settings. This theoretical proposition is corroborated by our findings at the EFC policy process in the 1973 – 2002 periods.

We identify three sources of initiatives of policy entrepreneurship promoting the EFC as a (partial) solution to Jakarta’s flooding problem. We identify the first policy entrepreneur and source of initiatives to be the Dutch consultants. As described, two master plan studies (1973 and 1996) were produced by Indonesia’s government in collaboration with the Dutch government. The Dutch advisors promoted the EFC in the respective master plans as the priority alternative to safeguard Jakarta from flooding. The Dutch policy advisors were not very successful though as the political conditions with a highly centralized and autocratic regime were not favorable; they acted as problem entrepreneurs working in the problem window rather than being a policy entrepreneur.

The second source of initiative is the Jakarta local authority requesting the implementation of the EFC to be done immediately after the flood of 2002. We categorize them as an important political entrepreneur in the revival of the EFC. After the decentralization the local authorities were regaining authority on local issues rather than being an extension of national government. Moreover they were held accountable for local policy making by their constituents. Consequently flood protection of local people rose on their agenda.

After decades of lack of political support, in 2002 the central government began to shift toward a supportive posture and started to advocate more expansive use of the EFC as an alternative for Jakarta’s flood defense. This shift bears from the negotiation between the central and provincial government, which were initiated by the province and led to the establishment of the MoU on EFC implementation. Therefore the provincial authorities should be considered the third policy entrepreneur in this game; they opened the window for funding and implementation of the EFC by extorting a MoU with the national government. Like the local authorities the changing
attitude and position of the province can be ascribed to the wider political changes in Indonesia after the fall of Suharto and their new focus on serving their constituents rather than obeying the national policy.

The media may be considered to be the fourth policy entrepreneur, although one could argue that they were mostly assisting to create a political window. Even though the media did not directly promote the EFC, the “media effects” in broadcasting the reality of the impact of floods and management in Jakarta helped connect the flood event 2002 to the Eastern Flood Canal alternative.

4. Discussion and Conclusion

In our introduction we stated that many contradictive opinions exist regarding the delay of the implementation of Jakarta’s flood defense policies. Suggestions were made that insufficient funding, lack of investors, bad governance and the difficult land acquisition process were factors upholding implementation. By reconstructing the policy making process on the Eastern Flood Canal as an example of flood policy making, while applying Kingdon’s stream model, we have tried to answer the question: What are the decisive causes of the delays and opposition faced by the Jakarta’s city government regarding the Eastern Flood Canal implementation? In this section we will present our answer and assess its usefulness for future policy making, but first we will discuss some findings.

This case study shows that the delays in implementing the EFC cannot be contributed to a lack of policy making; after the development of the first flood control master plan in 1973 until 2003 when the implementation started, several studies were carried out to formulate long term solutions for Jakarta’s flood control. The causes of delay and opposition were mainly located in the institutional structure of Indonesia before the decentralization in the 1999 and the way in which the decision making process of the EFC was conducted. Clearly two distinct phases can be distinguished in the macro context of the EFC policy process and a transitional period in between. The first period is situated during Soeharto’s regime when several Master Plans for flood protection were constructed. During Soeharto’s regime government practice in Indonesia was highly centralized and autocratic and the public infrastructure development funds relied on external loans. The transition from centralization to decentralization of the administrative system started in 1999. The decentralization implied that the regional and local government gained the power to direct the policies related to flood control management and the regional governments became responsible for dealing with flood issues and took the initiative to implement measures.

We found three decisive causes for the delays in implementation of the EFC:

(i) Institutional misalignment between local and national level during the centralized period
(ii) Absence of critical actors in the policy process
(iii) Disconnection of the political and institutional developments and the problems and solutions streams.

The institutional misalignment was most prominent when discussing the role of provincial authorities in policy making; their role was marginal as they were not consulted and had no
authority whatsoever. Implementation of the EFC was not considered urgent because most of the decisions reflected central government interest and not local or regional public interests.

The non-involvement and absence of critical actors, like local authorities, ground owners and city dwellers led to disinformation for instance about actual land use patterns and resistance of land-owners, which caused delays after the decision to start construction had been taken. As can be read from the previous sections our analysis shows that even actors who were holding important resources were not involved throughout the policy design process.

Implementation was possible only after changes in the political climate and the institutional arrangements towards decentralization of government, which allowed local and regional authorities to take responsibility for flood protection measures and to act as policy entrepreneurs to connect politics with problems and policies.

The 1993 flood events were the catalyst creating the urgency to open a policy window and the entrepreneurs were supported by the new freedom of press which allowed for criticism and public discussion of the problems, possible remedies and their consequences.

Conclusions concerning Kingdon’s Stream Model of Eastern Flood Canal Policy Process
Kingdon’s stream model has been used to show how finally the Eastern Flood Canal got attention from national policy makers and was considered as an alternative by the Indonesian government. While we agreed that the 2002 flood aftermath was one factor accounting for the implementation of the EFC, the stream model adds to our understanding of the mechanisms that led to the acceptance of the new policy and the implementation decision. We can see three streams identified by Kingdon related to the EFC implementation. The decision to finally implement the EFC emerged through the coupling of the problem stream of flood events and severe floods (problem stream) and the development or construction of Master Plans that provided several alternatives to cope with the flood problem in Jakarta (solution stream) and the decentralization of government tasks, the freedom of press, the opening up of society through the direct election after the fall of Soeharto’s regime (political stream). The Provincial government, municipalities and the media can be characterized as successful policy entrepreneurs who grabbed the opportunities and coupled those three streams so as to push the central government to see the urgency of the EFC implementation and provide guarantees for funding the project.

From this case study and the application of Kingdon’s stream model we can conclude that Kingdon’s model is a powerful tool to describe actual decision making processes. In our case we were able to highlight the important role of policy entrepreneurs, but the case also revealed that policy entrepreneurs can only be successful if the institutional and political order allows them to operate. The Dutch advisors who operated in the preceding centralized governance period clearly did not have sufficient leeway to move their problem window to a policy window. The case also shows that a policy entrepreneur should seize the opportunity; in the EFC case an extreme event in the problem stream was the catalyst for taking action and for pushing the decision forward.
Abbreviations

EFC Eastern Flood Canal

Acknowledgements

The present research product is supported by the “Governance for Sustainable Infrastructures” research program funded by the Dutch Ministry of Environment and Infrastructures (RWS - ARVODI 2008, R#21019661).

Appendix

Table A.1 List of legal documents reviewed during desk research.
- NEDECO, 1973, ‘Master Plan for Drainage and Flood Control’
- JICA, 1991 ‘The Study on Urban Drainage and Wastewater Disposal Project in the City of Jakarta – Master Plan Study’.
- JICA, 1997a, ‘Detailed Design for Urban Drainage Project in the City of Jakarta’.
- WIEMP 2002, Drainage Management for Jakarta, Strategic Action Program Development (DKI 3-9)
- JFM 2007, ‘Dutch assistance with non-structural measures Jakarta Flood Management’
- Memorandum of Understanding (Nota Kesepakatan) 2002, Menteri Pemukiman dan Prasana Wilayah dengan Gubernur DKI Jakarta

Table A.2 List of Interviewees
- Representatives of Public Work Department, Directorate of General Water Resources Management
- BBWSCC (Balai Besar Wilayah Sungai Ciliwung Cisadane)
- Public Work Agency (Provincial Level)
- Representative from East Jakarta Municipality
- Representative from North Jakarta Municipality
- 5 citizens
- 2 NGO
- Representative Land Committee
- Representative from Public Relation committee of Eastern Flood Canal Public
- Representative from Land Affairs (East Jakarta Municipality)
- Representative from land Affairs (North Jakarta Municipality)
- 2 representative from Village officials

References

Water policy entrepreneurs: a research companion to water transitions around the globe. Edward Elgar Publishing, Cheltenham, UK


Soenarno and Sasongko, D. (1998) Participatory planning and management for flood mitigation and preparedness in the city of Jakarta, Djoko, (ENRDD/WMRS/W/164(Phase II)).

