

# **Policy network and institutional capacity: An analysis of peri-urban environmental and infrastructure planning conflicts in Indonesia**

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## **Abstract**

Challenges of open cities in the forms of social exclusion, spatial segregation and institutional fragmentation are prominent in peri-urban areas. As dynamic and transitional zones between urban and rural areas, the areas often serve as the locus of struggle between market-driven urban development on the one hand and environmental protection and regional sustainability on the other. This paper analyses the potentials of policy network building as an innovative strategy in dealing with these two conflicting policy issues in the context of newly open and decentralised Indonesia's institutional framework. The analysis is illustrated by the evolution of environmental policy network in North Bandung Area (NBA) in promoting the ecological function of the peri-urban area as the main watercatchment for Bandung Metropolitan Area (BMA) in the face of increasing peri-urbanisation pressure from the main city of Bandung. The debate on a regional road development proposal passing through the peri-urban area is deconstructed to understand how the policy network was strengthened and contribute to the improvement of governance consciousness to be more responsive towards environmental quality and regional sustainability. This contribution was reflected in the aspects of mobilisation of discursive knowledge, empowerment of weak actors, and learning in decision making process.

## **Introduction**

Network approaches are not new in planning and policy studies. Earlier studies have focused on their functions as a framework for defining policy measures (Glasbergen 1990) and for understanding long-term policy change (Sabatier and Jenkins-Smith 1999), as an alternative organisational device (Alexander 2005), as a medium of power exercise (Bull and Jones 2006; Booher and Innes 2002; Moulaert and Cabaret 2006; McGuirk 2001), as an infrastructure for social movements (Batterbury 2003; Wekerle 2004) and as criteria for assessing democratic planning system (Torfing, Sorensen, and Fotel 2009). Nevertheless, little attention has been given to the institutional potentials of networks. As a relational resource in transformative planning process, networks have the potentials of contributing to the improvement of governance capacity of places. As Healey (1998) argues, such relational resources function as an important mobilising aspect for 'building an institutional capacity

focused on enhancing the ability of place-focused stakeholders to improve their power to “make a difference” to qualities of their place’.

It is argued that network forms of social relation are an appropriate basis for effective collective action in the context of increasingly decentralised and fragmented places and society (Castell 1996). This changing context of space and distance currently emerges in Indonesia and takes a considerable effect on spatial change in its peri-urban areas. First, with the outbreak of the Reform Era, since 1998 the country has radically transformed from centralised and hierarchical political systems of Soeharto’s New Order towards democratic and decentralised ones. As the result, urban and regional policies can no longer be formulated easily based on the rigid hierarchical order. The current open and democratic political system and social order provide more rooms for wider parties at local and regional scales to push government to consider various alternatives in their plans. This tension for more innovative planning process might be more apparent in peri-urban areas such as NBA due to its rapid spatial and socio-economic changes, inter local jurisdictional character and increasing and fragmented role of private and other non-governmental initiatives.

This paper aims to understand how a planning policy network is constructed and can contribute to the building of planning’s institutional capacity in the face of open and fragmented spatial, social and formal institutional relations. It uses an episode of planning debate in the peri-urban area of NBA as the study case, in which institutional capacity has referred to the issue of improving regional governance consciousness to effectively involve stakeholders and consistently implement agreed planning frameworks aiming at enhancing the quality of the peri-urban environment and promoting sustainable urban and regional development.

The paper first reviews the literature on network approaches, especially from new institutional perspectives. The next section provides an overview of geographical and policy contexts of NBA. It is then followed by an overview of the debate on Dago-Lembang road development planning project, as the illustration for the analysis. It further identifies the actors participating in the debate and reconstructs how those actors connected with each other forming a planning policy network. The analysis reveals that the network strategy was not used merely to prevent the project from realisation but, on top of that, to contribute in transforming the governance attitudes in order to be more responsive towards the sustainability issues in the peri-urban area. In conclusion, the paper stresses aspects of institutional capacity that were inherent in the network building: mobilisation, empowerment, and learning.

## **Towards an institutional approach to network**

A (social) network can be broadly defined as ‘a regular set of contacts or social connections among individuals or groups’ (Granovetter and Swedberg 2001). With this broad definition, networks, particularly in sociological economics, may refer to all kinds of social relation (Yeung 1994). However, this paper restricts networks only to that retain their unique characteristics compared to other distinctive forms of social relations, for example markets and hierarchies.

As Powell (1991) identifies, these unique characteristics can be summarised as follows. First, networks emphasise horizontal and decentralised – rather than hierarchical and centralised – social relations as they bring together actors of relatively equivalent role and status. These networks are typified by informal, implicit and reciprocal – instead of transactional (in markets) or employment (in hierarchies) – patterns of communication and exchanges. They promote interdependent – as opposed to independent (in markets) and dependent (in hierarchies) – relationships among actors. Another important feature is that networks imply moderately flexible relationships. These networks produce enduring but rather ‘loose coupling’ relationships. Such relationships preserve the autonomy of connected actors and prevent them from being ‘locked into’ specific rigid relationships (Grabher 1993).

Rational planning literature on social relations has rather emphasised hierarchical organisational arrangements as a means of reducing transactional costs resulting from the gap between planning formulation process and the complexity of its implementation (Alexander 2005). Fundamental shifts of attention in the literature towards network forms of social relations did not appear until the rise of the issue of social and political fragmentation, which increasingly characterises planning in the informational and globalised society (Healey 1997). From a systemic viewpoint, for example, networks are defined as open, dynamic and self-organising social systems taking the form of sets of interconnected actors with certain communicative codes, values or goals. This forms of network is later adopted in communicative planning as a medium of spreading 'informational power' in collaborative processes (Booher and Innes 2002). Yet, this informational perspective on networks still maintains the rationalistic view as it assumes the pre-existence of universal and perfect diversity, interdependence and mutual dialogue among participating actors. These assumptions are hardly evident in the social relations that have been unequally bounded by fragmented socio-cultural and institutional contexts. In short, this idealistic viewpoint has difficulties to read power and, furthermore, institutional/governance dimensions characterising planning practice. For this reason, some scholars have suggested of putting networks under more structural theories like, for example, the regulation and Bourdieu's theories (Moulaert and Cabaret 2006) and Latourian approach (McGuirk 2001). The problem with this approach is, since its analysis tends to be structural and historical, it results in descriptive, if not destructive, suggestions, providing very limited opportunities for agency to reconstruct the networks. As an alternative, this paper argues that new institutionalism in sociology can better address the governance inadequacies that often typify planning processes on the edge of cities in developing and transitional democratic countries.

New institutionalism is a social theory dealing with the cognitive and cultural analysis on the interactive relations between institutions and action (Powell and DiMaggio 1991). Here institutions are defined as more than just 'visible' structural properties constraining behaviour like, for examples, formal bodies, rules, procedures or norms like the state, constitutional writings and the policy systems. Away from this modern definition, the new institutionalism stresses 'the importance of particular common forms of understanding that are seldom explicitly articulated – classifications, routines, scripts, and other rationalising and rationalised schemas or, in other words, institutional myths' (Amin and Thrift 1994). According to Hall and Taylor (1996), such institutions may also include abstract templates like social symbols and cultural values and function not just to constraint but to enable, frame and legitimise action. Furthermore, these institutions are not predetermined but socially constructed in daily practices. In fact, there is mutually constitutive process between institutions (structure) and action (agency) in which the reproduction of institutions influences and is influenced by action (Giddens 1986).

From this sociological perspective, which is later adopted in regional economics, the institutional dimensions of networks can be explained through the concepts of social capital, embeddedness and/or institutional thickness. First, as a process of the building of social capital, network building may take a considerable social construction effort in the forms of enduring interdependent and reciprocal relationships (Putnam 1993). Networks do not guarantee actors with the attainment of tangible and short-term objectives but rather provide them with reputational, taken-for-granted and cultural frame of reference that constrains as well as enables their action. As an alternative explanation, if a firm (or an actor in broadest sense) is embedded within a network, its action and opportunities are shaped by this social relationship and, thus, its motivation moves away from the narrow pursuit of profit (or other short-term, tangible and material) gains towards the enrichment of this relationship through trust and reciprocity (Uzzi 1996). In another conceptual understanding, if a given region (or a society) has a 'thick' network form of social relation, there may be high levels of contacts, cooperation and interchanges embodied in shared rules, conventions, and knowledge which serve to constitute a supporting contextual environment for regional development (or social progress) (Amin and Thrift 1994). In short, these three overlapping concepts lead us towards

the perception that networks can be regarded as a form of institution and, accordingly, network building can be seen as an important aspect of institution building.

Networks have the ability not merely to channel shared (informational) power but, moreover to function as institutions. As Castell (2003) concludes, 'these networks do more than organising activity and sharing information. They are the actual producers, and distributors, of cultural codes', which may construct new institutions. In explaining this argument, transactional and historical institutionalism have focused on the reasons that the existence of such networks may increase the potential costs for opportunist action and manifest past success in collaborative action (Putnam 1993). Meanwhile, sociological institutionalism, as far as the current study concerns, moves away from this pre-existent feature and constraining functions of networks towards its reflexive construction and framing functions.

How do the constructed networks transform into those functioning as institutional reference gaining the capacity of framing action? First, Granovetter (1973) describes the unique capacity of these networks through the concept of 'weak ties', referring to ideal open, horizontal, informal network forms of social relation. Weak ties tend to link weak groups of actors rather than strong ones. Different and fragmented strong ties are not linked altogether but bridged through indirect contacts promoted by these weak ties. This contextual richness of weak ties builds a cohesive community thus allowing collaborative action more likely to happen (Granovetter 1973). Furthermore, the 'loosely coupled' relationships promoted by networks combine this contextual richness with a degree of flexibility. Both unique features may increase the ability of networks to learn and change (Amin and Thrift 1994). This learning capacity is required to produce innovative social action. These combined features also facilitate the construction as well as mobilisation of knowledge. It is argued that the knowledge passed through networks is relatively 'freer' than that flows in formal organisational hierarchies and 'thicker' than that is captured through independent external resources (Grabher 1993).

**Figure 1** A policy network approach to capacity building

Potential application of this new institutional approach to networks in environmental planning and management as capacity building process is presented as the conceptual framework of the current study (**Figure 1**). First, as a region's social capital, network forms of social relation might already exist among actors resulted from long period of interdependent and reciprocal interactions. When a planning debate is emerging, escalating and extending beyond formal decision making boundaries, these networks are (re)constructed, activated, coordinated and strengthened by participating actors. Furthermore, the networks channel and mobilise discursive knowledge, empower the role of marginalised actors, and encourage learning and innovation in the decision making. These three aspects result in an enhanced institutional capacity of governance that is more inclusive, adaptive and responsive to the unique challenges of peri-urban change.

## **Land development, planning and governance in NBA**

NBA is a peri-urban area in Bandung Metropolitan Area (BMA) – currently the third largest metropolitan region in Indonesia with more than seven millions inhabitants and around three percent annual population growth. NBA has referred to the main highlands located in the northern part of the region. Since the early 1980s, the highlands has been popular to the middle- and upper-income people due to their beautiful landscape, good local climate, fresh air and proximity to Bandung City as the core of BMA. These potentials have increasingly attracted the development of settlements and recreational functions.

NBA is most effectively governed by at least four autonomous local governments: West Bandung District, Bandung District, Bandung Municipality and Cimahi Municipality (**Figure 2**). Following decentralisation policies triggered by Law No. 22 of 1999 – later was replaced by Law No. 32 of 2004 – on Regional Administration, the local governments have the authority to manage urban and regional sectors, including spatial planning, within their own jurisdictions (Government of Indonesia, Law No. 22 on Regional Administration 1999; Law No. 32 on Regional Administration 2004). Meanwhile, with an inexistence of metropolitan institution, West Java Province by law has been the only tier expected to be able to coordinate inter-local planning issues like ground water, the environment and regional transportation in NBA as well as BMA as a whole. However, since Indonesia's decentralisation has emphasised the role of local governments, provincial governments have been criticised for lacking of power and resources and, thus, their role in managing these inter-local affairs has been very weak.

NBA has unique ecological functions due to its topographic and geological characteristics. Although NBA covers only 11% of the metropolitan area, it is claimed that, due to its soil and rock types and formation, it provides at least 60% of the region's ground water need (Bandung Municipality, Penataan Kawasan Punclut 2004). However, decrease of vegetation caused by peri-urbanisation has been argued to increase the magnitude and occurrence of floods during rainy season, especially around the city and other lower parts of the region. Moreover, it has contributed to the deepening of ground water level in the region.

Peri-urbanisation in NBA has been largely triggered by Soeharto's market-led development policies in the 1980s and early 1990s. The most fundamental one was the 1993's Deregulation Measures Package (*Pakto 1993*), which instructed that the issuance of development permits (*ijin lokasi*) would be no longer the only authority of the Province but the local governments and the National Land Administration Agency. The package in fact triggered the first Indonesian Property Boom period 1993-1997.

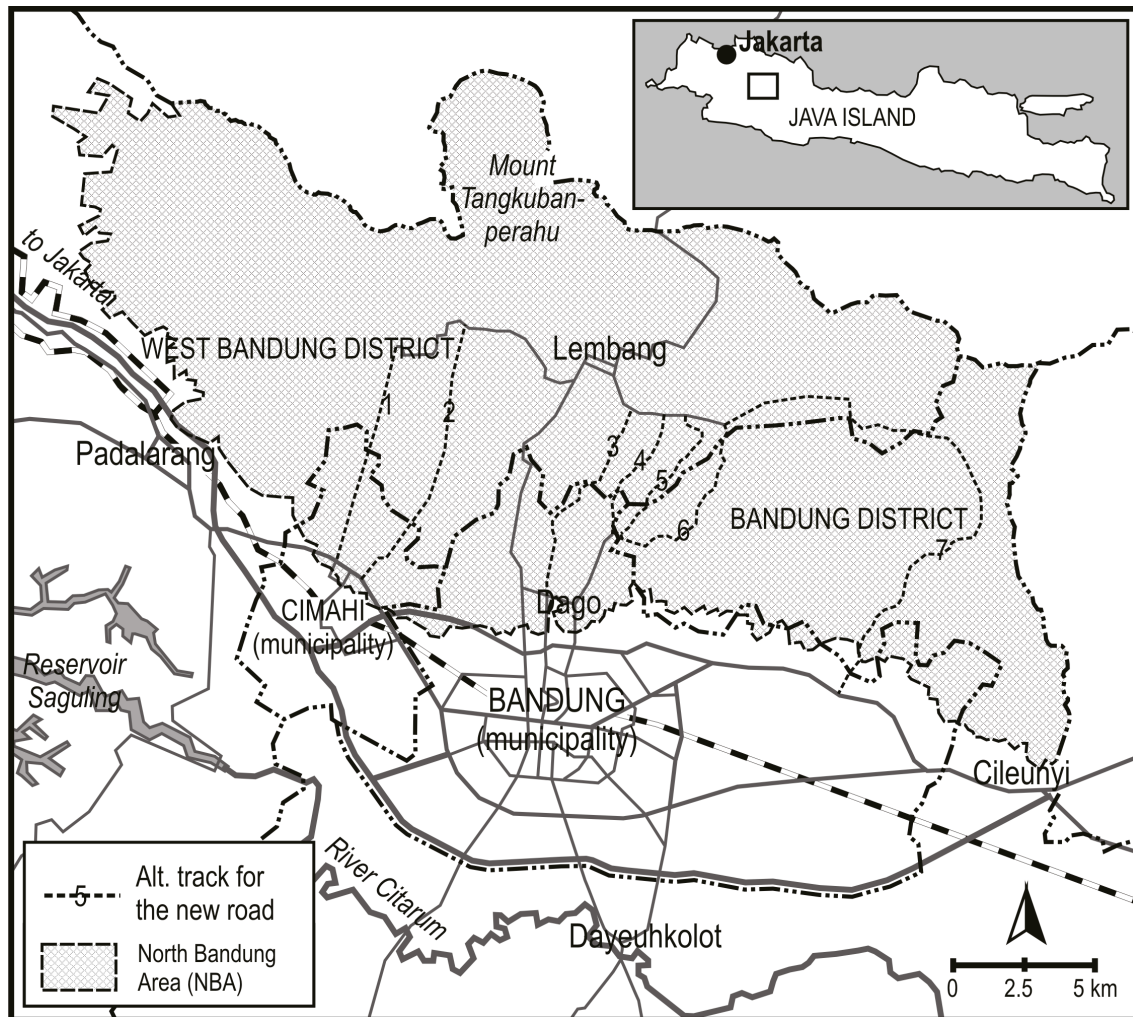


Figure 2 Case study area

Anticipating this peri-urbanisation pressure, various regulatory frameworks have been enacted. Series of governor decrees have repeatedly enforced NBA as the region's main water catchments and preservation areas. As the main regulatory foundation, in 1982, the governor decreed to preserve 25% of NBA as protected forests and only allow 15% of NBA to be converted into cultivation areas – most likely new settlements. The governor decrees were later reinforced by presidential decrees and number of provincial and national land use plans. Some of those plans were also renewed and adapted to the changing regional administrative structure impacted by decentralisation policies.

The enactment of such regulations and plans, however, could not significantly restrain the issuance of land development and building permits as well as physical development by private developers. As an illustration, during the boom period, in the district's part of NBA, the land reserved by private developers increased dramatically from 586 hectares in 1992 to 2832 hectares in 1996 (Fitriana 2007). For a while, the economic crisis in 1997–98 suddenly restrained the physical development as well as the issuances of new development permits. However, since the economy is recovering, the development continues to grow again. In fact, most of them are deemed to violate local and regional land use plans because they have transformed appointed protected forests into settlements and recreational functions (Harris 2008).

Although Indonesian planning system still follows rigid-regulatory approach, characterized by hierarchical land use and development plans from national to local levels (Hudalah and

Woltjer 2007), the planning practice, nevertheless, has moved towards informal, discretionary approaches with a strong influence of private sector. As an illustration, in NBA, it was the property developers who initiated urban transformation in the forms of exclusive residential and recreational estates, completed with road networks. Meanwhile, the provincial and municipal plans often forced to adapt to these fragmented private initiatives.

Such discretionary, market-driven practice can be more apparent in the issuance of development permits. Actually, permit system in Indonesia was designed as an essential systemic mechanism for controlling land use development. In practice, however, it has been widely misused to reserve land exclusively for approved developers (Firman 2000). In fact, due to complex transaction costs and inter-organizational procedure, the issuance of land development and building permits has become a prime field of attraction for collusion and corruption, especially in large-scale urban development on conflicting land (Server 1996). Such practice has encouraged uncontrolled speculation particularly in remotely-governed places like peri-urban areas.

There have been few but strong, concentrated and large private property developers operating in peri-urban areas around Indonesia's metropolitan regions. They have a powerful capacity to build enduring patron-client relationships with financial sectors as well as the government, including the political elite. This clientelist governance practice often undermines existing planning frameworks. Through informal lobbying, the developers with the helps of corrupted officials can simplify, manipulate the established formal procedures so they can reduce the transaction costs of realizing large-scale integrated urban land development projects (Winarso and Firman 2002; Server 1996).

### **Dago-Lembang road development proposal**

Planning's institutional capacity may be tested and evaluated when episodes of debate between urban growth coalition and environmental advocates emerge. An episode of debate consists of series of interconnected discussion, conflict and strategy and decision making that embody capacity building potentials and are situated in particular socio-political contexts. A rich history of such episodes can be found in the peri-urban area of NBA. The episode of debate on Dago-Lembang road development proposal, as an integrated part of the lengthy debate on preserving the ecological functions of NBA, was chosen as the case for this particular study considering a significant role of network building in reshaping the formal decision making process.

Lembang is a tourist town located at the heart of NBA, 15 kilometers to the north of Bandung City. Currently there is only one major road – Jalan Setiabudi – connecting this town and Bandung City. The provincial government has long argued that the capacity of the existing road could not meet anymore the transport demand along Bandung-Lembang corridor. Therefore, an alternative road was frequently suggested by the province in order to solve the traffic jam along the road. The road development idea was also aimed at reducing the fragmented, sporadic and uncontrolled road development by private developers. Furthermore, since Lembang functions as the main tourist destination in BMA, the road development was also expected to further stimulate economic growth and regional development.

The province's discourse to build the alternative road has emerged since 1976. However, it was never realized into a detail project proposal due to resistance from the environmental society, lack of budget and leadership transitions in the provincial executive and legislative bodies (Hardiansah 2005). The discourse was revisited in the early 2000s and first proposed formally to the provincial legislative assembly in 2002. Later the government also identified seven possible trajectories for the proposed alternative road (**Figure 2**). Those trajectories were built on the existing networks of local roads. The government wanted to transform one of those networks into a new major/regional road.

As a further attempt, a feasibility study (Kajian Rencana Pembangunan Jalan Alternatif Bandung-Lembang 2002) was prepared by the province's Regional Development Planning Board (*Bappeda*) in a direct consultation with LPPM, a business company owned by ITB – a leading research university in the region. The study was aimed at suggesting the most feasible alternative among the seven possible trajectories. Included in the study was environmental, accessibility, regional, social, and cost-benefit analyses. Based on this technical study, Trajectory 5 (Lembang-Tahura-Dago-Bandung) was selected as the best alternative. It was considered as the shortest route with the least socio-economic costs.

Land uses along the proposed trajectory were dominated by protected forests with stiff elevation, followed by agricultural areas and irregular settlements (*kampongs*). There were around 4,763 families lived along the corridor with 20.74% of them categorized as very poor families. Most of them worked in agricultural and service sectors. Around one-fourth of the working ages were unemployed or worked in irregular bases.

As the next step, the provincial executive resubmitted the road development proposal to the assembly, to be included in the province's annual budget of 2004. In parallel with this formal procedure, the executive also actively made public statements, conducted socialization, and held meetings with number of NGOs and experts. The latter could be seen as an attempt to gain public support and clarify the position of the project within broader society's aspiration.

Public reactions to the proposed plan were very strong. It started from outside of this parliamentary arena where number of environmental NGOs and academicians pushed the assembly to refuse the plan. They accused the road development plan of facilitating the private developers, whose uncontrolled action might harm the ecological functions of NBA. This project was also considered unnecessary, since the traffic jam along the existing road could be solved by improving traffic management in its critical points. Their particular opposition to the selected Track 5 was because it would pass through the Great Park of Juanda (*Tahura*), which functions as a region's important buffer zone and wildlife preservation. Together with the legislative members, planners and journalists, they built an informal policy network and actively constructed and mobilised this counter-discourse through legislative hearings, informal forums, news articles, public speeches, and demonstration.

## **The emergence of environmental policy network**

The current analysis attempts to understand the dynamics of governance process in the debate on Dago-Lembang road development proposal, focusing on the role of environmental policy network, and exploring their transformative potentials in improving planning's institutional capacity. For this reason, semi-structured interviews were conducted with key informants who involved in the debate on the project proposal, comprising government officials, politicians, planners/ academicians, and NGOs. Here the main researcher played not just a passive interviewer but also a close observer of the debate for around half year, through which he followed relevant discussions and meetings. The information resulting from the interviews was analysed using standard qualitative analytical techniques and compared with other supporting data like field observation, official documents, minutes of meetings and recognised newspaper articles. After situating the actors participating in the planning debate, the analysis further identifies the existence of network form of relationships among them. It also explains the aspects of institutional capacity of the identified network, represented in mobilisation of discursive knowledge, empowerment of weak ties, and learning in decision making process.

### ***Background of participating actors***

Before analysing the network building strategy, it is important to know the background of its participating actors. Whilst the actors who promoted the road development project centred on the provincial executive – with a potential support from private developers, those who

actively countered it tended to be more spread and dynamic. They were affiliated with members of the provincial legislative assembly, environmental NGOs, universities, and the media.

In general, legislative assemblies in Indonesia function to enact laws and budget plan, monitor the performance of executive bodies, and accommodate and channel society's aspiration. The authoritarian regime of the New Order era systematically undermined the representative functions of this legislative body. Meanwhile, democratisation euphoria of the Reform Era tended to exaggerate its authority. Since then, every major planning project proposed by national, provincial or local executives needs to be approved, either legally or politically, by their respective legislative assembly.

The effective provincial legislative assembly during the road development debate was resulted from the 1999's National Legislative Election. This first election in the Reform Era was considered as the first democratic election in the nation's history since 1955. The assembly mostly consisted of the parties those won the election. Each party or coalition of (smaller) parties formed a political faction in the assembly. There were 5 factions formed by the parties. In the beginning, the political factions tended to be divided into those supported the project proposal (3 factions) and those refused the proposal (2 factions).

In Indonesia, universities, especially big or public research universities, are more than just academic institutions. The universities have major responsibilities in three areas (*tridharma*), which are higher education, research and social service. The latter allows the universities to use their knowledge and wisdom, through their business sector and research institutes, to contribute in solving broader societal problems. There were two major (public) universities in the region which institutes and business sectors involved in the debate on the road development proposal: ITB and Unpad. They tended to be divided in their position. First, LPPM, the business sector of ITB, served as a private planning consultant for the provincial executive body thus backing up the project. Meanwhile, the Research Institute for the Environment (Lemlit) Unpad and the Urban Planning and Design Laboratory (Rangkot) ITB voluntarily countered the project.

In addition to these modern organisations, following democratisation policies of the Reform Era, NGOs and the media grew dramatically both in number and size and played an increasing influence in the society. Some environmental NGOs were built on weak idealism thus pragmatic in their action. In Indonesian, such NGOs are called as *plat merah*, implying a relative reliance on government's financial aids and political back-up in their operation thus tended to support every government project. Nevertheless, their number in the region was relatively small because most of the leading environmental NGOs were purely originated from the society. According to the assembly's research team, among 15 NGOs formally invited in the hearings, only one of them agreed with the project. The rests led the resistance. They might have better idealism because they built on relatively independent socio-political positions and strong grass-root supports.

Finally, the press, considered as the fourth pillar of democracy, was also equally important in shaping public opinion due to its far reaching audiences and their perceived reputation of neutrality. It was rather difficult, at least based on their news contents, to categorise which newspaper agencies in the region supported the project and which countered it. This vagueness was partly because maintaining the principle of 'both sides should cover the story' was important for any media in order to survive. Fortunately, each media had a level of subjectivity and was easier to be influenced by others. This potential was used by the resistant NGOs to reshape the public opinion.

The above paragraphs show that each of these organisations had their own unique and complementary functional strengths in attempt of countering the proposal. They also make clear that these organisations tended to be divided in their positions thus not all of their elements proactively countered the project.

### ***The network building strategy***

In responding to the project proposal, the actors identified in the previous section did not act independently but tended to link with each other through a multi-scale network. The relationships emerging within the network can be divided into intra-, inter-, and extra-organisational relationships. Intra-organisational relationship, for example, characterised the connection between members of the legislative assembly. Meanwhile, inter-organisational relationships predominantly constructed the network of environmental NGOs. At the highest scales, the four different types of actor were bounded by extra-organisational relationships. In the latter, the NGOs tended to play strategically as the *bridge* between the legislative assembly, the research institutes and the press.

Against this network form of relationships, there were formal/ hierarchical relationships between the provincial executive and the legislative assembly. Meanwhile, market/professional relationship was likely to occur between the executive and the university's planning consultant (LPPM ITB). Result of interviews also often pointed towards a potential clientelist relationship between the executive and the private sector, especially private developers. Nevertheless, since the paper focuses on the role of network building, these last three types of relationships are rather treated as a context for this study and, thus, not identified further in the analysis. The interactions between these four different types of extra-organisational relationships are presented in **Figure 3**.

The building of this network was often triggered by conflicts of policy values in the planning debate and evolved as the debate escalated. The network first initiated in the form of discursive-coalition. The relational pattern was not developed based on formal-hierarchical and contractual cooperation between the organisations where the actors affiliated to but was rather "person-to-person"; between individuals who concerned, had the same vision and whose action moved towards the same objective of preserving the ecological function of NBA. In the legislative assembly, it was not the political factions but their members who actively started relationships with the environmental activists and observers (and not with their affiliated NGOs). The activists also built network with the academicians and planners (and not necessarily with their universities) and the journalists and editors (and not formally with their agencies).

**Figure 3** Dominant extra-organisational relationships in the debate on Dago-Lembang road development planning proposal

As an extension to the formed coalition, the network also attempted to reach a broader range of participants by encouraging more loose coupling relationships. For instant, some NGOs within the coalition continued to keep a good contact with other NGOs who had the same understanding but hesitated to proactively join in. This 'weak' relationship is indeed considered as a major strength of network (Grabher 1993; Granovetter 1973). The coalition

realised that by promoting such informal relationship, more people from different backgrounds could be connected and thus stronger arguments and discourse could be constructed. Some leading environmental NGOs in fact could invite senior research fellows and professors from the recognised universities in the region. As the result, they had more comprehensive database and arguments. While the executive-sponsored feasibility study tended to focus on civil engineering aspects, the environmental policy network included also wider socio-economic and environmental consequences in their analysis.

The relationships between the actors countering the project were developed not based on pragmatic political lobbying but rather on the base of mutual understanding and sense of reciprocity. There was an exchange of information, ideas and other intangible resources in the network (**Table 1**). This exchange was the result of the complementary strengths between actors. For example, the members of the assembly continuously provided the activists with data and information about the project. In return, the activists, due to their ‘thick’ network, provided them with access to the planners and journalists, and built social pressure. As another example, the activists informed the journalists about attractive events to cover the newspaper pages. On the other way, the journalists reserved some article space for the activists to disseminate their discourse in order to reshape public opinion. In a similar fashion, the planners and academician supplied the activists with research outputs and equivalently the activists offered them access to the events where they could strategically disseminate their research findings. In such reciprocal type of exchange, it was not immediate organisational gains that needed to be measured, but rather the attainment of shared objective of the discourse, which was to prevent the road development project into realisation.

**Table 1** Exchange of resources among the actors participating in the debate on Dago-Lembang road development proposal

<b>To:</b>	<b>Environmental activists</b>	<b>Politicians/ decision makers</b>	<b>Academicians/ planners</b>	<b>Journalists</b>
<b>From:</b>				
<b>Environmental activists</b>		External pressure	Discussion forums	News events
<b>Politicians/ decision makers</b>	Data, information		Legislative hearings	News events/ topics
<b>Academicians/ planners</b>	Research outputs	Consultation		News topics
<b>Journalists</b>	News/article pages	News pages	Article pages	

In the beginning, the road development proposal was agreed by majority of the legislative assembly’s members to be included in the provincial budget plan 2004. Their consideration was initially only relied on the information given by the executive. As such, they lacked of information and misunderstood about the broader consequences of the project proposal until the pressure from the network came in. With an increasing flow of information and arguments from the network, later the politicians gradually rethought their original positions. As a result, the research team was formed; whose leading members were parts of the network.

In response to the increasing society’s resistance, the legislative assembly formed a research team consisting of their leading members. The task of this team was to study the issues, collect society’s aspiration and, finally, formulate recommendation for the assembly. The result of this study was considered very urgent because this elected body was approaching the end of its five-year administration in 2004.

The exchange of ideas and information within the network fuelled the operation of the assembly's research team. The results further facilitated the politicians to learn and change their decisions. It was realised that the road development would not solve the traffic jam. Construction of a new piece of road was also considered inessential given the fact that the old road still functioned. Moreover, the research team found that the project would worsen the violation on the provincial land use plan, which stated that 45% of the peri-urban area should be maintained as conservation areas. If new regional road constructed, the households and private developers would become more courageous to construct new buildings on the roadside.

## **Discussion and conclusion**

Peri-urban environmental planning and management in NBA has focused on dealing with uncontrolled urban growth and unforeseen future of the quality of the environment and regional sustainability. These two conflicting issues require the building of institutional capacity to transform governance styles to be more integrated, flexible, inclusive and transparent. The case presented in this paper provides an example how network building might contribute to the building of such capacity.

The analysis of this paper first identifies the construction of policy network in countering the Dago-Lembang road development planning proposal in NBA. The building of this resistance was part of broader attempts to promote the quality of the environment and sustainable growth in the peri-urban area. The policy network was constructed from social relationships emerged within and, more importantly, between dedicated politicians, environmental activists, academicians, planners, and journalists. They interacted with each other on the base of shared discursive policy objective of preventing haphazard impacts of the project's realisation. The network type of relationships can be argued based on the aspects of its construction, including complementary strength, informal, horizontal and loose coupling communication, and reciprocal forms of exchange.

Three major aspects of institutional capacity result from the strategy of network building in the case study. First, the network was used as an effective 'infrastructure' through which the discourse of preserving the ecological functions of NBA was reproduced. The richness of ideas and information flowing through the network strengthened the reconstruction of this discursive knowledge. The far-reaching arenas produced by the network also facilitated the mobilisation of this discourse. As the result, the discourse did not only frame the resistance' action but reshaped the opinions of other actors and wider society and increased their awareness on the broader consequences of the road development.

In addition, it was also through the network form of relationship that the vulnerable ties of non-governmental actors and environmental advocates were gaining their influence in the formal decision making process, which initially tended to be steered by the pro-growth coalition. The strength of this loose and dynamic relationship lied on its ability to reach wider range of actors and audiences.

Another important aspect was the network inherently embodied innovative potentials because it promoted learning, adaptation and change in the decision making process. The provincial bureaucrats and politicians would be difficult to change their position of supporting the road development project if they were not pushed by the alternative discourse and supplied with new ideas and information growing with the network.

Taken together, all these three aspects of capacity building contributed to the improvement of governance attitudes thus becoming more sensitive and responsive towards the issues of sustainability and the quality of the environment on the edge. Such capacity might affect not merely the achievement of short-term and narrow political objective of preventing the project's realisation but the future of the peri-urban areas and the region as a whole in a longer period and more comprehensive sense.

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