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URBAN SPATIAL PLANNING AND PUBLIC CAPITAL INVESTMENTS

THE EXPERIENCE OF INDONESIA'S INTEGRATED URBAN INFRASTRUCTURE INVESTMENT PROGRAMME

Michael Mattingly & Haryo Winarso

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Michael Mattingly
Development Planning Unit
9 Endsleigh Gardens
London WC1H 0ED
Tel: +44 (0)20 7388 7581
E-mail: m.mattingly@ucl.ac.uk

Haryo Winarso
Department of City and Regional Planning
Institute of Technology Bandung
Jalan Ganesha 10
Bandung, Indonesia
Tel: +42 22 250 4735
Hwinarso@pl.itb.ac.id

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1. INTRODUCTION

Investment in infrastructure is needlessly wasted because urban managers do not adequately plan the place, sequence and time of construction. A small expenditure on good planning can bring benefits that are so much greater as to make the failure to plan a ridiculous oversight. Improvements to development management have rarely attempted to dramatically change the dominant urban planning practice, even though it has most often proved unable to guide public investment to greater efficiency and effectiveness. The need for change is an expressed concern of the Urban Management Programme of UNCHS/WB/UNDP (UMP, 1991; Dowall and Clarke, 1991) and is reflected in numerous points of the Habitat Agenda adopted in Istanbul in 1996 (UNCHS, 1997).

It has long been argued that planning will make public investments more effective and efficient by reducing duplication, overlap, conflicting public works, and ill-timed provisions (Curtis, 1969 and UNCHS, 1996). In the case of urban areas, it is thought that spatial planning will, among other things (Keeble, 1964; Chapin, 1979):

- coordinate the location in time and place of both the supply and demand for service infrastructure and facilities;
- establish uses for land which will increase the efficiency and effectiveness of services, including transport, compared to piecemeal land development.

These effects are important to increasing the access of low income households to improved urban services and to improving the availability of cost effective transport for urban poor, including public transport and non-motorised modes (e.g. by concentrating origins and destinations). They can also reduce the cost of constructing, rehabilitating, operating and maintaining road, sewerage, water piping, and telephone and electricity infrastructure (e.g. by reducing road lengths compared to unplanned urban expansion).

This capability of urban planning has been put into practice only in isolated cases (for example, see Coughlin and Pitts, 1960, on the integration of capital programming and city planning in Philadelphia, USA). The practice of urban multi-sector investment planning (Peterson et al, 1990), such as that attempted in the Capital Investment Folio Process for Metro Manila (UNCHS,1996), has not been effectively integrated with spatial planning.

A chief reason for this is that conventional urban spatial planning methods have proved to be too slow to inform decisions in today's world, especially in urban areas where rates of economic, political, and population change are great (Dowall and Clarke, 1991 and Farvacque and McAuslan, 1992). Many of these methods are derivative of ones formulated for use in the conditions of slow and steady growth thought to exist at the time in the U K or other Western countries. Such circumstances encouraged faith in elaborate and detailed procedures and techniques. (Koenigsberger, 1964) The planning guidance which results is usually out of date before it can be utilised. (Koenigsberger, 1964; Planning Advisory Group, 1965; UNCHS, 1993).

Probably the most comprehensive - and imitated - revision of a tradition of urban planning technique was undertaken in the UK (Planning Advisory Group, 1965). Partly, this model aimed to simplify procedures and to speed the processes of town plan preparation and approval. It was put into practice (Department of the Environment, 1972), but it has failed to provide principles for use in fast changing urban areas, because it did not significantly hasten procedures (The Nuffield Foundation, 1986). Moreover, it did not give satisfactory guidance to investment programming (McKee, 1981).

Koenigsberger (1964) produced a model named "action planning", later modified by Safier (1974) and Baross (1990) among others, which sought to make the planning process more rapid by simplifying it and by focusing it upon limited priorities. Eventually, specific techniques were proposed to exploit spatial planning's power to guide investment while avoiding some of the clumsiness of traditional master planning. These have emphasised simplicity and priority in order to speed procedures and be more responsive to emerging decisions (UNCHS, 1994). In Indonesia (Zaris et al, 1988; van der Hoff and Steinberg, 1993; Suselo et al, 1995), such techniques have been put into practice. Only in very few countries have attempts been made to do this.

2. WHY EXAMINE THE IUIDP?

The Integrated Urban Infrastructure Development Programme (IUIDP) of Indonesia had been in operation for more than a decade as a nation-wide programme providing a wealth of experience with the actual programming of investments. The programme was designed, first, to decentralise urban infrastructure investment programming from central government's Ministry of Works to the level of provincial and district governments. Among the advantages to be obtained was greater attention to local needs. Secondly, it

sought to improve efficiency and to avoid duplication in the construction of urban infrastructure by integrating projects from various sectors. Thirdly, it hoped to promote local resource mobilisation and cost recovery and to improve local government budgeting procedures. (Zaris et al, 1988). One step in achieving these aims has been to integrate the country's traditional town planning together with a new action planning approach that would improve the programming of capital investment projects, the mobilisation of funds for them, and implementation. (Dice, 1995: 199)

The IUIDP has drawn a great deal of attention, often being seen as a model of its kind. (Singh et al, 1998; UNCHS, 1997) It is no wonder, therefore, that foreign consultants involved with it have fostered the modification and application of its principles in at least two other countries: Nepal and India. In Nepal as a consequence, there is now a substantial history of attempts to guide urban infrastructure investment with spatial planning. To better understand such experiences as followed elsewhere, it is useful to first examine closely what has happened in Indonesia with the activities after which they were modelled.

3. HOW WAS IT EXAMINED?

As part of a larger research project funded by the Department for International Development of the British Government to identify and critically evaluate the use of spatial planning to guide urban infrastructure investment planning[1], investigations were carried out in early 1999[2] regarding 7 Indonesian cities, one of these with the assistance of staff of the Department of Urban and Regional Planning of the Bandung Institute of Technology. (It was intended to include an eighth city, Bandung, but efforts to obtain information on the practice of spatial planning in the IUIDP there were not successful.) In addition, information was obtained on the IUIDP process carried out for 67 towns in East Java and Bali.

Interviews with senior government officials and consultants were conducted in Jakarta. Documents provided by them included reports of discussions and workshops to improve the relationship of spatial and investment planning in the practice of the IUIDP and a manual setting down methods for doing so. On the basis of the documentation and these accounts of the evolution of the IUIDP since its inception in 1985, the set of urban areas was selected for study and a method was devised for gathering information.

With letters of introduction to local governments obtained from the Ministry of Public Works and Ministry of Home Affairs, each of the cities was visited, interviews were conducted with local officers and/or their consultants, and documentation on spatial and investment planning was examined. The emphasis of the investigation was on practice: what was in fact possible when attempts were made to carry out the concepts of this programme.

4. THE INTENDED PREPARATION AND USE OF SPATIAL PLANNING

4.1 Spatial Planning

Experience gained from urban sector projects during 1969-1974 had showed that there was little co-ordination of urban road and drainage construction, for example, because they were the responsibility of different institutions. Such circumstances were improved by the introduction of Kampung Improvement Programme in the mid 1970s, aimed at integrating construction of various infrastructure elements at a neighbourhood level, namely walk ways, drainage, public water taps, communal latrines, and washing facilities for low-income neighbourhood. It became clear that without a strategic spatial development framework, projects would be chosen that were individually justifiable but which would not work together efficiently and effectively. It was realised then that to integrate infrastructure construction at the level of the whole town or city, local governments had to formulate the most likely development scenarios, probably in the form of master plans. Initially the idea of the IUIDP was to translate the master plan into an medium-term programme of infrastructure projects and projected expenditures. With this, the construction, operation and maintenance of individual elements of service infrastructure could be coordinated. It was also expected that a more strategic form of planning would emerge that could be used to attract private sector involvement (van der Hoff, 1998, Suselo, Wegelin and Taylor, 1995).

When the IUIDP started in 1985 the then-called Rencana Tata Kota or Urban Plan, was legally based on the Dutch colonial laws of 1944 and 1945. It was not until 1992 that Indonesia promulgated its first spatial planning act. The 1992 Act stipulates that there should be spatial plans at every tier of Government (see Figure 1).

[1] A project of the KARS programme of the Infrastructure and Urban Development Department, Department for International Development.

[2] The investigations were conducted by Haryo Winarso and Michael Mattingly, with technical assistance from Tom Carter, Llewelyn-Davis Hong Kong.

Figure 1: Indonesian Planning System

Executive Head	Level	Tiers	Strategy	Development Plan	Sectoral Planning	Spatial Plan	Planning Co-ordination	Budgeting
President	**Central**	First Tier	National Development Guideline *(GBHN)*	National Five-year Development Plan *(Repelita)*	Sectoral	*RTRWN*	National Consultation (*Konas*)	National Budget *(RAPBN)*
Gubernur (Governor)	**Level I**	Second Tier (27 Provinces)	Regional Development Guideline *(Poldas Dati I)*	Provincial Five-year Development Plan (*Repelita Dati I)*	Sectoral I	*RTRWP*	Development Co-ordination I (*Rakorbang I)*	Provincial Budget *(RAPBD I)*
Walikota/ Bupati (City Mayor)	**Level II**	Third Tier (55 Municipalities / *Kotamadya*) 246 Counties/ *Kabupaten*	Local Development Guideline *(Poldas Dati II)*	Local Five-year Development Plan *(Repelita Dati II)*	Sectoral II	*RTRWK*	Development Co-ordination II *(Rakorbang II)*	Local Budget *(RAPBD II)*

Source: Winarso, 2000

Note: ***RTRWN : Rencana Tata Ruang Wilayah Nasional; RTRWP = Rencana Tata Ruang Wilayah Propinsi; RTRWK = Rencana Tata Ruang Wilayah Kabupaten/Kotamadya RAPBN = Rencana Angaran Pendapatan dan Belanja Negara; RAPBD = Rencana Anggaran dan Belanja Daerah***

Regarding the local government (Kotamadya/Kabupaten), in particular the 1992 Act (article 22, No. 3) stipulates that level be used as a guideline for:

1. bringing about integration, interrelation, and balance in development among areas in a Kabupaten/Kotamadya and compatibility among investment sectors
2. defining the locations for investments by Government and/or by communities and the private sector in the Kabupaten/Kotamadya
3. preparing detailed spatial planning in the Kabupaten/Kotamadya.

However, to serve such purposes as these, an urban plan has to reflect current, actual uses of land (including population and building densities) and current service infrastructure networks and facilities. It must also express up-to-date strategic policies for the treatment of existing built-up areas, for directions of new growth, and for land uses in the new areas.

Plan preparation procedure was not mentioned in the 1992 Act, and, in practice, spatial plans were not used as stipulated. Instead, actual preparation and use were based on the Ministry of Home Affairs regulation No. 2 of 1987 and Ministry of Public Works Regulation No. 540/KPTS/1986, which were intended for the preparation of the old versions of plans. A master plan of this sort presented a static picture of the future, it was silent on programming, and it was very quickly out of date. It could hardly be used as the base for infrastructure investment. Moreover, most urban areas did not yet have even a master plan. As a result, the need was recognised early on for a new approach to physical planning if it was to support the IUIDP (Zaris et al, 1988).

4.2 The IUIDP Process

The main activity of IUIDP was the creation of a multi-sector, multi-year infrastructure investment programme. Spatial planning was to be used to identify urban growth trends - including directions and phasing - and the location and scale of existing infrastructure deficiencies and medium-term requirements. Individual projects were then to be formulated to fill needs, with their approximate costs and suggested means of financing. Next, a programme of projects was to be drawn up, backed by technical and financial feasibility studies, as a draft multi-sector, multi-year investment plan called the PJM. The first year of this PJM was to be incorporated into the routine annual budget of the local government.

The overall process can be briefly described as the following, taking from van der Hoff and Steinberg, 1993, and Suselo, Taylor, and Wegelin, 1995.

- If a spatial plan exists for the urban area, review and strengthen its validity regarding the present conditions, and the validity of any Urban Development Strategy which it contains for the next 20 years.
- If there is no spatial plan, or if the contents of the existing one cannot be made valid for the present circumstances, construct an Urban Development Strategy (UDSt) for the next 20 years based on the physical and socio-economic conditions of the city, taking into the consideration the national and regional policies as described in the REPELITA, REPELITADA, and sectoral policy documents.
- From the Urban Development Strategy (UDSt), construct an Urban Development Scenario (UDSc) for the next five years.
- Identify the needs for infrastructure (by constructing an Infrastructure Needs Assessment or INA) for the next five years, using the UDSc as a guide.
- Assess the capacity of the local resources including the local revenue, subsidies, grants and loans, and the capacity of the private sector to finance the infrastructure development.
- Assess the local institutional capacity, in particular, to plan, to fund, to operate and to maintain infrastructure development. Consider also the capacities of the private sector and the community to participate.
- Formulate projects to meet the needs identified and assemble them into a long list of possibilities that matches with the available funds at national, regional as well as local level, but without thoroughly considering local management capacities.
- Prepare a Local Revenue Improvement Action Plan (RIAP) containing strategies for improving the to increase the local revenue and to optimise the use of local revenue.
- Prepare a Local Institution Development Action Plan (LIDAP) to enhance the capacities of local institutions.
- Prepare the technical design and assess the financial feasibility of the prioritised projects.
- Shorten the list of possible projects into a draft multi-year investment plan (PJM) by prioritising and programming projects in accord with the RIAP and the LIDAP and considering their financial and technical feasibility. This draft PJM consists of programmes, an investment plan, and the implementation schedule.
- Review and revise the draft PJM in the annual series of meetings at all levels to plan development (Rakorbang meetings), sending the PJM upward through the structure to obtain approval from central government.

- Integrate the first year of the approved PJM with the routine local government investment budget.
- Repeat this process each year, reviewing the factors and revising the PJM

4.3 The Infrastructure Needs Assessment (INA)

In the first local IUIDPs there were 8 components: clean water, drainage, sewerage, solid waste, urban roads, slum upgrading and market infrastructure, housing, and land use. The steps of an Infrastructure Needs Assessment (INA) for any of these can be summarised as the following:

1. Obtain data on the existing condition of service infrastructure networks and facilities.
2. Plot the locations of the infrastructure on maps.
3. Identify the problems of the existing infrastructure (deficiencies, defective elements, etc.) and locate them on the maps
4. Use the Urban Development Scenario maps to locate and estimate the scale of the needs for new and improved infrastructure, taking into account the physical/topographical aspects of the city, commitments to new infrastructure projects and the progress of infrastructure projects underway.
5. Using the standards provided by Government, calculate the technical aspects for infrastructure (for example, in the case of water distribution, length of pipe, diameter, construction materials, geometry, etc.) for each IUIDP component.
6. Plot the layout of the projected infrastructure networks for the next 5 years onto the maps.
7. Calculate the difference between the projected and the available (existing) infrastructure in order to obtain the Infrastructure Need Assessment (INA).
8. Presents the result of these estimates in a table.

4.4 The Revenue Improvement Action Plan (RIAP)

Assessments are made of the capacity of the local government to finance investments, and a plan, called a Revenue Improvement Action Plan (or RIAP) is formulated to bring this up to the level required of the investment programme. (Steinberg, 1991) This is composed of reviews of the local government's financial situation, of local government enterprises, of revenue and land/building tax collection, and of the financial potentials of the private and community sectors, which are put together with estimates of resource needs and proposals for innovative ways of obtaining revenues as well as for increasing the effectiveness of the conventional ways.

4.5 The Local Institutional Development Action Plan (LIDAP)

Also, a plan is created for the institutional development which implementation of the investment programme, and later the operation and maintenance, would necessitate. Called the Local Institutional Development Action Plan (or LIDAP), it is created by first reviewing the management system, the government institutions involved, the potentials for community participation and the requirements of the plans for increasing resources contained in the Revenue Improvement Action Plan. Then strategies are formulated for upgrading the management capabilities of local institutions. Training has had a major place in the LIDAP.

4.6 The Multi-Year Investment Plan (PJM)

A PJM is built up component by component until the results for all 8 investment sectors are assembled. The following procedures for the drainage component taken from the manual (Tim Koordinasi Pembangunan Perkotaan, 1989) illustrate this element of the process. The aim is to produce the program components for drainage development for the next 5 years. These include the types of development (i.e. new development, extension or rehabilitation), development status (e.g. in progress, an extension of an existing project, or a new project) and the quantity of the work.

First, the identified need for drainage is broken down into programme components (i.e.: primary network; secondary network and tertiary network, rehabilitation of the existing network and the maintenance). The location of each programme component is decided, as is the work volume involved. Then the types of programme/project for each component is decided (e.g. new construction, operation and maintenance, rehabilitation, or to optimise the present use/service). Next, the status of each component is identified (e.g. in progress, an extension of an existing project, or a new project). All of the program components for drainage development, including location, types, status, and work volume, are shown in a table.

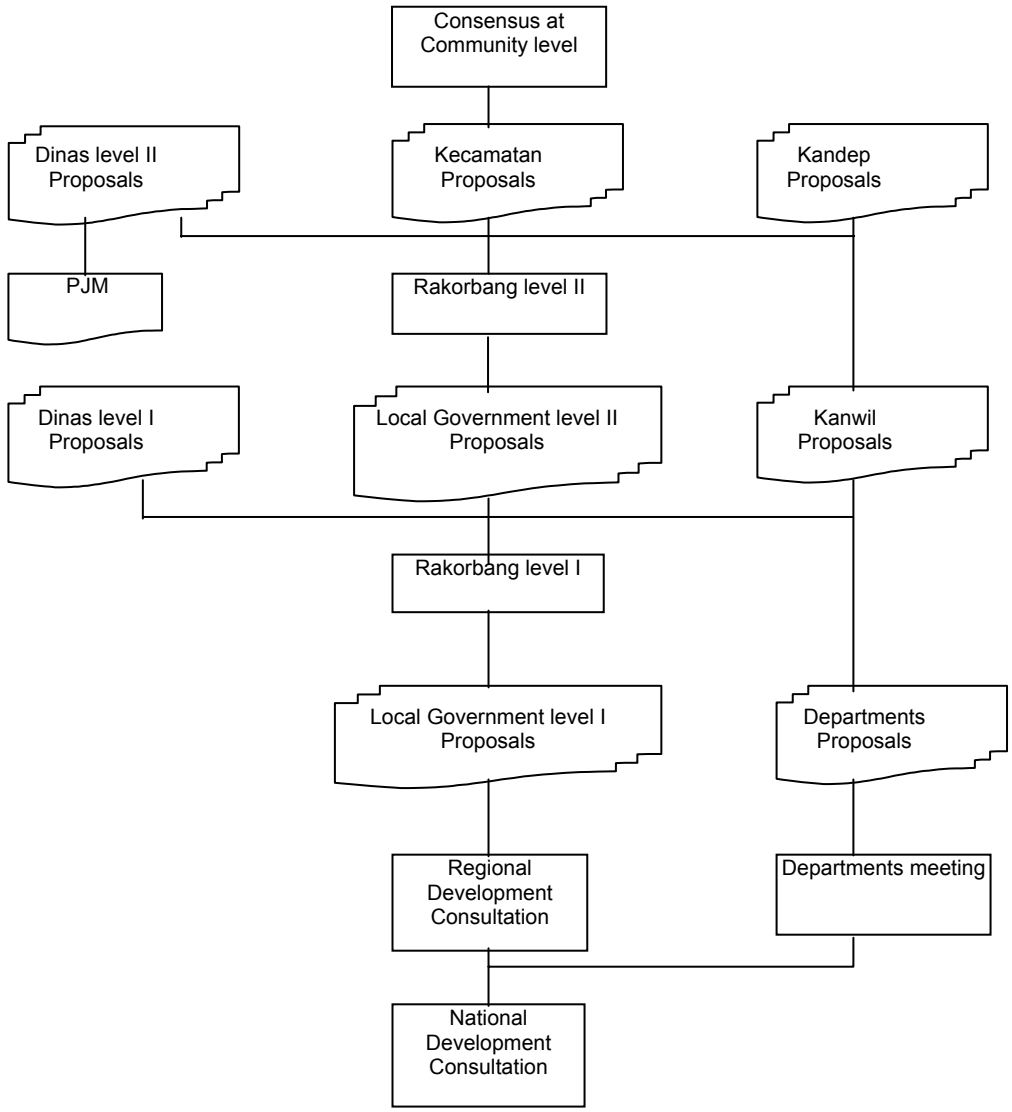
After this is done for all eight programme components, all the projects and programmes are put together in a long list and given priorities, creating a draft PJM. Making reference to the Revenue Improvement Action Plan which indicates the funds likely to be available and to

the Local Institutional Development Action Plan, project feasibility studies are carried out to cut the list to a reasonable size. These may include a financial investment appraisal, application of a check list of criteria, application of a goal-achievement matrix, assessment of resource costs, an analysis of social costs and benefits, and use of the planning balance sheet or an optimisation technique.

A ministerial decree stipulates that this process should be done in conjunction with a bottom up planning approach. This process, know as Rakorbang, is based on a series of annual meetings for planning and development which start at the community level and are subsequently held at progressively higher levels of government (i.e. *Kalurahan, Kecamatan, Kabupaten,* provincial and finally central government levels). (See Appendix 1).

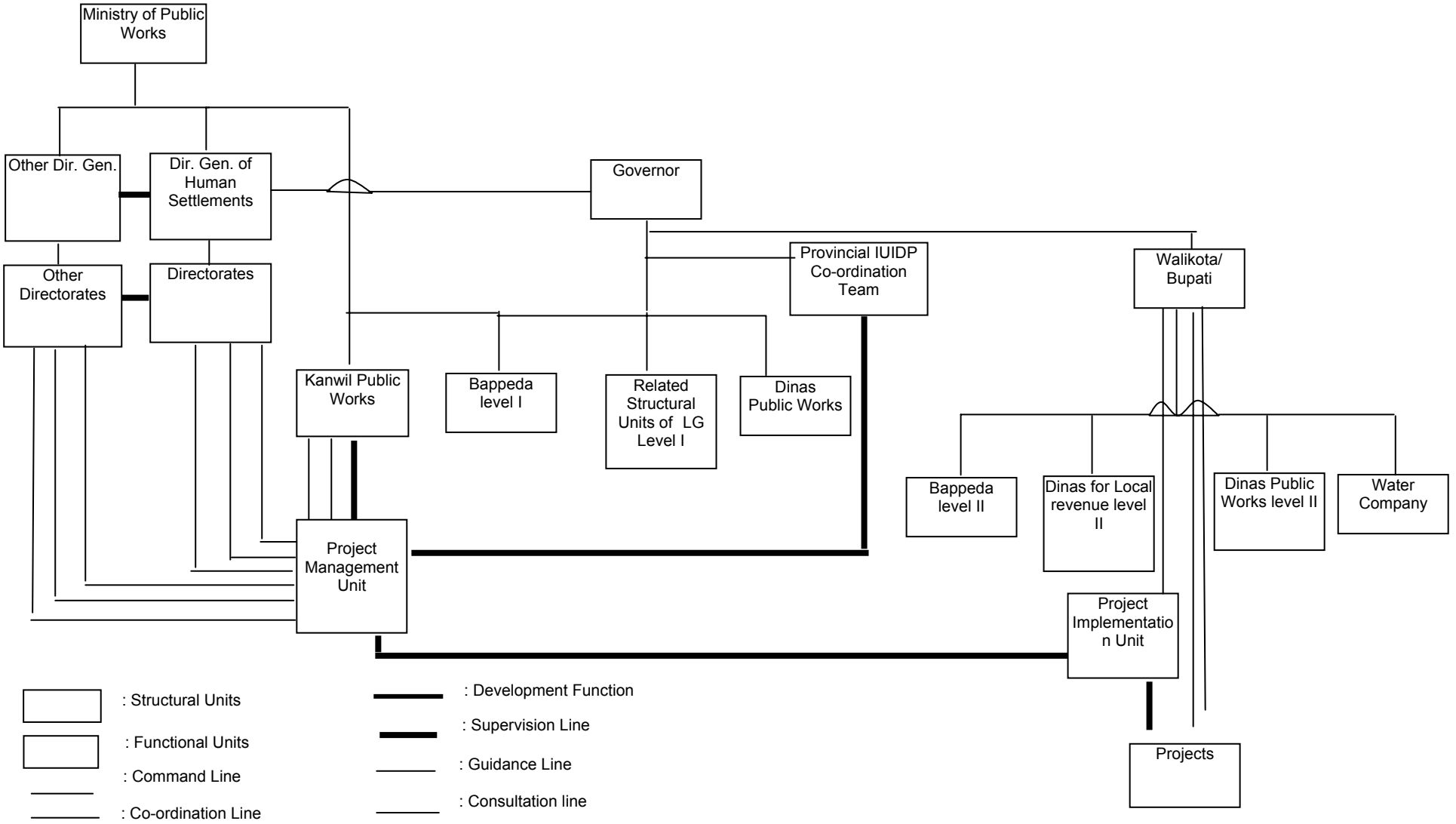
Once the PJM is prepared, it is forwarded from local government (the *Kotamadya* or *Kabupaten. See* Appendix 1) to the provincial government, where it is discussed and its components are put into the separate programmes proposed by the national sectoral agencies. These separate sectoral programmes are suppose to have been integrated in a Rakorbang meeting during the process of formulating the PJM. The financial programme proposals are forwarded to Cipta Karya (the Directorate of Human Settlements) in the Ministry of Public Works, who pass them on to BAPPENAS (the national planning organisation), to the Ministry of Home Affairs and to the Ministry of Finance to be included in the central government budgets and programmes of foreign assistance. See Figure 2.

Figure 2: Rakorbang System and the PJM



Source:
Fritschi, Kristayani and Steinberg, 1992

Figure 3
IUIDP Organigram



Source: Sugijoki, BTS And Sutmuller, P., 1993

Funds for the PJM are suppose to be raised from different sources including from local revenues. However, the PJM is forwarded to the Ministry of Public Works as if it were a project of that Ministry (see Figure 3). Despite this, it is expected that the PJM will then be included in the annual local government budgeting process, as stipulated by the ministerial degree no 9/82 (see Figure 2).

4.7 When There Was No Plan

The first experiences with the IUIDP showed that the vast majority of Indonesian urban areas were without any plan at all (Zaris et al, 1988).

A good example of what was done in such cases is provided by the earliest phase of the East Java and Bali Urban Development project, which was one of the first generation of IUIDP projects funded by The World Bank. It was started in 1986, assisted by a consultant with offices in Jakarta. At that time, most of the small towns and cities had no spatial plans, so these were prepared by the IUIDP. Apparently, spatial plans for 67 cities were created in four months. Because there were only four expatriates and a few Indonesian experts on the consultants' team, a rapid appraisal of conditions was undertaken and a spatial plan was quickly formulated in each urban area.

The basic method used was to, first

- make a rapid visual assessment of the city, using any available map,
- conduct interviews with government officials with a prepared check list and questions to better understand the local needs for land development and infrastructure,
- hold discussions with the Bappeda II Mayor, the Head of the Ministry of Public Works office at Level II and the Town Planning Officer to know the vision and the development strategy of the local government., and
- conduct a second visual assessment with a reasonably good map in hand.

While this assessment was underway, various technical actions were carried out. A base map was prepared using maps available from the National Land Agency or another agency. Population figures were calculated and their growths were projected and cross-checked with aerial photographs, if the available data were not reliable. Land prices were checked through interviews with known developers in the area, and land transactions were studied to identify the development trends. (Years later, when consultants realised the weaknesses of previous methods, they added interviews with private sector land agents to learn their views of development trends.) All of this analysis was then placed on the base map.

Using the results of the assessments and the technical analyses, an Urban Development Strategy (UDSt) was formulated (apparently, much in the way that was later written into the Government's manual) and expressed on a map of 1:10,000 or 1:25,000. The map showed the development trends, land uses, population distribution and other physical condition which indicated the constraints and potential for further development.

Beside the limited time allocated for the preparation of the spatial plan, problems encountered in the earliest phase of IUIDP in East Java were basically the lack of reliable data and the limited co-operation of the local government. Basic maps to be used in the first field observations often were not available and had to be put together from fragmented information. Other basic data, particularly population data and land use data were not reliable and sometimes were conflicting. In some cases the consultant cross-checked by counting houses in the city (from aerial photography if available) and by calculating the population from this.

To this experience, the Government of Indonesia responded by creating a new form of urban planning. Its product, called an IUIDP Development Assessment Plan (IDAP), was meant to be the result of a relatively quick and simple process which could be carried out by the skills likely to be available at the local level and in time to be of use in an IUIDP preparation, which itself would take only a few months.

The idea was to do no more than the minimum necessary to programme infrastructure investment over the short term (e.g.5 years). Information would be collected only to the extent that planning of this sort required. Rough data collection methods would be used such as "windscreen" surveys and the interpretation of available aerial photographs. Local people would help in identifying conditions, problems and opportunities. The output would be presented in a mode which would encourage continuous review and revision because it would avoid expensively printed reports and a final-state plan statement. The whole should be within the capabilities of locally based technical staff who have limited experience with planning or even no formal planning training. An IDAP was not to take the place of a formal plan or to have formal government approval, except by the local government so that it would be acknowledged as a base for investment planning by that government. (Ibid.)

Before long, the Government formulated an explicit set of activities for the preparation of an IDAP, which were circulated in a manual: Tim Koordinasi Pembangunan Perkotaan, 1989. These were the result of serious consideration of the aims of practical planning and of the needs of the time. Government and its consultants put them through trial runs. (Zaris et al, 1988).

The process was elaborated into the following procedure for preparing an Urban Development Scenario (UDSc) when there is no spatial plan for a city, which is outlined in Figure 4:

Basically data gathering steps:

1. Acquire data from urban related agencies
2. Acquire base maps from the Agraria Office (now BPN, the national land agency), or another source
3. Acquire secondary data on population from *Kalurahan, Kacamatan* (the two lowest levels of local government), and from the national Statistical Agency for the last 5 years
4. Acquire Gross Domestic Product of the city for the past 5 years
5. Prepare a topographic base map at a scale of 1:10,000 or 1:50,000
6. Draft a hydrological map showing the directions of the surface water flow and the areas of potential flooding
7. Acquire land use data from *Kalurahan* or *Kecamatan*, including changes in land use over the last 5 years
8. Acquire data on building use and the number of buildings or houses in each *Kalurahan* from the *Kalurahan* or the *Kecamatan*
9. Acquire data on the area of each *Kalurahan* and *Kecamatan*

Basically analytical steps:

1. Plot on the base map the areas with potential for new construction (those areas where there is already basic infrastructure) and with constraints (those areas where land is of good quality for agriculture or subject to flooding).
2. Calculate the building density by dividing the number of buildings by the built-up area
3. Plot the existing development
4. Plot the population distribution and population density on the base map, using *kalurahan* or built-up areas within them as the units of analysis
5. Calculate the per capita income using the GDP and estimate affordability
6. Calculate the population density in each *Kalurahan* or built-up area
7. Calculate the annual population growth for the whole of the town or city
8. Project the population growth for the next 20 years
9. Conduct a visual observation in several areas of the city to see the actual development and compare it to the data obtained
10. Map the trends in land development
11. Execute an overlay analysis to identify possible areas for additional housing and for other new construction in keeping with current policies and conditions

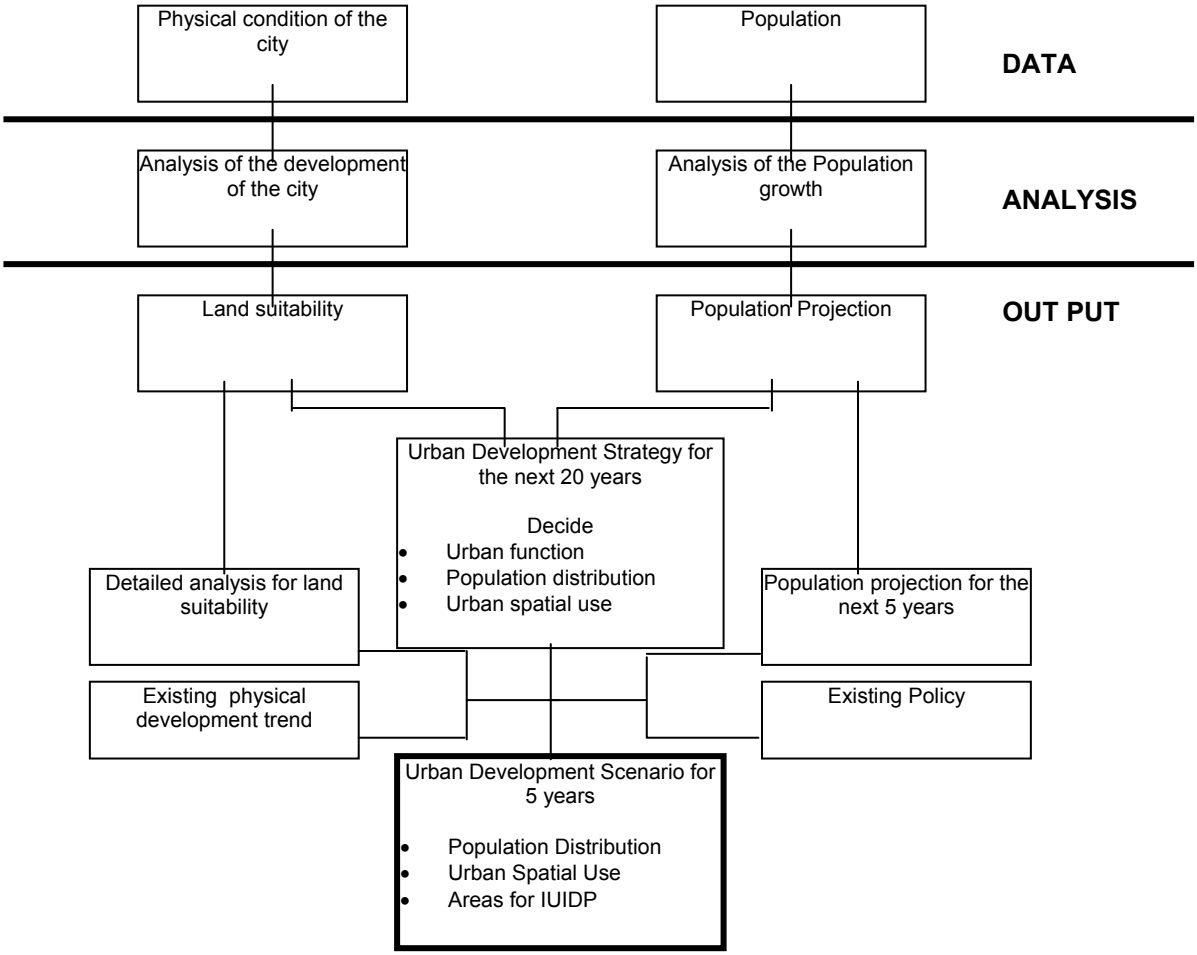
Ouputs:

1. Current land use and areas suitable for new land development.
2. Locations and directions of the current land development trends
3. A projection of the population growth
4. Identification of areas for additional housing
5. Allocation of the population increases to areas identified for new construction, considering the existing development policies of the city

Policy formulation steps using the Ouputs:

1. Develop an Urban Development Strategy, that is a set of policies for the utilisation of urban space in long term (the next 20 years). The UDSt. includes an identification of the functions of the city, directions and densities of housing development for the additional population and directions of the spatial utilisation of additional space by the city. Important factors to be considered include population projections, the existing development, and the current development policies of the city
2. Formulate an Urban Development Scenario (UDSc). This are the initial steps to be taken to reach the long-term urban development strategy (20 years). They include predictions of the amount and residential location of the population growth in the next 5 years, broken down into the growth in each year, the prediction of the amount and directions of the physical development in the next 5 years, and the direction of the spatial utilisation of the city for the next 5 years.

Figure 4: Creation of an Urban Development Scenario For a City Having No Master Plan



Source: Tim Pembangunan Perkotaan, 1989

Apparently, the situation calling for rapidly prepared urban plans soon changed; within a year, the Ministry of Local Government obtained sufficient funds for the formulation of plans in the traditional manner for nearly all major urban centres during the last years of the 1980s. As a consequence, the IDAP procedure described by Zaris et al (1988) was hardly ever carried out, so that it was impossible to obtain detailed accounts of the preparation of such an IDAP, or even to obtain assurances that the prescribed procedures were ever fully put into practice. Nevertheless, parts or the whole of the process were apparently used when existing master plans were not adequate for the purposes of the IUIDP, as noted below. Perhaps for this reason, the term IDAP seems to have been used in some cases in later years to describe the process of preparing an Urban Development Scenario suitable for use in the IUIDP, whether or not a city had a pre-existing spatial plan.

4.8 When There Was an Existing Spatial Plan

Although the opportunity for the Ministry of Home Affairs to launch traditional master planning in most of Indonesia's cities removed the need for the IDAP process as it was originally conceived, something similar was required to revise an existing urban plan when beginning an IUIDP. This master plan generally reflected conditions and policy details which were out of date and it often lacked a strategic view of future spatial relationships. This gave rise to a set of procedures for reviewing an existing plan which could be executed quickly and with relative simplicity in order to keep pace with the IUIDP process.

The review of an existing plan was to focus on three aspects only: population, land use and building density. Recent data for the three aspects was to be obtained from secondary sources (there are three government offices

which may have it), and this was to be compared to the projections used in the existing plans. Has too much land development occurred which is not in accord with the plan, in terms of use and density? (Simple field observations would often be adequate to answer this.) Are population distributions too different from those on which the plan was based? The comparison would then be used to check the validity of the urban development strategy (UDSt) and the urban development scenario (UDSc) contained in the existing plan, if there these were in fact present. If the urban development scenario was still valid, it was to be used to prepare the PJM. If the urban development scenario was not valid, a new one was to be created, using the steps described above for preparation of an UDSc when there is no existing plan.

5. THE PRACTICE OF SPATIAL PLAN PREPARATION AND USE

The interviews of this research provided consistent evidence that the procedures of the manual for preparation of Urban Development Scenarios were widely practised. However, the accounts of practice revealed that spatial planning was not used as intended, in the steps that followed preparation,.

The first important difference occurred when infrastructure needs were assessed. In a typical case, based on the Urban Development Scenario and standards from the Ministry of Public Works, targets for infrastructure development were identified to be met at the end of 5 years. Then, using the available data, the capacity of the existing infrastructure relating to the eight components of the IUIDP was assessed. Finally, an Infrastructures Need Assessment (INA) was conducted. Although an estimate of future infrastructure needs was made, the INA focused on the backlog. One consultant explained that concentration on the backlog was necessary to satisfy the people of the towns.

Failure to use the spatial plan as intended commonly occurred throughout the remainder of the process for preparing the multi-sector, mutli-year investment plan, the PJM and its implementation. A programme of projects was supposed to be constructed which filled the gap between the targets and the existing provisions, taking into account the possibilities for financing and the capacity of the local institutions, expressed in the RIAP and LIDAP. (The previously noted focus on the backlog meant not only that the programme was designed to meet the unsatisfied needs of the existing population, but also that the need was calculated according to the current standards.) These efforts produced a long list of projects. This long list, a rough PJM, was later cut down in the Rakorbang to become the shortlist.

Up to this point, the involvement of the local governments was limited only to the approval and prioritising of the long list programme. In other words, a consultant usually prepared the draft programmes and presented them to the local governments' technical teams to be discussed in detail. During this process the spatial plan was still effectively used, in the sense that the locations and sizes of the projects were still based on the spatial plan. Yet local officials did not fully understand the IUIDP process because they had not received adequate information from the central government. Most of them thought of the IUIDP as a Central Government programme and not their own. One effect was to make local officials passive. They relied on a consultant to prepare the plan and felt little ownership of it. Consequently, they did not know the spatial plan well, they did not understand its utility for investment programming, and they did not care greatly that it was followed.

One result was that the IUIDP processes were not thoroughly integrated into bottom-up Rakorbang planning processes, as stipulated in a ministerial decree (MOHA Decree No 9 of 1982), so the spatial plan had little influence beyond the eight components of the IUIDP. This meant that other kinds of infrastructure decided for the local government's annual budget tended to be located and programmed without reference to the IUIDP and its spatial plan. For instance, the site for a school building would be chosen where there was cheap land or Government land. Electrical and telephone networks would be placed guided by plans with which the responsible agencies had equipped themselves.

The spatial plan was supposed to be used as a basis for proposing and selecting and projects in the development co-ordination meetings of the Rakorbang, during the conversion of a long list into a short list of projects. However, it was common to consider only the cost of a project and to ignore the location and timing implied by the spatial plan. There seemed to be little confidence in the Revenue Improvement Action Plan, or little determination to implement it, so projects were favoured which were most certain to obtain financial contributions from provincial and central government. Sometimes the local government would ask how much funds were available and then choose projects to fit the amount, rather than be guided by the economic, social and/or physical significance of the project in a planned strategy for development and seek adequate financing for it. Frequently there was little effort from the local government to find or to improve the revenue capacity to finance a facility because it was a priority need according to the plan. At the same time, large projects from central government were

often not integrated into the local programme because they could be difficult financial burdens for the local government. Then, as consideration of the short list passed upward from one level to the next, altogether new projects not in the spatial plan were sometimes proposed by higher government levels on an ad hoc basis, displacing locally designed ones.

There were other causes for the logic of spatial plans to be disregarded. Spatial plans might demonstrate that projects were not needed in all eight of the IUIDP components, but the local governments felt pressure to create projects for each of the components in order to satisfy central government that they were implementing the IUIDP.

Prioritising was biased by the interests of national or local elite, whose influence was enough to dictate the location and the amount of money to be spent for some projects. Powerful individuals who intervened to satisfy their own interests did not appear to use the spatial plan to support their case. One would not expect that they could easily do this if the plan is constructed to serve the public interest rather than that of individuals. Similarly, a local area, such as the neighbourhood of the social elite, could mobilise sufficient political will to insert projects which served it wants in particular or to change the programme to bring forward projects its desired. No reference is made to a spatial plan when this was successfully done.

The financial plan was used as a proposal to negotiate funds from foreign lenders, such as the Asian Development Bank or IBRD. Satisfying the lending institutions led to changes in the timing of projects and their scale and even the rejection of a project altogether from the programme. During the delays which occurred while project assessment and the negotiation of funding, local circumstances altered requiring different proposals. When the negotiations cut down the scale of a project, it did not always fit with the location initially selected. These decisions did not seem to take any guidance from a spatial plan because they were so distant from the local level that the spatial plan was easily forgotten or ignored.

Once the multi-year investment strategy was agreed by central government, there were events which followed during which projects were changed. There was no evidence that a local spatial plan was ever referred to during these changes.

The first year of the PJM was meant to be the annual budget of the IUIDP for that year, and this was supposed to be integrated with the annual investment budget (if any) routinely prepared by the local government. In the cases of the cities studied, there was very little such integration. On the one hand, as noted above, a local government was not inclined to see the IUIDP and its spatial plan as its own. On the other, the funding process created differences between the IUIDP budget and the local government budget. To finance IUIDP projects, funds were pooled from each of the central government agencies involved. The financial plan of the PJM had to assume each agency would provide its share. When funds expected from a central government agency were held back because of shifting priorities in the agency, the timing and size of projects had to be changed or projects had to be dropped altogether from the programme.

During implementation, problems sometimes caused the site of construction to be changed. Failure to get adequate information on site conditions at the start might have been the cause. Then, scheduling in the PJM was not always reflected in the central government budgeting of IUIDP funds. Often there were considerable time gaps between project proposal and construction, during which conditions at the location chosen changed to an extent that required the selection of a new site or major alterations to the project scale and costs. An example of this was construction of road drainage that had to be change when new private sector housing development in the area caused a reclassification of the road. Moreover, the difficulties of land acquisition were not anticipated. These could radically alter the location, timing and economic feasibility of an element of infrastructure. In a place like Padang, traditional ownership rights are still very important, so land acquisition becomes very complicated and unpredictable. It did not help matters that land acquisition was the responsibility of the national land agency, BPN, which did not seem to co-ordinate well with governments at the local level.

One reason these changes in location were apparently not made with reference to the spatial plan may be that, in most cases, local governments did not have enough staff skills to deal with the complications which arose regarding land acquisition and its timing. Therefore, local staff of the Ministry of Public Works or the ad hoc agency at the local level set up for the purpose of managing IUIDP.(see Figure 3) took on this function, neither of which may have been much involved in the preparation of the spatial plan.

The aspects of practice regarding the spatial plan generalised above are drawn from IUIDP experiences in those cities whose histories were explored in this research. In Table 1. these features are summarised.

Table 1: Features of IUIDP Practice in the Cities Studied

City	Spatial Plan Preparation	Investment Programming	Size
East Java and Bali	Because spatial plans were lacking in the most of the towns, a quick process was used to prepare an Urban Development Strategy for each. (See the text for details.) Consultants performed the work.	Spatial plans were used to prepare long lists of projects, considering infrastructure development targets for 5 years, assessments of current infrastructure capacities, Infrastructure Need Assessments which focused on the backlogs, and the gaps between current backlogs and existing capacities which could be financed and managed according to the RIAPs and the LIDAPs. During the shortening of project lists in Rakorbangs, spatial plans were no longer consulted.	67 cities and towns were involved of various sizes.
Malang	1. prepared a base map 2. after field observations, population was projected 3. an urban development scenario was constructed by the consultant, using imagination and discussion with the technical team and the Bappeda 4. this was plotted on the map as the UDSc	Made an INA based on the UDSc, using standards and focusing on the services backlog. Results were plotted on the map to locate possible programmes of projects. A long list of projects was created, and the transformation to a short list was done by the local government with little if any reference to the spatial plan. The main consideration was on the cost.	250,000 population, 1995 Land development pressure was not high
Klaten	A consultant performed the work. The existing 1986-2006 RIPK (structure plan) was reviewed in 1996 to produce the UDSt from which a Urban Development Scenario (UDSc) was prepared.	This UDSc was used to prepare the PJM, following the steps in the manual. Based on the UDSc, an Infrastructure Needs Assessment and Real Demand Survey were carried out and a long list of projects was prepared. In a meeting of technical agencies, Bappeda officials, and the consultant, a short list was created. The spatial plan was used up to and during the preparation of the short list. If there was a physical problem of implementation, a project might be moved to another site without reference to the spatial plan, such as in the case of a ring road where there were land acquisition difficulties.	200,000 population, 1995 Land development pressure was not high

Yogyakarta	A master plan existed, so a quick review was done to check it by the consultant. The water company executed its own plan, using present needs and demands.	An assessment of needs and demand led to the preparation of a long list at local government level, during which the spatial plan was consulted. During the Rakorbang, this was cut down to a short list by the provincial and central governments to ensure that provincial and national policies would be implemented and new proposals were added by them. Financial feasibility was often the critical criteria. Project location and sizes were often changed, but the spatial plan was not consulted during these changes. The plan did not distinguish between built-up and planned areas, which led to errors in the estimates of costs to lay infrastructure.	100,000 population, 1995 increasing at 7.8% pa in 1990 Land development pressure was quite high.
Padang	A UDSc was created from the existing master plan, but it was not known if this was done according to the manual of 1999. This was mostly done by the consultant.	The overall process was somewhat according to the manual but the detailed processes such as programming and cutting down the list were not. There were accusations from local officials that the locations of projects were not based on the spatial plan in the Rakorbang meetings, but instead on the directions of the local elite. Another accusation was that the PJM was created from the lists of the sectoral agencies, and when it returned from being sent to central government for approval, most of the original projects were missing. The The spatial plan was seen as the basis for preparing the Urban Development Scenario, but then the PJM was prepared without looking at the UDSc in the Rakorbang, the yearly process by which projects are proposed at a community level meetings and passed up through meetings of various levels of central government administration. Land acquisition difficulties impeded implementation, causing some project locations to be changed.	250,000 population, 1995 land development pressure was not high
Bukit Tinggi	A UDSc was prepared in a short time by the consultant, but it was reported the existing spatial plan was not used to do this.	The consultant prepared the programme in consultation with the sectoral agencies at the local level. It is not known if the UDSc was used in this process. Later when a solid waste disposal site proposal had to be changed because of land acquisition problems, the spatial plan was not consulted.	88,000 population, 1995 growing slowly in 1994: 1.3 % p. a. (BPS, 1994).

Denpasar	The Bali Urban Infrastructure Project had produced a spatial plan at considerable effort. Its strategy plan was updated. As the second IUIDP was relatively recent, the Bakosurtanal and/or BPN mapping agencies had already produced base maps showing topography and land use. One at 1:15,000 was selected to show the strategy and scenario, and another at 1:5,000 to show the detail. Using the maps, field observations were made of the conditions of service infrastructure facilities and problems were plotted onto the maps. To understand the aspiration and the vision of the local government; the function of the city; what they want to achieve in the future, discussions were conducted with the Bappeda and the technical agencies of central government. Simple calculations were made of population projections. A strategy for future land use and infrastructure additions were plotted on the map. Apparently the result was used to prepare an Urban Development Scenario.	The long list of projects was prepared by the consultant based on the infrastructure needs assessment and on the spatial policies. A summary was presented to the central government sectoral agencies during the Rakorbang at a coordinating meeting. Land acquisition difficulties threatened implementation. For example, funds were ready to be dispersed before land was obtained for a road development. The National Land Agency had not coordinated properly with the IUIDP, so a Land Acquisition and Resettlement Action Plan was introduced.	500,000 population, 1995 pressure for land development is high
Cirebon	An existing spatial plan was revised using the procedures of the manual. This was done by the consultant without much involvement by the local government. A second revision was undertaken after the PJM was prepared, in order that the Urban Development Strategy agreed with the PJM..	The PJM was prepared according to standard procedures involving the consultant, the sectoral agencies at local level, who discussed this with local government at meetings coordinated by the Bappeda. An infrastructure needs assessment was performed. The sectoral agencies conducted field observations to identify the trends in growth relevant to their particular concerns. Prioritisation of programmes and projects was done in a meeting involving the sectoral agencies and Bappeda. The result was a long list, which was then presented in the Rakorbang meeting. The short list of projects and their locations were not based on the spatial plan. Land acquisition problems caused conflicts with the timing of financing.	250,000 population, 1995 development pressure is high.

Source: interviews and programme documents.

6. CONCLUSIONS

Practice IUIDP included the preparation of a spatial plan for guiding urban infrastructure programming. Because existing plans lacked certain features or because they did not exist, procedures were developed for reviewing and revising existing plans with a minimum of time and effort. From the short time at the start of the IUIDP when there were many urban areas were without spatial plans, procedures were developed for easily creating those elements of them which could be used in basic project programming, elements which could guide choices of the kind, location, size, and timing of service networks and facilities. As far as it was possible to obtain information on the application of these procedures, they were put into practice more or less as described in the existing literature.

There is a different story to tell of the use of these spatial plans. From the evidence, it seems that, in practice, a spatial plan was consulted during the identification of possible projects and construction of a long list. Then, once the prioritisation projects began in order to create a short list and then a multi-sectoral, multi-year investment programme (the PJM), the spatial plan was rarely consulted again.

There were several reasons why this happened. When considering the local financial capabilities (in the Revenue Improvement Action Plan) and the local institutional capacities (in the Local Institutional Development Action Plan) and during interaction with higher levels of government, prioritising was based on a project's economic appraisal and financial feasibility rather than factors captured in the spatial plan such as its social, economic and environmental benefit and impact and its relationship to other projects.

It was reported that sometimes the interests of central or local elite dictated the nature, timing and location of some projects without regard to any spatial plan. More often it was various government levels that dictated such changes. Throughout the selection of a short list of priorities and their programming into a draft PJM, certain projects originating from the central government line agencies tended to displace local priorities. Provincial and central government were involved to ensure that the policies of these levels are considered, but they each had their own views and often their own plans. Reducing the long list of initial possibilities to a short list of priorities and then shaping this to the approval of provincial and central level gatekeepers of funds and their international sources of loans was a process requiring alterations and submissions of new proposals. It meant that the list of projects in the approved final PJM often differed considerably from that in the draft PJM, the short list prepared and programmed at the local level. In the process, often the location was moved and the size has been altered from whatever might have been first proposed when guided by the spatial plan.

All of this evidence points to the reduction of the role of spatial planning in the practice of the IUIDP to that of only providing guidance when an initial list of possible projects is formulated. Unfortunately, even this contribution is questionable because of the apparent failure of practice so far to ever go beyond a concern for backlogs in infrastructure needs. The identification and treatment of current deficiencies does not utilise planning, if planning is understood to be a policy making process distinguished by its future orientation.

This is perhaps a logical consequence of situations common in the developing world in which urban infrastructure networks and facilities are already so greatly inadequate. Populations taking their places in urban areas in the future cannot compete with those already alive for the available resources, and if these resources are meagre, the latter remain too dissatisfied with their own lots to set aside anything for those to come. There is a place for planning in the allocation of resources to the problems of the present: what are the future consequences of responding to whose current needs? However, the planning required has a very small spatial dimension, if any.

Spatial planning is nevertheless able to identify the location, size and timing of future situations which require treatment in preference to some existing needs, according to the logic of efficiency or effectiveness. The evidence obtained in Indonesia suggests that even if this point is appreciated at a national policy level, this appreciation has been lost in practice. The reasons why it has been lost may have their origins in the overwhelming nature of current infrastructure deficiencies and also in the relatively short political and professional experiences upon which most of the decision makers draw.

Some changes were forced on programmes during implementation, especially because land acquisition was not given adequate attention in advance, causing projects to be moved to new sites or removed from programmes without any reference to spatial plans. These occurrences point up an important deficiency in the spatial planning that is performed: its failure to say anything about land ownership and the acquisition for the implementation.

The investigations established that a substantial effort has been made since 1987 in the Integrated Urban Infrastructure Development Programme (IUIDP) of the Indonesian Government to provide physical planning guidance to urban infrastructure investment. This effort focused on overcoming the lack of up to date and otherwise adequate conventionally constructed urban plans. Because IUIDP project

proposals for a city or town are prepared in a matter of months, initial physical planning efforts or up dating and detailing of existing plans needs to be more rapid than the conventional process lasting one or two years.

However, only in a very few cases were the Government's most unconventional techniques for undertaking spatial planning where no plan exists actually applied, because the situation in which a great many urban centres lacked plans altogether disappeared between 1988-90. It proved impossible to locate documentation or obtain clearly recalled accounts of the actual application of these techniques.

Consequently, IUIDP projects prepared in the 1990s were examined. In all cases, conventionally prepared spatial plans existed at the start which were out of date, lacking critical details, or otherwise unsuitable for use in an IUIDP exercise. Despite the dissemination by central government of detailed procedures for rapidly enhancing such plans into the statements required to be part of the proposed investment plan documents, the research found little connection between the spatial planning performed and the choice of locations, timing, sizes, and priorities of the infrastructure projects proposed in the final multi-sector investment plan. Strategic spatial plans have been constructed to help in the IUIDP process by updating and otherwise revising existing urban plans. These have been used to identify infrastructure projects which might possibly be included in an investment programme. Yet, the prioritisation of these possibilities into a programme has been a process of choices and changes which in practice ceases to use spatial policies as a source of guidance. Moreover, technical and political decision makers and their consultants have consistently given priority to backlogs of needs, without making any reference to the future which the planning provides and, therefore, to development objectives.

Although the Indonesian experience yields a good deal of detailed, practical thinking about the need for spatial planning to guide infrastructure investment and about methods to perform rapid and simple spatial planning which will fill gaps between existing planning and that required, it has not yet adequately demonstrated the use in practice of the concepts and techniques it has devised. The reasons for this are lessons in themselves for others to heed. Nevertheless, there is considerable value in the spatial planning guidelines developed by the IUIDP, even if they have not been adequately tested in practice.

References:

Baross, Paul, 1991, "Action Planning", IHS Working Paper No 2, Institute for Housing and Urban Development Studies, Rotterdam, The Netherlands

Chapin, F S and Kaiser, E, 1979, *Urban Land Use Planning*, 3rd edition, University of Illinois Press, Urbana, Illinois

Coughlin, R, and Pitts, C, 1960, "The Capital Programming Process", *Journal of the American Institute of Planners*, Vol XXVI, No 3, pp 236-241

Curtis, V, (ed), 1969, *Planning - Programming - Budgeting Systems*, American Society of Planning Officials, Chicago

Department of the Environment, 1972, *Development Plan Manual*, HMSO, London

Dice, S., 1995, “Comments from the World Bank Experience”, in Suselo, H, Taylor, J, and Wegelin, E, (eds), *Indonesia's Urban Infrastructure Development Experience: Critical Lessons of Good Practice*, UNCHS, Jakarta

Dowall, D, and Clarke, G, 1991, *A Framework for Reforming Urban Land Policies in Developing Countries*, Urban Management Programme Policy Paper No 7, World Bank, Washington, D C

Farvacque, C, and McAuslan, P, 1992, *Reforming Urban Land Policies and Institutions in Developing Countries*, Urban Management Programme Policy Paper No 5, World Bank, Washington, D C

Fritschi, B., Kristiyani, AT., Steiberg, F., 1992, " Community participation and the IUIDP: Experiences and potential", in Van der Hoff, R., and Steinberg, F., eds. *Innovative Approaches to Urban Management: The Integrated Urban Infrastructure Development Programme in Indonesia* Avebury, Aldershot.

Keeble, L, 1964, *Principles and Practice of Town and Country Planning*, The Estates Gazette, London, 3rd edition

Koenigsberger, O, 1964, "Action Planning", *Architectural Association Journal*, May, Architectural Association, London

McKee, W, 1981, "Is There a Future for Planning?", *Proceedings, RTPI Summer School*, Royal Town Planning Institute, London

(The) Nuffield Foundation, 1986, *Town and Country Planning*, The Nuffield Foundation, London

Peterson, G E, Kingsley, G T, and Telgarsky, J P, 1990, *Multi-sectoral Investment Planning*, UNCHS, Nairobi

Planning Advisory Group, 1965, *The Future of Development Plans*, HMSO

Safier, M, 1974, "Habitat for Development - An Action Planning Approach", *Proceedings, RTPI Summer School*, Royal Town Planning Institute, London

Singh, K., Steinberg, F., and von Einsiedel, N (eds.), 1998, *Integrated Urban Infrastructure Development in Asia*, Oxford & IBH Publishing Co, New Delhi.

Steinberg, F (1991) “Urban Infrastructure Development in Indonesia”, *Habitat International* Vol 15, 3- 23

Sugijoko, BTS and Sutmuller P., 1993, " Pelaksanaan Program Pembangunan Prasaran kota Terpadu (The implementation of Integrated Urban Infrastructure Programme)" in Rukmana, N., Steinberg, F., and Van der Hoff, R., (eds.) *Manajemen Pembangunan Prasarana Perkotaan (Mangement for Urban Infrastructure Development),* LP3ES, Jakarta.

Suselo, H, Taylor, J, and Wegelin, E, (eds), 1995, *Indonesia's Urban Infrastructure Development Experience: Critical Lessons of Good Practice*, UNCHS, Jakarta

Tim Koordinasi Pembangunan Perkotaan, 1989, “Petunjuk Penyusunan Program Pembangunan Prasarana Kota Terpadu”, Jarkata

UMP (Urban Management Program), 1991, "Revised Perspectus", Nairobi ?, October

UNCHS, 1993, *The Management of Human Settlements: the Municipal Level*, UNCHS, Nairobi

UNCHS, 1994, *Report of the International Conference on Re-Appraising the Urban Planning Process as an Instrument of Sustainable Urban Development and Management*, Nairobi, 3-7 October

UNCHS, 1996, *An Urbanizing World: Global Report on Human Settlements 1996*, Oxford University Press, Oxford

UNCHS, 1997, *The Istanbul Declaration and the Habitat Agenda*, UNCHS, Nairobi

van der Hoff, R., 1998, "The integrated Urban Infrastructure Development programme (IUIDP) in Indonesia" in Singh, K., Steinberg, F., and von Einsiedel, N eds. *Integrated Urban Infrastructure Development in Asia*, Oxford & IBH Publishing Co, New Delhi.

van der Hoff, R, and Steinberg, F, 1993, "The Integrated Urban Infrastructure Development Programme and Urban Management Innovations in Indonesia", Working Paper No 7, Institute for Housing and Urban Development Studies, Rotterdam

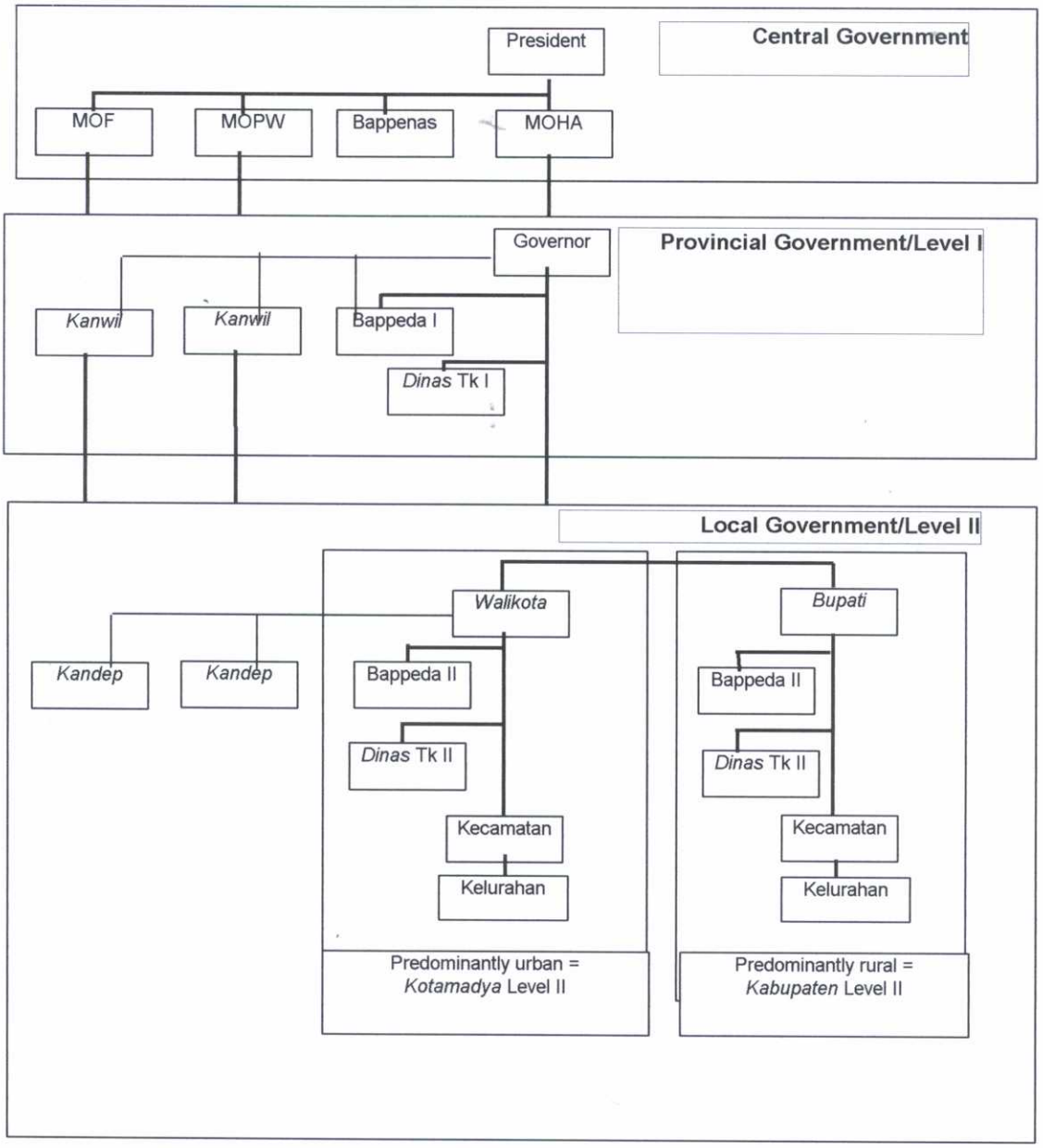
Winarso, H., 2000, "Residential Land Developers' Behaviour in Jabotabek, Indonesia", PhD thesis report, University of London, University College London, London

Zaris, R, Carter, T, and Green, I, 1988, "An Action Planning Approach to Strategic Urban Development", *Habitat International*, Vol 12, No 4, pp 13-20, Oxford

Appendix 1. Government Structure

To better understand the process, one has to understand the organisation of the Indonesian government the administration is divided into three tiers with the central government being the first, the provincial (level I) government being the second tier, and the municipal - *Kotamadya* and *Kabupaten* (level II) government being the third. There are 26 provinces at level I and 55 municipalities and 243 *Kabupaten* at level II. The central government comprises ministries and other administrative units which are further fragmented horizontally and vertically. (see Diagram I)

Diagram I: Summary of Indonesia's Administrative Structure



Note: MOF : Ministry of Finance; MOPW: Ministry of Public Works; MOHA: Ministry of Home Affairs; Bappenas: National Development and Planning Board; *Kanwil*: Regional Office; Bappeda I: Provincial Development and Planning Board; *Dinas* Tk I; Local Authority at level I; *Kandep*: Local Office; *Dinas* Tk II : Local Authority at level II; ; Bappeda II: *Kab upaten/Kotamadya* Development and Planning Board ; *Walikota*: Mayor; *Bupati*: Head of *Kabupaten*; Kecamatan: District; Kalurahan: Sub District

The structure of the Local Government of Indonesia was based on the Law No 4 of 1974 which stipulated that there were three principles governing the relationship between central and local government in terms of the responsibility for policy formulation, financing and implementation. These were deconcentration,

performing the decentralisation principle, while *Kanwil* in level I and *Kandep* in level II Local Government were supposed to performing deconcentration principle, Practically, however, they perform co-administration more than the deconcentration principle. Mayors of the *Kotamadya* or *Bupati* of the *Kabupaten* were responsible to co-ordinate the different functions of the *Kandep* and *Dinas*. For the planning purposes the Bappeda Tk II is the only institution for co-ordinating planning and programming activities of the local government.