



Government of Central Kalimantan



Government of Indonesia



Government of the Netherlands



Master Plan for the Rehabilitation and Revitalisation of the Ex-Mega Rice Project Area in Central Kalimantan



SPATIAL PLANNING IN THE EX-MEGA RICE PROJECT AREA IN CENTRAL KALIMANTAN

Technical Report No. 10

OCTOBER 2008

Euroconsult Mott MacDonald and Deltares | Delft Hydraulics
in association with
DHV, Wageningen UR, Witteveen+Bos, PT MLD and PT INDEC

Master Plan for the Rehabilitation and Rehabilitation of the Ex-Mega Rice Project Area in Central Kalimantan

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Summary

Spatial planning for the Ex-Mega Rice Project area is part of the hierarchical system of national, provincial, district and city spatial planning. These general spatial plans contain a Spatial Design and an Infrastructure Design. The Spatial Design divides the area being planned for in two major function zones: (1) a Development/Cultivation Zone and (2) a Protection Zone. Each of these zones can be further subdivided in more specified functions, such as an agricultural, or industrial function in the Development Zone, or protection forest or nature reserve in the Protection Zone.

The general spatial plans are to be further elaborated in Specific Spatial Plans. At National level these are the Island Spatial Plans (e.g. Kalimantan Spatial Plan) and the National Strategic Area Spatial Plans (areas of national strategic interest). At Province level these are the Provincial Strategic Area Plans, and at District/City level the District/City Strategic Area Spatial Plans and the Detail Spatial Plans. The Detail Spatial Plans are the basis for zoning regulations, linked with licensing policies and stipulations. However, Detail Spatial Plans have yet to be produced by the majority of Districts/Cities in Indonesia. The same is true for the Specific Spatial Plans in general, such as specific spatial plans for areas such as peat swamp areas, coastal areas, or the plans that represent a comprehensive integration of aspects of water, environment and social-economic development.

An area such as the EMRP, which is the focus of a Presidential Instruction on its large-scale and comprehensive rehabilitation, could be declared a national strategic area, and subsequently planned for. The strategic importance of the EMRP area comes from its major potential environmental impact through the volumes of carbon stored in its peatlands that are at risk of being released through repeated land and forest fires and continued oxidation of the drained and drying degraded peatlands. The widespread smoke and haze produced by the fires also put public health, transport safety, economy, and international relations at risk. Alternatively, the EMRP area could be appropriately planned for in a general spatial planning process, if comprehensive procedures would be implemented that consider, integrate and balance all relevant environmental, economical, social and cultural aspects. The present situation though is that only general spatial plans are available, often even marred by inaccuracies. This is caused by a combination of problems, including the absence of complete, comprehensive and accurate data, lack of sufficiently detailed and clear guidelines and manuals, and a lack of institutional, organizational and individual capacities on the part of the spatial planning agencies.

The new Spatial Planning Law No.26/2007 requires the review and issuance of new spatial planning guidelines, manuals and standards. Furthermore, for the implementation of the new spatial planning law an overhaul and development of appropriate capacity is needed. This capacity development includes the networks, organizations, systems and human resources involved in spatial planning at central, provincial and district/municipality level. Standardization and networking of spatial data is regulated by Presidential Regulation No. 85/2007.

The guidelines, manuals and standards that are being revised, updated or newly drafted include the manuals for composing the general spatial plans. These manuals describe the components, procedure, process steps and flow, and input and outputs of the spatial planning. The manuals furthermore refer to technical guidelines and manuals for a more detailed and technical elaboration of the planning process components. An example is the Technical Manual on Analysis of Physical and Environmental Aspects, Economic Aspects, and Social Cultural Aspects in Composing Spatial Plan (Permen PU No. 20/PRT/M/2007). For areas of special interest, further specific manuals are available, such as the Manual Spatial Planning of Coastal Reclamation Area (Permen PU No. 40/PRT/M/2007).

The revised implementation manuals for general spatial planning now include the classification of area types, as compared to the previous manuals that applied an uniform approach to all types of areas in terms of data/information needs, evaluation and analysis, thereby overlooking specific area characteristics that would need focused attention of the planners. The typing of areas now steers the applicability of specific dedicated technical manuals.

Several of these manuals are already available, such as the Manual on Spatial Planning for Areas with Volcano Eruption Hazard and Earth Quake Hazard or the Manual on Spatial Planning for Coastal Reclamation Area.

A specific technical manual for Spatial Planning for Peat Land Areas is needed as well. The experiences gained within the EMRP Masterplan project provide the input for such a manual. The EMRP Masterplan project has produced the approach and tools for planning and zoning an expansive peatland area, concentrating on the environmental aspects of the peat lands and their hydrology and composition of the peat domes, as well as suitability for different types of land use and socio-economic development.

1 Introduction

1.1 Background

The development of a Master Plan for the Integrated Conservation and Development of the Ex Mega Rice Project in Central Kalimantan Province is financed by the Government of the Netherlands in support of the planning and programming by the Government of Indonesia for the rehabilitation and restoration of the area. The implementation of the project is supervised by the Royal Netherlands Embassy in Jakarta together with the Government of Central Kalimantan Province.

The EMRP Master Plan covers an interdisciplinary review, analysis and indicative integrated design of sectors of conservation and development. These sectors include hydrology, ecology, land use, social-economy, infrastructure, environment, economy, policies and capacities. The designs concern spatial utilization scenarios of the area, which represent the integration of potentials, constraints, trends, impacts and organization of interventions in the mentioned sectors of ecological conservation and social/economic development.

There is a need for the spatial planning process referred to above to be accommodated with clear manuals and technical guidelines. A number of spatial planning manuals and associated technical manuals are available in Indonesia.

1.2 Approach

The spatial planning process, and associated manuals and technical guidelines are reviewed to determine where improvements with regard to spatial planning for areas such as the EMRP area can be introduced. A range of manuals are presently being revised and/or drafted by the Public Works Ministry. Input with regard to improvements of manuals are directed toward the teams drafting these manuals.

2 Spatial Planning in Indonesia

2.1 Brief introduction to spatial planning in Indonesia

Spatial planning issues in Indonesia before 1992 were handled by a number of key agencies at national level, including Bappenas, the Ministry of Public Works, the Ministry of Home Affairs, the Ministry of Environment and the Ministry of Forestry. Due to a lack of a system of coordination and standardization, this situation led to many inefficiencies and incompatibilities in spatial planning, an ineffective spatial management, and disengagement of stakeholders at regional and local level since these were mostly excluded from the spatial planning processes. In order to remedy this situation and reorganize spatial management, Indonesia issued the Spatial Management Law UU 24/1992. In 2007 the law was replaced by the Spatial Management Law UU 26/2007. The new law not only improves the planning, but also the monitoring and control of the use of space. The law stipulates the enactment of a number of government and ministerial regulations, either new or updating the regulations based on the old law. The ministerial regulations institute the guidelines, manuals and standards to be used in the spatial management process. They are mainly from the Public Works Ministry, which is the department responsible for spatial planning. Some regulations are coming from the Department of Home Affairs, a situation which is related to the history of responsibilities and roles in spatial planning in Indonesia.

At the regional level the key agencies in spatial planning are the Regional Public Works Agencies, the Regional Development Planning Agencies (BAPPEDA), the Environmental Management Agencies (BAPEDALDA) and the Forestry Agencies. The BAPPEDA was until the enactment of Government Regulation No. 41/2007 on Regional Government Organization the agency responsible for coordinating and producing the regional spatial plans. This new Government Regulation however has now shifted this responsibility for spatial planning and spatial management to the Public Works Ministry and Agencies. The BAPPEDA remain responsible for the development of the regional development plans. Development planning and spatial planning are closely linked processes, and it is therefore of utmost importance a workable mechanism of coordination and cooperation between the Public Works Agency and Bappeda is created.

Spatial planning in Indonesia takes place at three levels: national, province and district/city level. See also Figure 2. The higher level spatial plan provides the framework for those below it. All spatial plans have a duration of 20 years. The spatial plans provide reference and guideline for the five year Mid-Term Regional Development Plans and Sector Plans.

Table 1: Spatial Planning Products in Indonesia

Plan Type	National	Province	District / City
General Spatial Plan	RTRWN	RTRWP	RTRWK
Specific Spatial Plan	a. RTR Island / Islands b. RTR National Strategic Area	RTR Provincial Strategic Area	a. RTR District/City Strategic Area b. Detail Spatial Plan

Notes:

1. The Detail Spatial Plan is a generic name for Specific Plans in the District/City other than the District/City Strategic Area Spatial Plan.
2. RTRWN is the Rencana Tata Ruang Wilayah Nasional, or National Spatial Plan.
3. RTRWP is the Rencana Tata Ruang Wilayah Propinsi, or Provincial Spatial Plan
4. RTRWK is the Rencana Tata Ruang Wilayah Kabupaten (or Kota), or the District (or City) Spatial Plan.
5. RTR is Rencana Tata Ruang, or Spatial Plan (e.g. the National Strategic Area Spatial Plan)

Central Government produces the National Spatial Plan, the National Strategic Area Spatial Plan, the Island Spatial Plans, and is furthermore responsible for the coordination of spatial planning with neighboring countries, and the facilitation of coordinated spatial planning between provinces.

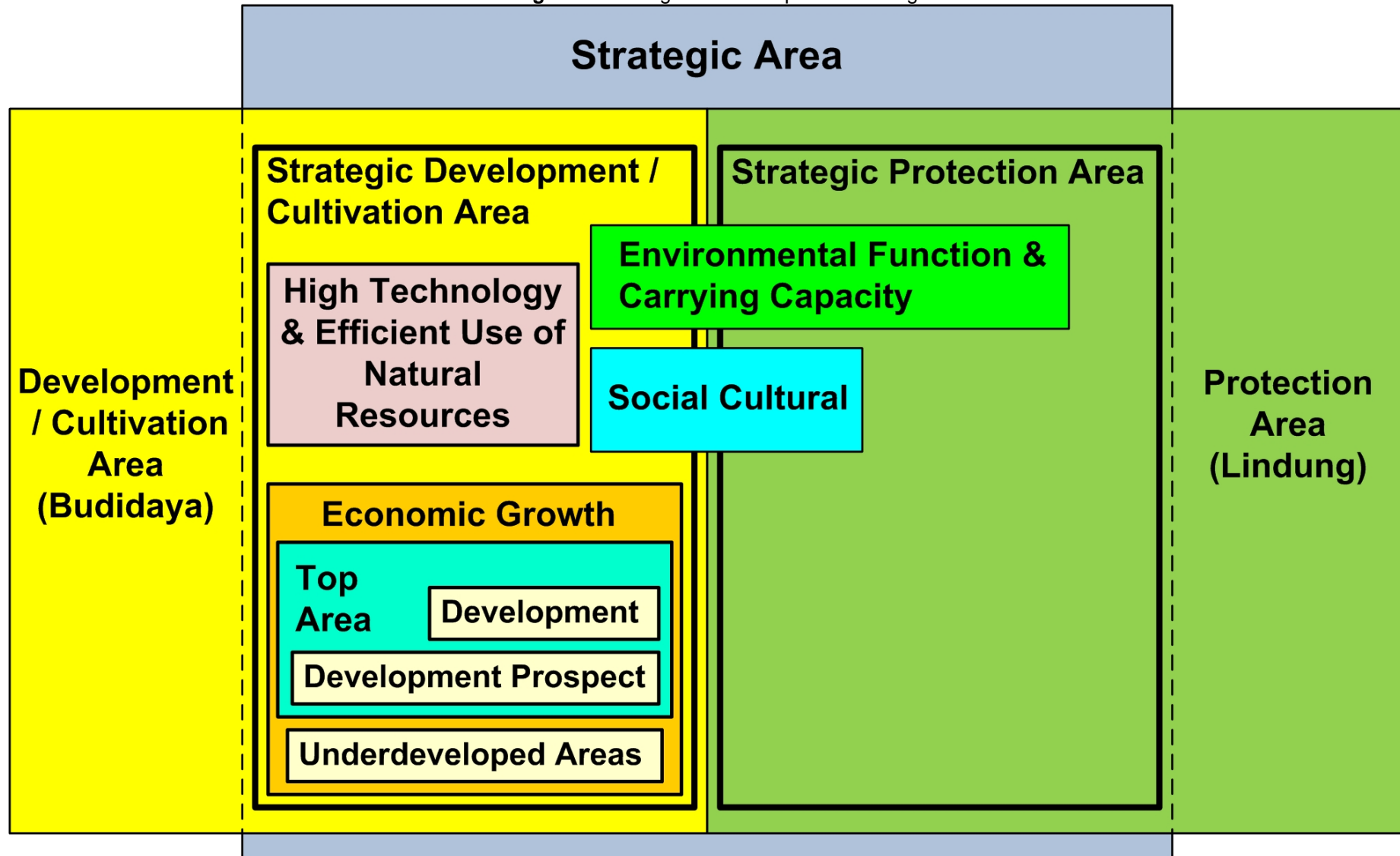
Provincial Government is produces the Provincial Spatial Plan, the Provincial Strategic Area Spatial Plan, and responsible for the coordination of spatial planning with neighboring provinces, while also facilitating coordinated spatial planning between districts/cities.

District/City Government is produces the District/City Spatial Plan, the District/City Strategic Area Spatial Plan, District/City Detail Spatial Plans and responsible for the coordination of spatial planning with neighboring districts/cities.

Figure 1 gives a visualization of the understanding and position of Strategic Area in relation to the Protection Area and Development/Cultivation Area, and to functional areas that aim to stimulate, preserve and/or improve specific qualities and values, such as Economic Growth, Social Cultural, Environmental Services, and specific uses of natural resources (e.g. thermal / hydro power). Strategic developments with regard to economic growth or natural resource utilization can only be implemented in the Development/Cultivation Zone of a Spatial Plan. Strategic developments with regard to the environment or social cultural conditions can be directed to both the development/cultivation and protection zones.

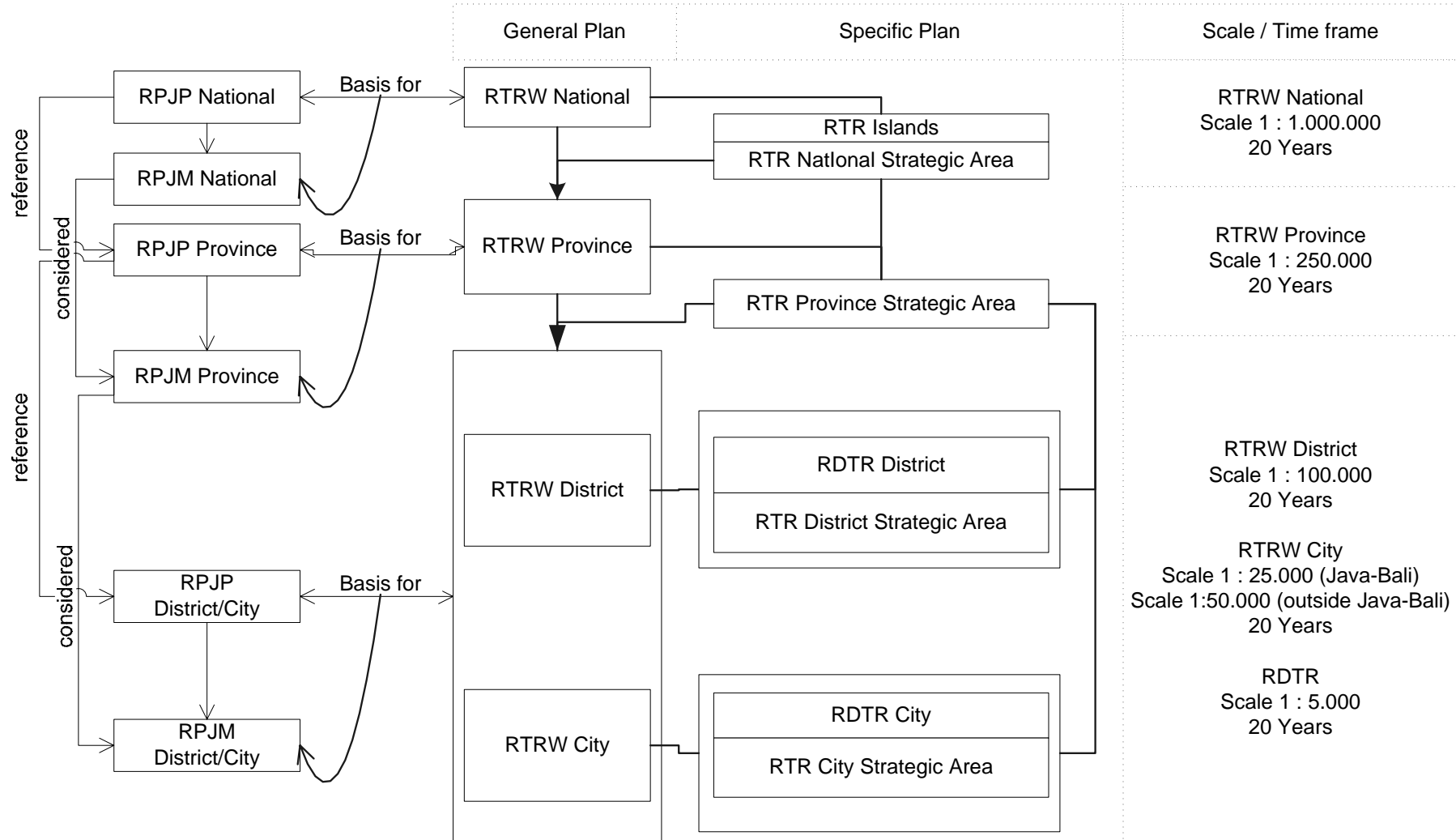
Spatial Planning is closely linked to Development Planning, in dependency and in contribution, and both share much of the same type and focus of data, trend and scenario analysis in the process of their composition. Figure 2 provides an overview of this relationship.

Figure 1: Strategic Areas in Spatial Planning



Source: Pedoman Penyusunan RTRW Propinsi (Guideline for Composing Provincial Spatial Plan). Ministry of Public Works, Directorate-General Spatial Planning, 2008.

Figure 2: Relationship between Spatial Planning and Development Planning



Source: Pedoman Penyusunan RTRW Propinsi (Guideline for Composing Provincial Spatial Plan). Ministry of Public Works, Directorate-General Spatial Planning, 2008.

The General Spatial Plans present the planning in two major themes:

- a Spatial Structure Plan (Struktur Ruang), which concerns the services and layout of transportation, electricity, water and telecommunication infrastructure and the functions and distribution of the urban/settlement networks
- a Spatial Function Plan (Pola Ruang), which divides the different uses of space in three major groups, i.e. Protection Area, Development/Cultivation Area, and Strategic Area.

The time schedule for developing the provincial spatial plan is as follows:

Figure 3: Spatial Planning Time Schedule

Phase	PREPARATION	DESIGN				LEGALIZATION
ACTIVITIES	Technical and Non-Technical Preparation before start of planning	Review of the previous RTRW Province	Data Collection & Compiling (primary & secondary)	Analysis	Drafting Concept RTRW Province Concept Plan → Plan	1. Concept Draft Regulation 2. Agreement on Content 3. Legalization
TIME FRAME	1-3 months	1-3 months	1-6 months	3-6 months	2-6 months	-
8 – 24 months						

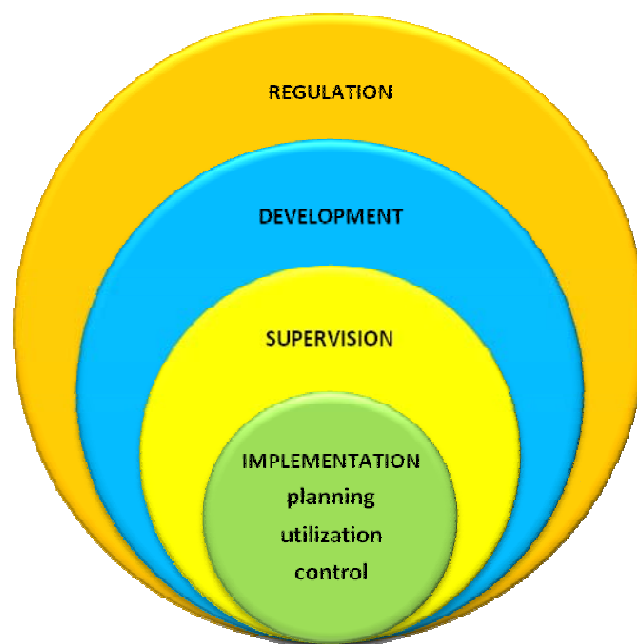
Source: *Pedoman Penyusunan RTRW Propinsi (Guideline for Composing Provincial Spatial Plan)*. Ministry of Public Works, Directorate-General Spatial Planning. 2008.

2.2 Spatial Planning Process

Spatial Planning is part of spatial management. Spatial Management includes the following components, also known under the Indonesian acronym: Tur-Bin-Lak-Was

1. Regulation (Pengaturan) Role of central government
2. Development (Pembinaan) Role of central government
3. Implementation (Pelaksanaan) Role of district, province and central gov
 - 3.1. Spatial Planning (Perencanaan)
 - 3.2. Spatial Utilization (Pemanfaatan)
 - 3.3. Spatial Control (Pengendalian)
4. Supervision (Pengawasan) Role of central government

Figure 4: Spatial Management Components



The implementation component of spatial management includes Spatial Planning, Spatial Utilization and Utilization Control. While spatial planning takes place at district/city, province and national level, spatial utilization and utilization control plays primarily at District/City level. It is at this level where zoning regulations are exercised, providing the basis for the systems for licensing space utilization, incentives/disincentives and sanctions.

Spatial utilization refers to the long, medium and short-term public and private sector programming and associated budgeting. The various programs should individually and in combination be in line with the spatial plan and with the goal, targets and strategies of regional development. Sector Programs are synchronized together into a balanced regional development program in line with the long-term development and spatial management plans.

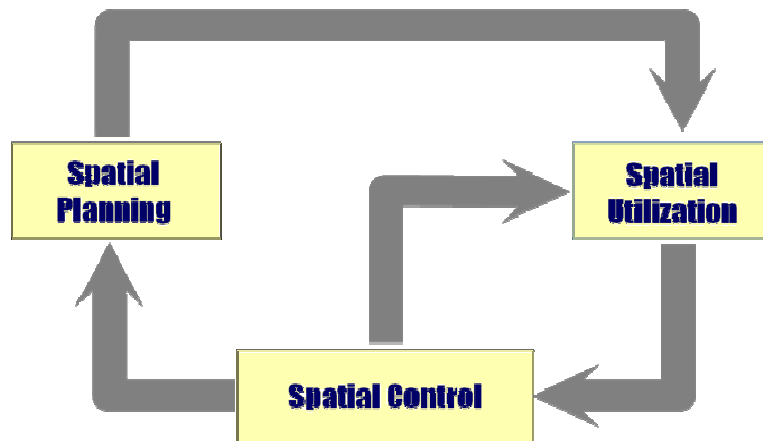
Spatial utilization control is exercised to regulate, authorize, encourage and enforce/rectify spatial utilization, with the ultimate purpose to develop and guide spatial utilization in line with the spatial plan and associated policies and development targets. The new spatial planning law describes a system of licensing/permits, incentives/disincentives and sanctions. Zoning regulations are determined and applied at district and city level, in conformity with national (ministerial) and provincial level directions on spatial zoning. These directions include classifications, criteria and values. Zoning is based on / part of a Detail Spatial Plan at district/city level. Licenses are issued based on the zoning plan. This means that licenses for e.g. oil palm estates cannot be issued if a detail spatial plan and associated zoning plan are absent. The common practice has been and so far still is (in this phase of transfer between the old law and regulations and the new spatial management law and its various regulations including on zoning) that land use licenses are being issued based on the general spatial plan only.

This report focuses on the Spatial Planning component of Spatial Management Implementation. Table 2 gives an overview of the products and steps of the spatial planning process.

Table 2. Spatial Management Products, Process Steps/Tasks: IMPLEMENTATION / Spatial Planning

COMPONENT & Products	PROCESS STEPS / TASKS	EXPLANATION
<p>Implementation</p> <ul style="list-style-type: none"> - Spatial Planning - Spatial Utilization - Spatial Control <p><u>Products Spatial Planning:</u></p> <ul style="list-style-type: none"> o <i>RTRWN, RTRWP, RTRW Kab./Kota</i> o <i>RTR Pulau/Kepulauan</i> o <i>RTR Kawasan Strategis Nasional, Provinsi, Kab./Kota</i> o <i>Rencana Detil Tata Ruang</i> o <i>GIS / Spatial Database</i> o <i>Data Management System</i> 	<p>(refer to Figure 5)</p> <p><u>Spatial Planning</u></p> <ul style="list-style-type: none"> - Preparation - Evaluation/Review - Data Collection/Verification - Change/Trend Analysis - Determine Context/Parameters - Potentials/Constraints Analysis - Spatial Plan Options/Model - Consultations - Draft Spatial Plan - Legalization 	<p><u>Spatial Planning</u> is done at national, province and district/city level.</p> <p>Preparation is of the planning team and any needed arrangements. Evaluation and review is of previous plan, developments, successes and failures up to present, and feed-back from stakeholders.</p> <p>The context and parameters for the spatial plan options and modeling are determined by development goals, targets, issues and strategies, from the national and regional development plans and by other spatial plans and settings in effect.</p> <p>Analysis of potentials and constraints among others compares the development demands with the spatial and environmental carrying capacity. Consultations are with public and private sector, the general public, and the parliament.</p>

Figure 5: Spatial Management Process Steps/Tasks – IMPLEMENTATION



2.3 Spatial Planning Manuals

The process and tasks of the general spatial planning for province, district and city are described in manuals issued by the Public Works Ministry. These manuals are presently being revised to improve the functionality of the manuals and reflect the changes introduced by the new spatial planning law.

Manual Composing Provincial Spatial Plan / Pedoman Penyusunan Rencana Tata Ruang Wilayah Provinsi	Revision of existing manual & being drafted / 2008
Manual Composing District Spatial Plan / Pedoman Penyusunan Rencana Tata Ruang Wilayah Kabupaten	Revision of existing manual & being drafted / 2008
Manual Composing City Spatial Plan / Pedoman Penyusunan Rencana Tata Ruang Wilayah Kota	New manual & being drafted / 2008

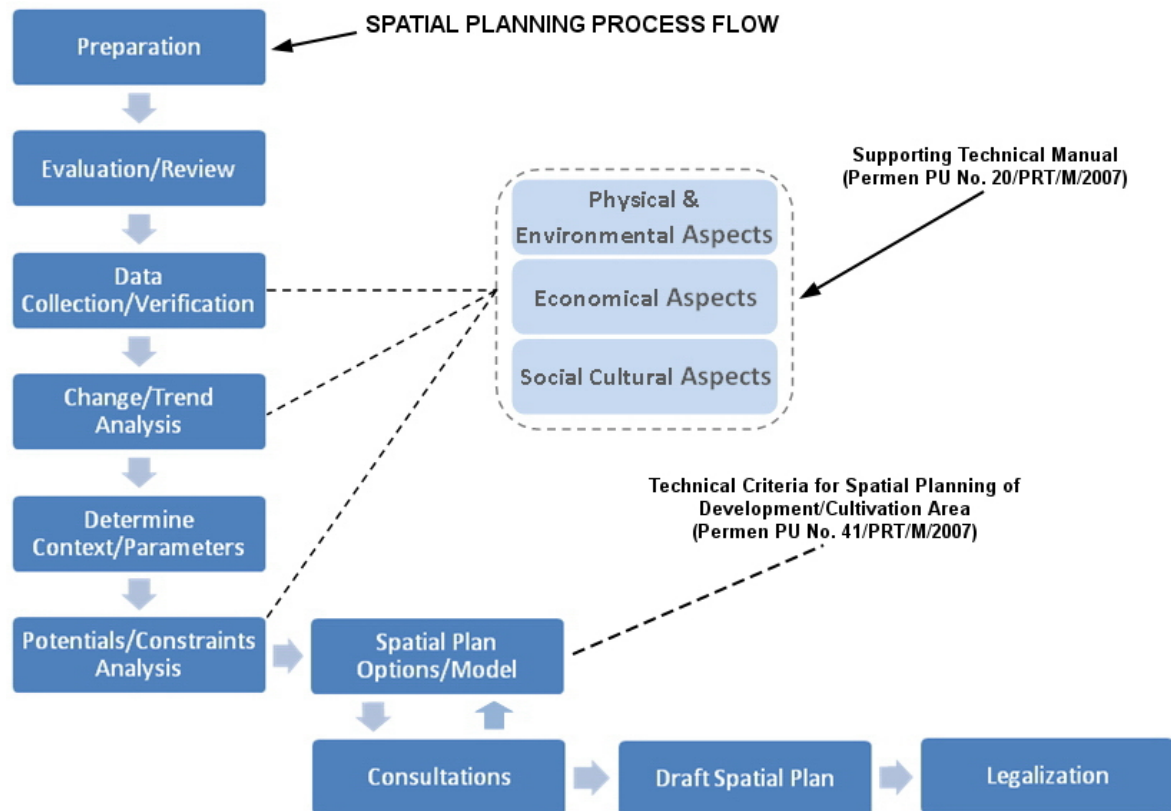
There are a number of other manuals available, being renewed, or newly developed. These manuals are either:

- Concentrating / detailing parts (steps) of the general spatial planning process
- Concentrated on spatial utilization and control of utilization
- Concentrated on spatial planning for areas with special conditions or purposes

There are General Manuals and Technical Manuals. A Technical Manual that is concentrating / detailing parts (steps) of the general spatial planning process is the Technical Manual Analysis of Physical and Environmental Aspects, Economic Aspects, and Social Cultural Aspects in Composing Spatial Plan (Supporting Technical Manual (Permen PU No. 20/PRT/M/2007). While the new manuals on general spatial planning already provide more guidance and detail on the needed data and data analysis, the Technical Manual No.20 provides a more comprehensive and specific overview of steps, methods, standards and results. The Technical Criteria for Spatial Planning of Development/Cultivation Area (Permen PU No.

41/PRT/M/2007) is another manual that elaborates a section of the spatial planning process.

Figure 6. Spatial Management Process Steps/Tasks – IMPLEMENTATION / SPATIAL PLANNING



Based on: *Pedoman Penyusunan RTRW Propinsi (Guideline for Composing Provincial Spatial Plan)*. Ministry of Public Works, Directorate-General Spatial Planning. 2008.

A list of manuals concentrating on parts of the spatial planning process or on special applications of spatial planning is provided in table 3. The manuals that are released per regulation can be downloaded from the website of the Ministry of Public Works, Directorate-General Spatial Planning (<http://www.penataanruang.net>).

Table 3: List of Spatial Planning Manuals (Department of Public Works).

	GENERAL	STATUS
1	Manual Evaluation of Spatial Management Implementation in Province, District and City	Draft
2	Technical Manual Analysis of Physical and Environmental Aspects, Economic Aspects, and Social Cultural Aspects in Composing Spatial Plan	Permen PU No. 20/PRT/M/2007
3	Manual Composing Spatial Plan for Agropolitan Area	Draft
4	Manual Composing Detail Spatial Plan for Rural Area	Being drafted
5	Manual for Evaluation of Dividing/Forming District/City/Province	SE Dirjen Penataan Ruang No 05/SE/DN/2003
	SPATIAL FUNCTION (Pola Ruang)	STATUS
6	Manual Spatial Planning of Coastal Reclamation Area	Permen PU No. 40/PRT/M/2007
7	Technical Criteria for Spatial Planning of Development/Cultivation Area	Permen PU No. 41/PRT/M/2007
8	Manual Management Water Infiltration Area	Draft
9	Manual Spatial Planning of Area near Lake, Basin and Pond	Draft
10	Technical Criteria Spatial Planning River Authority Area within City	Draft
11	Manual Spatial Planning River Area	Draft
12	Manual Providing and Utilization of Green Open Space (RTH) within City Area	Permen PU No. 05/PRT/M/2008
13	Manual Spatial Planning of Area Near Permanent Waste Dump Sites	Draft
14	Manual Spatial Planning for Area Post-Mining Closure	Being drafted
	SPECIFIC SPATIAL PLANNING	STATUS
15	Manual Spatial Planning Areas with Volcano Eruption Hazard and Earth Quake Hazard	Permen PU No. 21/PRT/M/2007
16	Manual Spatial Planning Land Slide Disaster Areas	Permen PU No. 22/PRT/M/2007
17	Manual Method of Composing Spatial Plan for National Strategic Area	Draft
	DETAIL SPATIAL PLANNING DISTRICT/CITY	STATUS
18	Manual Composing Detail Spatial Plan for District Spatial Plan	Being drafted
19	Manual Composing Detail Spatial Plan for City Spatial Plan	Being drafted

3 Integration of EMRP in Spatial Planning

3.1 Present Condition

The EMRP landscape is characterized by extensive peat lands, large and deep peat domes, a complex hydrology, tidal influences and low soil fertilities. Most of the area has been opened up for development and cultivation. Much of the peat lands in the area are degraded, creating a yearly fire hazard. The resident and migrated communities that inhabit the area are relatively poor with limited economical options. The specific conditions of this area, and other areas like it, in particular concerning the complex peat and hydrological setting, require a customized data collection, analysis and scenario building for its spatial planning. The EMRP Master Planning project has provided such an approach for an area dominated by coastal / lowland peat lands.

The spatial planning of the EMRP is part of the new Central Kalimantan Province Spatial Plan, which is expected to be issued in 2009. The previous provincial spatial plan already heeded specific the environmental conditions of the area, though insufficiently so, due to a lack of appropriate focus, data and subsequent analysis. The available spatial planning guidelines and manuals, as well as present spatial planning capacity at the province and district governments, do not yet sufficiently cover the required in-depth analysis and evaluation for spatial planning in a peat dominated landscape.

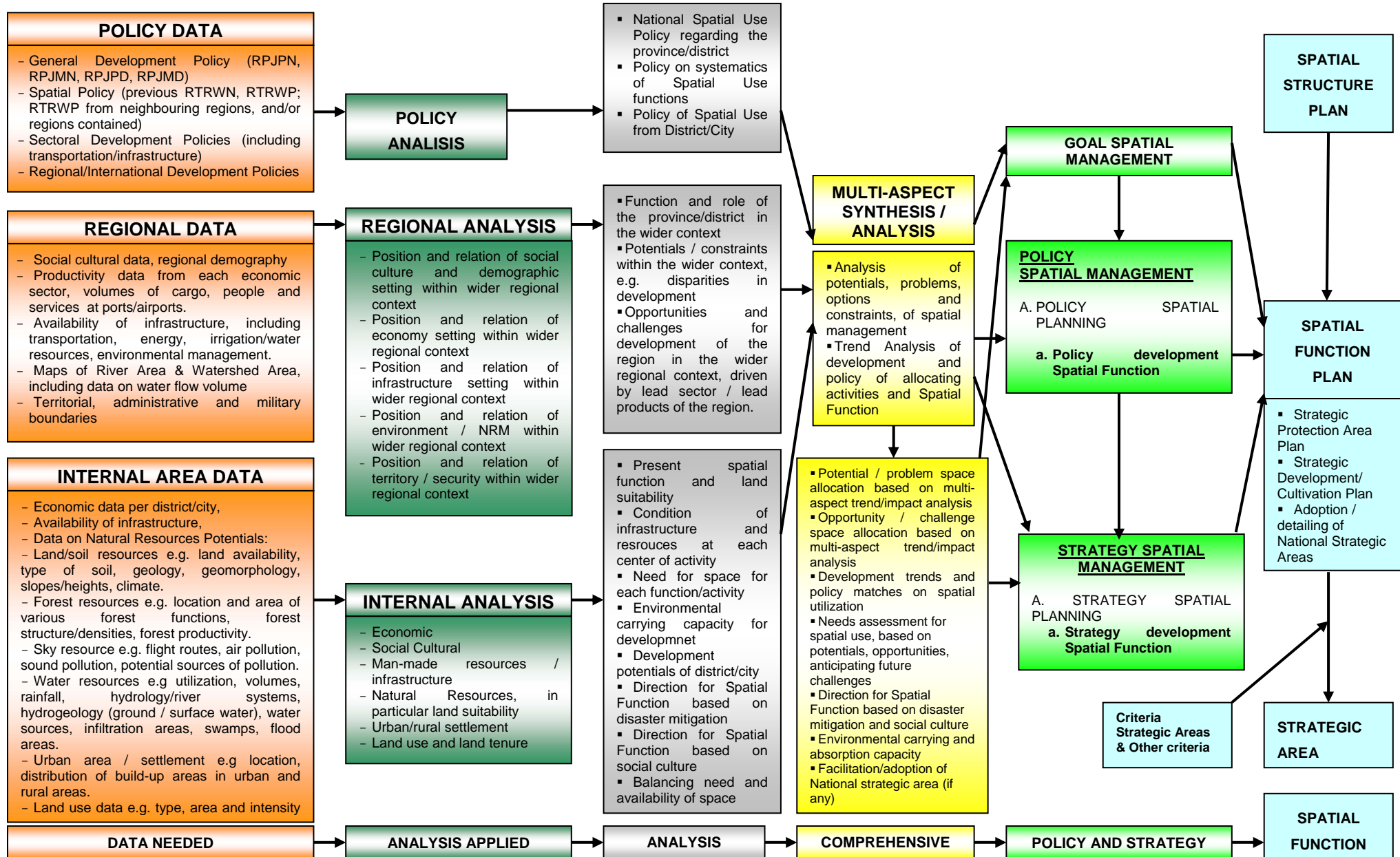
3.2 Evaluation of existing spatial planning manuals

The present manuals for Composing Spatial Plans at Province, District and City level all provide a generalized approach, process, steps and data to be collected. The available technical manuals provide further detail as to what, how and when to analyze data and compose alternative scenarios. Both the general and associated technical manuals however, would need to define different types of areas/regions. Introducing a typology of area/region into the general spatial planning manuals will help to focus the analysis and assessments needed for specific areas on their inherent specific conditions, potentials and constraints. The manuals for general spatial planning need to include the criteria and steps to identify the type of area/region. Then, for each of these types of area/region, particular technical manuals or expanded technical guidelines should be used, in order to produce viable input for a sound spatial and development planning of these areas. The typology of areas/regions is based e.g. on physical characteristics, hydrological characteristics,

existing land function allocations, population densities, environmental /natural hazards, economic potentials etc.

The manuals for general spatial planning (province, district and city) presently explain why & what needs to be analyzed, and how the results of the analysis are to be used to design the draft spatial plan. The manuals that are being revised now are much more comprehensive, clear and informative on the whole planning process and its components than the present manuals. Exactly how the various types of analysis are / could be done is the domain of the technical manuals. An example of the flowcharted process of producing the Spatial Function Plan as part of the general spatial planning is shown in Figure 7.

Figure 7: General Spatial Planning: Relation Data, Analysis, Output Analysis for Spatial Function. Source: *Pedoman Penyusunan RTRW Propinsi (Guideline for Composing Provincial Spatial Plan)*. Ministry of Public Works, Directorate-General Spatial Planning. 2008.



A number of manuals are already available that focus specifically on spatial planning for areas with particular conditions, such as spatial planning in earth quake prone and volcano eruption hazard areas (nrs. 15, 16 in table 3), or on spatial planning for Coastal Reclamation Areas (nr.6). A manual specific on spatial planning in peat land areas is not yet available. This manual would cover an analysis of the extend of peat lands, depth of peat and peat domes, type of peat, state of health/degradation of the peat, the hydrological workings sustained by the peat cover, and potential utilization of peat land within the limits of risking environmental hazards.

Furthermore, a number of manuals (most of them still being drafted by the Public Works Ministry) concern themselves with water management issues and hydrological assessments, in different situations, such as manuals nrs. 8-11 in table 3. Here, a problem exists with the synchronization between such manuals. Manuals should not overlap but be mutually complementary. Water management / hydrology is in particular a cross-cutting issue, which could be given more detail / guidance in the manuals for general spatial planning, as well as being elaborated in detail in one dedicated technical manual.

3.3 Conclusions & Recommendations

The various spatial planning manuals presently available, or being revised / drafted, already sufficiently describe process, steps and tasks of spatial planning.

The recently revised manuals for general spatial planning now incorporate a typology of areas/regions, and will be more effective if the criteria and evaluation process to determine the type of a certain area/region are fine-tuned. Based on the type (e.g. dominated by peat lands), the general manual could refer to the associated technical manuals for area specific analysis and elaborations.

The Technical Manual Analysis of Physical and Environmental Aspects, Economic Aspects, and Social Cultural Aspects in Composing Spatial Plan (Permen PU No. 20/PRT/M/2007) gives a step-by-step approach, and thorough overview and sufficient detail of the process of the various linked analyses. The target group of the manual however is clearly the professional user, since the actual basics of the analysis, any formulas, very detailed process descriptions, or any instructions for primary data collections, are not included. These are assumed to be known to the user.

This manual does not yet include a typology of areas/regions. Such an improvement is recommended, along with sub-sections on the various types of areas/regions. The sub-sections can either be short, and give reference to other more specific technical guidelines, or the sub-sections could be comprehensive, making them modules of the main technical manual. For any manual, it needs to be clarified first who the users will be. This will determine the further scope and detail of the manual.

Capacity building is the most important factor for improved spatial planning in the provinces and districts. With regulations, policies and manuals in place, it is up to the province and district institutions and their organizational, system, operational and human resource capacity to implement these.



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