



Municipal Government of Banda Aceh

CITYWIDE SANITATION STRATEGY

Banda Aceh City

VOLUME 1: SANITATION DEVELOPMENT FRAMEWORK



Version 1, November 2009

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PREFACE

Assalamu'alaikum Wr. Wb

Praise to Allah SWT who had given us guidance until we could finish preparation of the City Sanitation Strategy (CSS) Volume 1: Sanitation Development Framework. This document is so-called the CSS, is a framework for sanitation development strategy. Content of the document is not only about infrastructure development strategy but also concerning strategy of sanitation governance and strategy of public participation to support the achievement of Banda Aceh vision to be an Indonesian Islamic Tourism Port.

Beside explains about Banda Aceh sanitation development strategy, this document also consists of priority setting of sanitation development on infrastructure sector and will become an input for annual framework arrangement process of RKPK. Due to its long planning horizon (until 2025), this document could become a main document for the preparation of Renstra SKPK.

This document had been discussed on the seminar "*Sanitation Development for A Better Services – Pembangunan Sanitasi untuk Pelayanan Warga Kota yang lebih baik*" on August 2009, attended by various community component from gampong level to the municipal government and also representatives of universities and NGOs. Any input during the seminar becomes important input for the completing of this document. The seminar had also agreed on a Collective Declaration – Deklarasi Bersama among city components to support and actively participate in the sanitation development in Banda Aceh. The declaration is also an important document for the comprehensive and sustainable sanitation development in Banda Aceh.

Finally, we expect that this document of Citywide Sanitation Strategy Volume 1 can be used as a guidance for SKPK to prepare development activities especially in sanitation sector and can be used by other institutions that have initiative to develop sanitation in Banda Aceh.

Wassalamu'alaikum Wr. Wb.

Banda Aceh, 10 November 2009

 Walikota Banda Aceh 




 Ir. Mawardy Nurdin, M.Eng.Sc

TABLE OF CONTENTS

TABLE OF CONTENTS	i
LIST OF FIGURES	ii
LIST OF TABLES	ii
GLOSSARIES.....	iii
CHAPTER 1 : INTRODUCTION.....	1
1.1 Background	1
1.2 Goal and target	2
1.3 Legal basis	2
1.4 Document lay out.....	2
CHAPTER 2 : GENERAL DESCRIPTION OF THE CITY AND ITS DEVELOPMENT PLAN.....	3
2.1 Administrative boundary and demographic condition	3
2.2 City governance.....	3
2.3 Banda Aceh City Development.....	6
CHAPTER 3 : OVERALL STRATEGY FOR CITY SANITATION DEVELOPMENT	10
3.1 Sanitation vision and mission	10
3.2 Objective and target of sanitation development.....	10
3.3 Sanitation development general policy	10
3.4 Current city policy	11
CHAPTER 4 : STRATEGIC DEVELOPMENT OF SANITATION INFRASTRUCTURE 2010 – 2025.....	12
4.1 Water supply.....	12
4.2 Wastewater.....	16
4.3 Drainage	19
4.4 Solid waste	22
CHAPTER 5 : STRATEGY ON PUBLIC PARTICIPATION 2010 – 2025	26
5.1 Monitoring of sanitation services	26
5.2 Community participation	26
5.3 Private sector involvement.....	27
5.4 Communication.....	27
CHAPTER 6 : STRATEGY OF SANITATION GOVERNANCE 2010 – 2025	29
6.1 Development of Tim Sanitasi.....	29
6.2 Strengthening local regulations for Banda Aceh sanitation development	29
6.3 Funding strategy	31
6.4 Project preparation and budgeting process	31
Appendix: Collective Declaration on Sanitation Development	32

LIST OF FIGURES

Figure 1-1	Process and relation of the CSS and other planning documents	1
Figure 2-1	Map of Banda Aceh population density distribution based on the population data 2007	4
Figure 2-2	Flow process of the city planning and budgeting process	5
Figure 2-3	Organizational structure of Tim Sanitasi Banda Aceh.....	6
Figure 2-4	Banda Aceh land use 2005	7
Figure 2-5	Influence of the Banda Aceh city development to Aceh Besar Regency	8
Figure 2-6	Banda Aceh spatial planning 2026.....	9
Figure 4-1	Result of priority setting for water supply development based on 2007 population density data	13
Figure 4-2	Distribution of NRW reduction program areas up to 2009.....	14
Figure 4-3	Water supply distribution network of PDAM Tirta Daroy 2009.....	15
Figure 4-4	Priority setting for wastewater management in Banda Aceh based on 2007 population data	17
Figure 4-5	Phased implementation of offsite sanitation system in Banda Aceh up to 2025.....	18
Figure 4-6	Banda Aceh drainage zones and rehabilitation schedule for main drains	19
Figure 4-7	Distribution of the micro drainage type 1 in Banda Aceh (location of pilot areas)	20
Figure 4-8	Priority setting for micro drainage system in Banda Aceh based on 2007 population data	21
Figure 4-9	Regular collection and transport of solid waste in Banda Aceh.....	23
Figure 4-10	Priority setting for solid waste management in Banda Aceh based on 2007 population data	24

LIST OF TABLES

Table 2-1	Population density classification in Banda Aceh	3
Table 4-1	Micro drainage classification	19
Table 4-2	Summary of long term sanitation development plan in Banda Aceh.....	25

GLOSSARIES

AMPL	Air Minum dan Penyehatan Lingkungan – Water Supply and Environmental Sanitation
APBK	Anggaran Pendapatan dan Belanja Kota – City budget
BRR	Badan Rekonstruksi dan Rehabilitasi Aceh – Nias – Aceh – Nias Rehabilitation and Reconstruction Agency
CSS	Citywide Sanitation Strategy
DED	Detailed Engineering Design
DPRK	Dewan Perwakilan Rakyat Kota – City Council
Gampong	Desa - Village
Geutchik	Kepala Desa – Village Head
IPA	Instalasi Pengolahan Air – Water Treatment Plant
IPAL	Instalasi Pengolahan Air Limbah – Wastewater Treatment Plant
IPLT	Instalasi Pengolahan Lumpur Tinja – Septage Treatment Plant
MDGs	Millenium Development Goals
Musrenbang	Musyawarah Perencanaan Pembangunan – Consultative Development Planning Meeting
NRW	Non Revenue Water
PDAM	Perusahaan Daerah Air Minum – Municipal Water Supply Company
Qanun	Peraturan Daerah – Local regulation
Renstra	Rencana Strategis – Strategic Plan
RPJM	Rencana Pembangunan Jangka Menengah – Medium Term Development Plan
RPJP	Rencana Pembangunan Jangka Panjang – Long Term Development Plan
RKPK	Rencana Kerja Pembangunan Kota - City Government Activity Plan
SKPK	Satuan Kerja Perangkat Kota – City Government Agency
SNI	Standar Nasional Indonesia – Indonesian National Standard
SPM	Standar Pelayanan Minimum - Minimum Service Level
SOTK	Struktur Organisasi Tingkat Kota
UNDP	United Nations Development Program
WWTP	Wastewater Treatment Plant
WTP	Water Treatment Plant

CHAPTER 1 : INTRODUCTION

1.1 Background

Citywide Sanitation Strategy (CSS) is a planning document which is used to give guidance on the implementation of a comprehensive, sustainable and participatory city sanitation development in order to achieve minimum sanitation service level refers to the Minimum Service Standard (SPM - Standar Pelayanan Minimum), the Millennium Development Goals (MDGs) and other regulations issued by central and local government. Particularly for Banda Aceh, the CSS document consists of three volumes with the following composition:

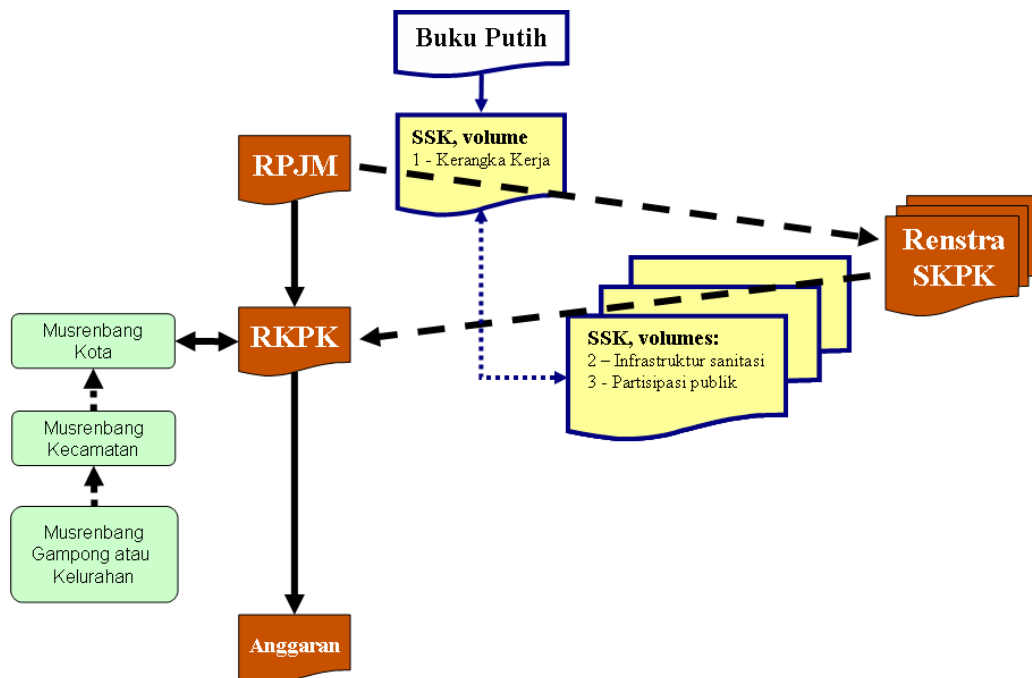
- Volume 1: Framework of Sanitation Development
- Volume 2: Strategic Development of Sanitation Infrastructure
- Volume 3: Strategy on Public Participation

The CSS Volume 1 describes the Banda Aceh long term sanitation development until 2025. Main users of this volume are the Mayor, Head of Dinas, Board and Director at the city and provincial level and related Directorate Generals in central government. The CSS Volume 2 and 3 give more detail explanation on the strategy and its annual action plan which is divided into three period; short term, medium term and long term strategy. Sanitation governance strategy is described briefly in the Chapter 6 of this document considering the ongoing internal discussion about this issue within the Tim Sanitasi. The sanitation governance strategy was prepared based on the Sea Defense Consultants (SDC) comprehensive study titled “*Needs and Opportunities for Sanitation Governance in Banda Aceh, 2009*”. Possible funding sources for costs of sanitation development activities which are indicated in the CSS Volume 2 and 3 will be done further during preparation of the RKPK (Rencana Kerja Peringkat Kota).

As an operational document of RPJMK especially on sanitation sector, CSS has accommodated Renstra SKPK and it's expected to be one of the bases for preparation of RKPK sanitation sector.

Relation of the CSS with other city planning documents is illustrated in the following figure.

Figure 1-1 Process and relation of the CSS with other city planning documents



1.2 Goal and target

The CSS Volume 1 gives brief description on the long term vision of Banda Aceh sanitation development. This volume also contains systematically prepared priority setting for Banda Aceh sanitation development and action planning to achieve the sanitation targets. Detailed strategy is available in the CSS Volume 2 and 3.

1.3 Legal basis

Preparation of the CSS has the following legal basis:

- 1) Undang-Undang Dasar Republik Indonesia Tahun 1945;
- 2) Undang-Undang Nomor 17 Tahun 2003 tentang Keuangan Negara;
- 3) Undang-Undang Nomor 25 Tahun 2004 tentang Sistem Perencanaan Pembangunan Nasional;
- 4) Undang-Undang Nomor 32 Tahun 2004 tentang Pemerintahan Daerah;
- 5) Undang-Undang Nomor 33 Tahun 2004 tentang Perimbangan Keuangan antara Pemerintah Pusat dan Pemerintahan Daerah;
- 6) Peraturan Pemerintah No. 65 Tahun 2005 tentang Standar Pelayanan Minimum¹ (SPM);
- 7) Surat Edaran Mendagri Nomor 050/2020/SJ tentang Petunjuk Penyusunan Dokumen Rencana Pembangunan Jangka Panjang (RPJP) Daerah dan Rencana Pembangunan Jangka Menengah Daerah (RPJMD);
- 8) Qanun No. 2 tahun 2008 tentang Struktur Organisasi Kerja Tata Pemerintah Kota Banda Aceh.

1.4 Document lay out

This document describes the sanitation development strategy in six chapters. The following five chapters are an addition from the first chapter, introduction.

- **Chapter 2** gives explanation on the general description of the City of Banda Aceh and its city spatial planning;
- **Chapter 3** contains general strategy of sanitation development which consists of sanitation vision and mission, objective and target, and general policy of sanitation development;
- **Chapter 4** explains about strategic infrastructure development for water supply, wastewater, neighborhood drainage and solid waste up to 2025;
- **Chapter 5** gives illustration on strategy to improve public participation for long term sanitation development, and;
- **Chapter 6** provides explanation concerning strategy on sanitation governance up to 2025.

¹ Until today, the SPM which refers to Government Regulation No. 65 Year 2005 has not been determined yet. But in the preparation of this document, this draft of SPM has become one of the basis.

CHAPTER 2 : GENERAL DESCRIPTION OF THE CITY AND ITS DEVELOPMENT PLAN

2.1 Administrative boundary and demographic condition

In 2007, number of population in Banda Aceh was 217.940 person as recorded by BPS Banda Aceh. Population density in Banda Aceh has been classified and calculated (in village level) according to the following classification:

Table 2-1 Population density classification in Banda Aceh






Density (pop/ha)	Classification	Color	Percentage to total	
			% area	% population
< 25	Rural		48,55%	16,78%
25 – 100	Peri-urban		47,81%	67,68%
100 – 175	Urban low		3,32%	12,94%
175 – 250	Urban medium		-	-
>250	Urban high		0,33%	2,60%

Figure 2-1 shows distribution of population density in Banda Aceh according to the above classification.

2.2 City governance

Planning and budgeting process in a municipal government follows a flow chart in Figure 2-2 in which RPJM plays a strategic role in the medium term planning. Specifically in the sanitation sector, RPJM Banda Aceh 2007 – 2012 mentions that one of grand strategies to achieve city vision and mission (Banda Aceh vision and mission can be seen in Chapter 3) is development of city infrastructure to support tourism (see Box 1).

Box 1: Banda Aceh development grand strategy

(detailed activities for the grand strategy are only provided for point 4. Detailed activities for another grand strategies are not presented in this box)

1. To established a trusted government;
2. Human resouces quality improvement;
3. Invovlement of community active participation in development and governance;
- 4. Development of city infrastructure to support tourism;**
 - a. Tourism objects and commercial area are completed with praying room, information center, water supply, drainage system, sanitation, open and green space, public facilities and transportaion;
 - b. Development of city transpotation and drainage infrastructure;
 - c. Banda Aceh free from garbage all the garbage has been processed into product with added value;
 - d. Banda Aceh has an efective mitigation disaster system.
5. To develop people's economy;

Source: RPJM Kota Banda Aceh, 2007 – 2012

Figure 2-1 Map of Banda Aceh population density distribution based on the population data 2007

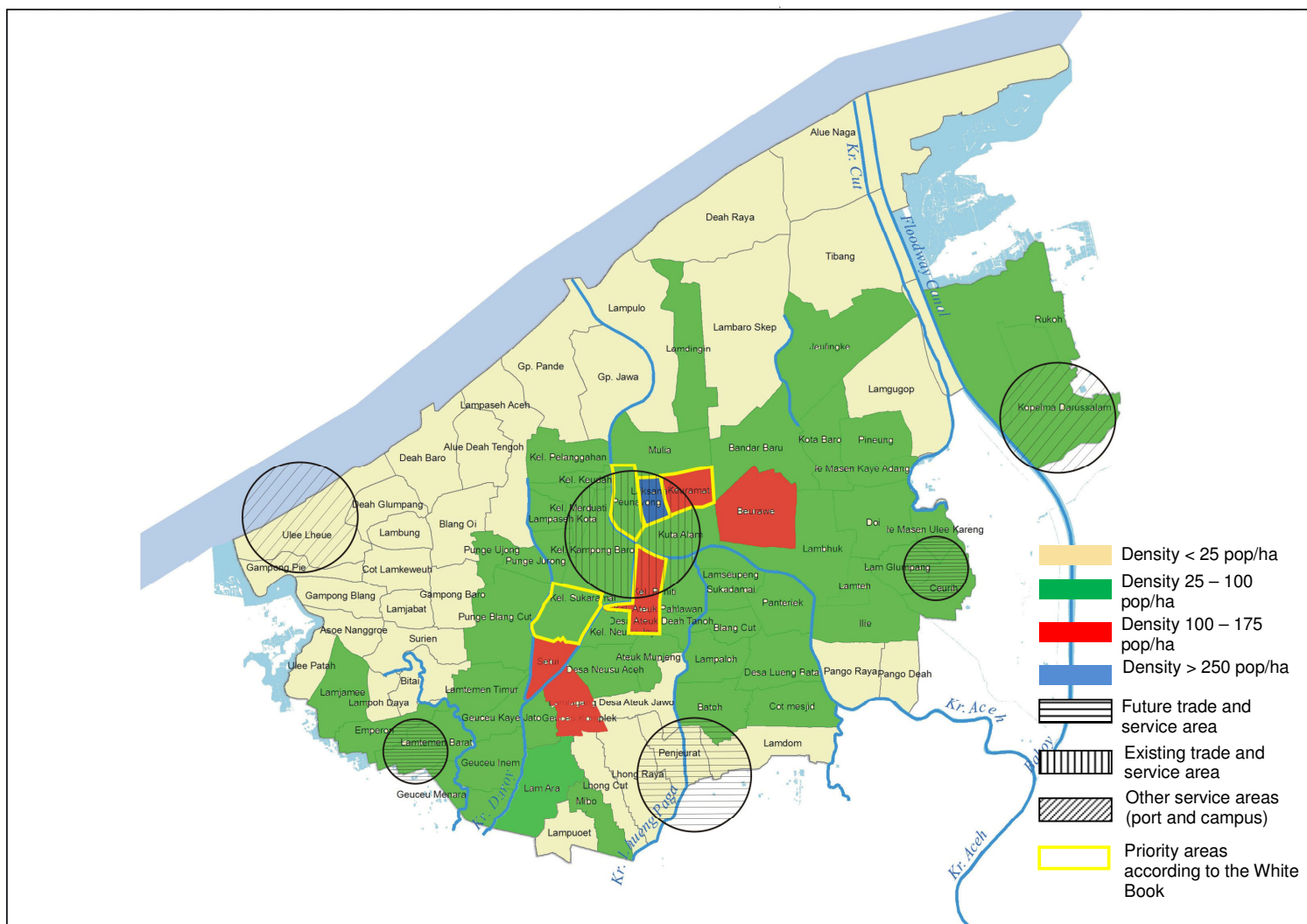
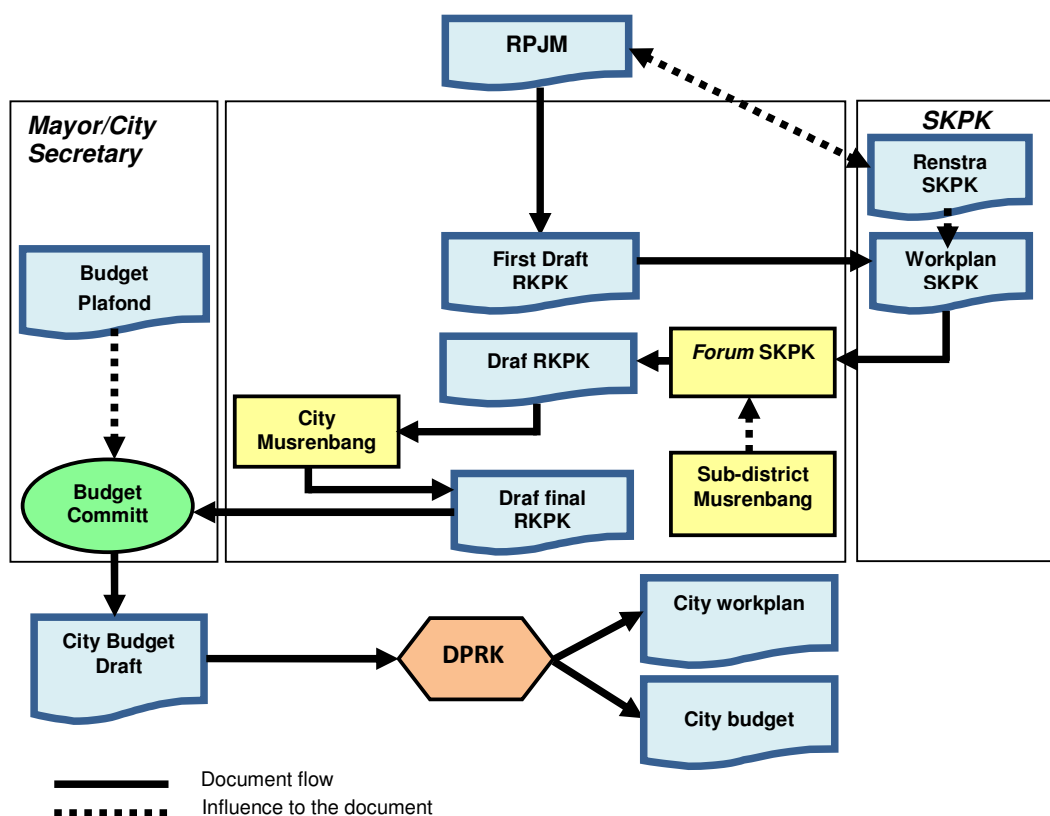


Figure 2-2 Flow process of the city planning and budgeting process



To achieve the city vision and mission, Municipal Government of Banda Aceh has prepared a local regulation (qanun) concerning Struktur Organisasi Tingkat Kota (SOTK). The old version of the qanun has been revised in 2008 through Qanun No. 2 year 2008. According to the qanun of SOTK, sanitation activities are spreaded out in several dinas/SKPD/board. Intensive coordination between Dinas/SKPD/bord is required to have a sustainable and comprehensive sanitation development.

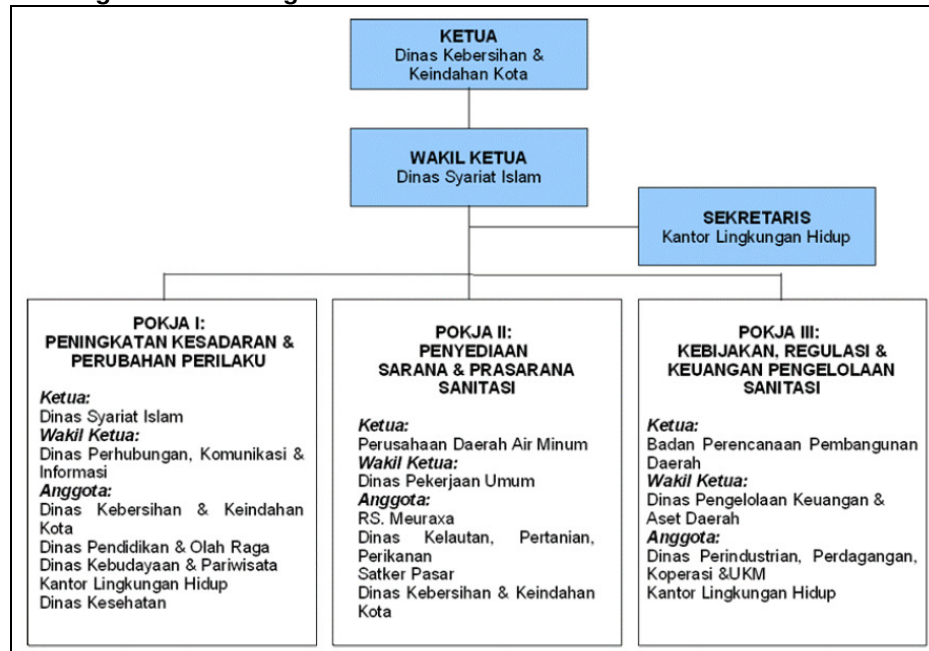
As a respond for the acceleration of the sanitation development, Mayoral Decree No. 304 year 2008 established Tim Sanitasi Kota Banda Aceh. Brief description of the task and responsibility of Tim Sanitasi are as follows: (i) to do sanitation studies, (ii) to formulate annual sanitation action plan, (iii) to prepare city sanitation strategies (CSS), (iv) sanitation socialization, (v) to coordinate with related Dinas at the city level and Pokja AMPL at the provincial level, (vi) coordination with neighborhood region (Aceh Besar Regency). Organizational structure of Tim Sanitasi can be seen in Figure 2-3.

Box 2: Tim Sanitasi Kota Banda Aceh

Tim Sanitasi Kota Banda (City Sanitation Working Group), which was established in 4 November 2008, has gave important contribution for the development of comprehensive sanitation in Banda Aceh. With the support from GTZ supported project SLGSR and Sea Defence Consultants (SDC), Tim Sanitasi has been finalized the Sanitation White Book which describes Banda Aceh existing sanitation conditions and problems.

Tim Pelaksana Sanitasi comprises of 13 SKPK. Tim Pelaksana Sanitasi is directed by Tim Pengarah Sanitasi which consists of Head of SKPK and headed by the City Secretary. Currently, Tim Sanitasi has an office at Gedung Dinas Kebersihan dan Keindahan Kota Banda Aceh where all regular meetings are held and all sanitation documents are stored and organized.

Figure 2-3 Organizational structure of Tim Sanitasi Banda Aceh



2.3 Banda Aceh City Development

Figure 2-4 provides information about the existing land use (2005). Trade and service (commercial) areas are concentrated in two regions; Kelurahan Peunayong and Kelurahan Kampong Baro, while residential areas are distributed in the south side of the city.

Development of a city will not be limited by administrative boundaries. Interaction with fringe areas will significantly influence city development patterns. Sogreah describes (as an example of this interaction) that Banda Aceh water supply development is strongly affected by interaction of fringe areas in Aceh Besar. In addition, there are sanitation infrastructures which are used to serve Banda Aceh but located in Aceh Besar Regency administrative area. Figure 2-5 shows location of infrastructures in fringe areas.

Due to those interactions, it is important to establish cooperation and coordination between Banda Aceh and Aceh Besar especially in sanitation sector. Two activities have been planned in order to achieve this cooperation and coordination objectives:

- Integration of activities between Pokja AMPL in Aceh Besar and Tim Sanitasi Banda Aceh will be intensified as a short term activity,
- A join program for sanitation development between the two regions will be established in the long term.

Sanitation strategies in this document has been prepared with consideration on the Banda Aceh spatial planning 2026 which is presented in Figure 2-6. One of the main issues in this spatial planning is development plan of a new commercial area in the south side of Banda Aceh (Batoh area) and development of two areas considered as city sub-center for trades and services. Medium and long term sanitation development strategies should always consider this development plan.

In the following pages, related maps concerning Banda Aceh city development are presented.

Figure 2-4 Banda Aceh land use 2005

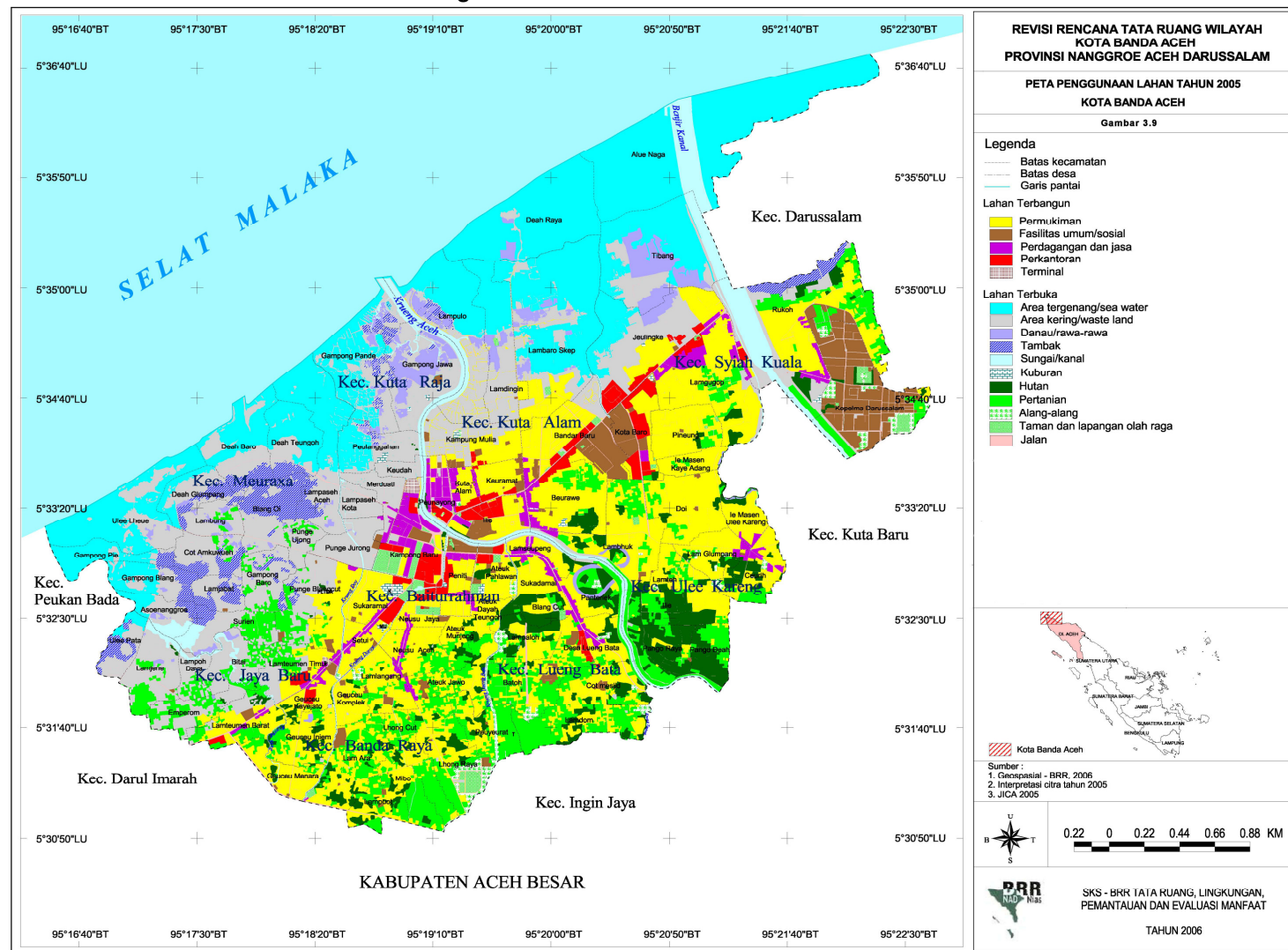
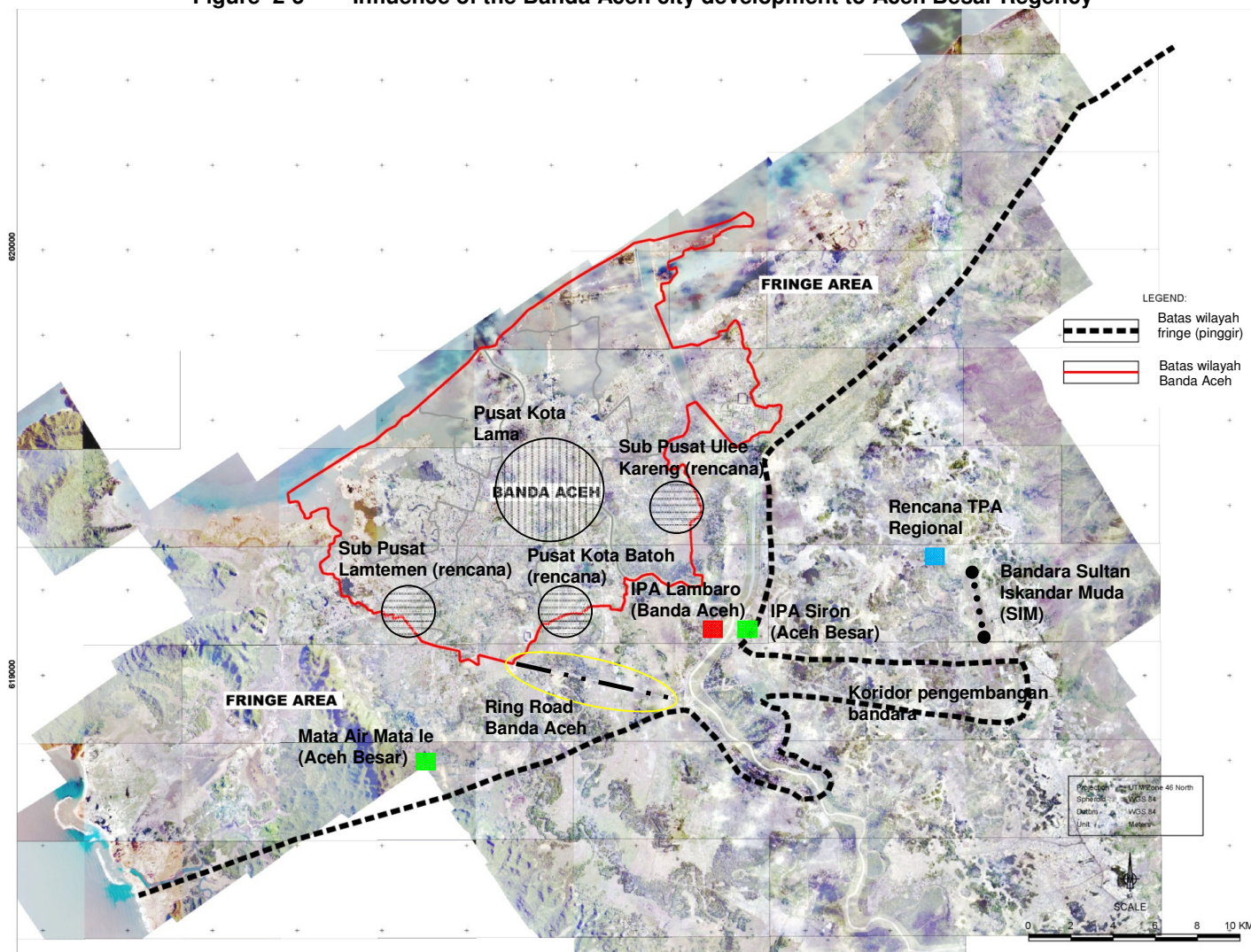


Figure 2-5 Influence of the Banda Aceh city development to Aceh Besar Regency



CHAPTER 3 : OVERALL STRATEGY FOR CITY SANITATION DEVELOPMENT

3.1 Sanitation vision and mission

Banda Aceh sanitation vision and mission has been prepared to give direction on the development of sanitation in order to achieve city vision and mission. Both city vision and mission and sanitation vision and mission are presented in the following table.

City vision and mission (based on Banda Aceh Medium Term Development Plan/RPJM)	Sanitation vision and mission (developed by Tim Sanitasi)
<p>Vision: Islamic tourism city in Indonesia</p> <p>Mission:</p> <ul style="list-style-type: none">• Improve quality of the Islamic way implementation• Develop Islamic tourism• To improve quality and quantity of the city infrastructure, environment and residential• To develop economic	<p>Vision: Together to create better sanitation condition</p> <p>Mission:</p> <ul style="list-style-type: none">• Increase facilities and access to health service, water supply and sanitation to the all city resident• To creates safety, comfort, happiness and Islamic for the city resident• To improve awareness on clean and healthy behavior• To increase budget allocation for sustainable sanitation development• To increase role of the related institutions to implement sanitation program• To increase knowledge on the importance of sanitation

Note: City mission number 4, *To improve quality and quantity of the city infrastructure, environment and residential*, is highly relevant with the commitment on sanitation development as mentioned in the sanitation vision and mission.

3.2 Objective and target of sanitation development

Sanitation development in Banda Aceh has an objective to improve environmental quality through improvement on infrastructure and overall sanitation services in order to improve community quality of life. The development will focus in Banda Aceh area but still give any option for cooperation with other regions.

3.3 Sanitation development general policy

In order to achieve the above mentioned objective and target, 10 general policies have been prepared as presented in the Sanitation White Book version 1. These policies are:

1. The city government allocates 7,5% from the City Budget (APBK) for sanitation investment and Operation and Maintenance (O&M) costs up to 2012;
2. Institutional strengthening of Tim Sanitasi;
3. Strengthening of the sanitation leading sector in the effective management and controlling system;
4. Mobilization of non-APBK funds;
5. Private sector involvement in the urban sanitation management;
6. Phased development from onsite to offsite sanitation system in the priority areas and CBD;
7. Management of solid waste is directed to the implementation of productive activities (3R – including composting and solid waste reuse);
8. Waste from small and medium enterprises can be controlled through business permit and SPM;
9. Small and medium enterprises are equipped with private WWTP according to SNI;
10. Public facilities, food and beverage processing and residential areas comply with hygiene and sanitary requirements.

3.4 Current city policy

Recently, the Mayor of Banda Aceh just released a *Visit Banda Aceh Year 2011 – 2012* program. With this program, demand for acceleration on sanitation development becomes high. In relation to this program, improvement of environment health condition has been set as one of development priorities in Banda Aceh in 2010 with focus on non-physical activities (i.e. behavioral change program) which will be the basis for physical activities in the coming years. This program indirectly becomes one of accelerators for the need of sanitation development acceleration in Banda Aceh.

CHAPTER 4 : STRATEGIC DEVELOPMENT OF SANITATION INFRASTRUCTURE 2010 – 2025

4.1 Water supply

Short-term objective of piped water supply development in Banda Aceh is 80% service coverage with a minimum consumption of 100 l/capita/day as mentioned in the MDGs. While for a long-term objective, it is planned to serve the whole city of Banda Aceh with potable water.

To achieve the above objective, priority areas have been set based on several criteria, such as: land use, population density, groundwater condition and ability to pay for water. Result of the priority setting is presented in Figure 4-1. Complete description on the process and criteria of priority setting is available in the CSS Volume 2.

Currently, service coverage of the PDAM is 66% from the total Banda Aceh population even though the water supply distribution network has covered 85% of Banda Aceh area. Based on that condition, development and improvement of water supply services are focused on production sector, distribution network and non revenue water reduction through following activities. These activities are planned as short-term activity.

- Implementation of Block Renovation Program (BRP) to reduce Non Revenue Water (NRW). Until this moment, 12 areas have been implemented the BRP. These areas are shown in Figure 4-2. Twenty (20) new areas will be added in 2010. Through this program, NRW can be reduced to the level of 40%. Reduction of NRW will increase availability of water for new customers.
- Reactivation and legalization of house connections from the rehabilitation and reconstruction program after tsunami to reduce administrative losses;
- Rehabilitation of the damaged distribution networks due to city infrastructures development;
- Optimization of distribution network constructed by donors (see Figure 4-3 for the water supply distribution network map). This activity is important since one of PDAM's problems is many pipes are not connected to the existing PDAM's distribution network;
- Water supply service improvement in tourism areas, port and terminal, and other public places (ie. campus);
- Payment of the water bill through banks;
- Increasing capacity of the raw water extraction by construction of additional transmission pipes from the Kr. Aceh intake to the Lambaro Water Treatment Plant (WTP) in 2010.

Medium and long-term strategies for water supply service improvement consists of the following activities:

- Up-scaling of the Lambaro WTP from its existing capacity of 435 l/s in order to meet future Banda Aceh water demand;
- New and potential raw water sources since there is a possibility of water quality and quantity degradation of Kr. Aceh.

Figure 4-1 Result of priority setting for water supply development based on 2007 population density data

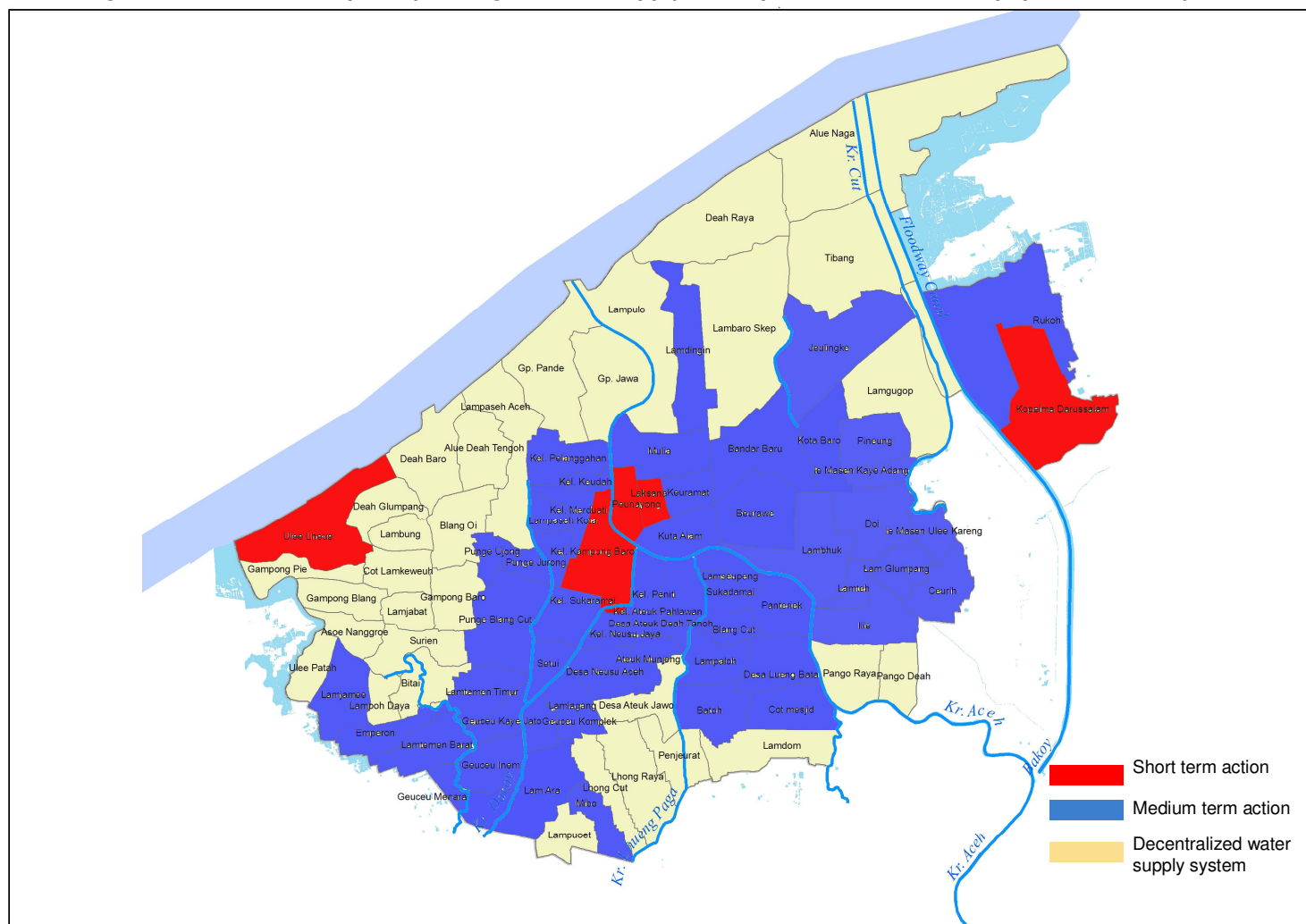


Figure 4-2 Distribution of NRW reduction program areas up to 2009

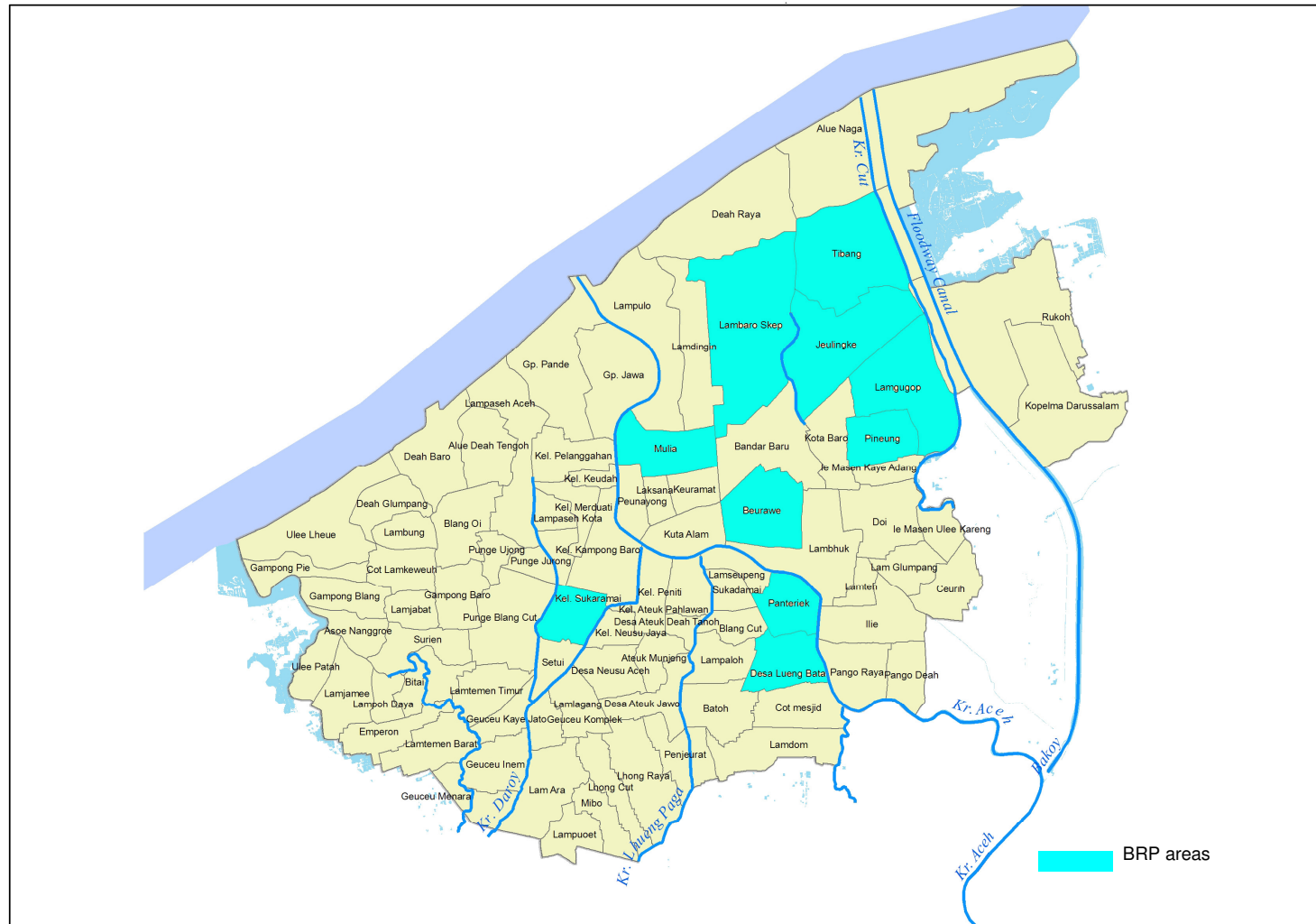


Figure 4-3 Water supply distribution network of PDAM Tirta Daroy 2009



4.2 Wastewater

In wastewater management aspect, at the moment Banda Aceh operates one Septage Treatment Plant (STP) located in Gampong Jawa and supported by several desludging trucks. There is no sewerage system in Banda Aceh.

Several initiatives to develop implementation of proper onsite system have been done. One of these initiatives is legislation process to include onsite sanitation (septic tank) requirement according to SNI in the building permit process. This legislation process is currently ongoing between Dinas PU Kota and PU Province, KPTSP and facilitated by Tim Sanitasi. Besides this legislation process, treatment of point source pollution have been started by using DEWATS and Biodigester technology. Slaughtering house is one of examples which has implemented Biodigester technology for their wastewater treatment system. Recently, wastewater treatment plant at Meuraxa Hospital is being constructed which is funded by DAK (Special Allocation Fund) KanLH.

Other important point source pollution is Rusunawa which is under construction. Attention to the wastewater management from Rusunawa has been given by Dinas PU Kota in cooperation with Satker Pembangunan Rusunawa to ensure proper treatment for grey and black water.

The old city center and sanitation priority areas are on the highest priority for development of offsite sanitation system in Banda Aceh. Related to this, Dinas PU through DAK will develop a communal septic tank in the old city center (Kelurahan Peunayong) in 2010. This plan is one of Pemko's efforts for the phased implementation of an offsite sanitation system in Banda Aceh.

In this CSS document, a priority setting for wastewater management has been prepared based on four (4) criteria; (i) population density, (ii) land use characteristic, commercial or residential area, (iii) health risk, and (iv) groundwater level. Detailed description on these criteria and its analysis is available in the CSS Volume 2. Figure 4-4 presents result of the priority setting for wastewater management in Banda Aceh. Drainage zone boundaries have been added into the map to have more clear information.

An offsite sanitation system development plan has been developed based on the priority setting result and presented in Figure 4-5. According to the plan, at least four (4) WWTPs are required to cover all areas.

Figure 4-4 Priority setting for wastewater management in Banda Aceh based on 2007 population data

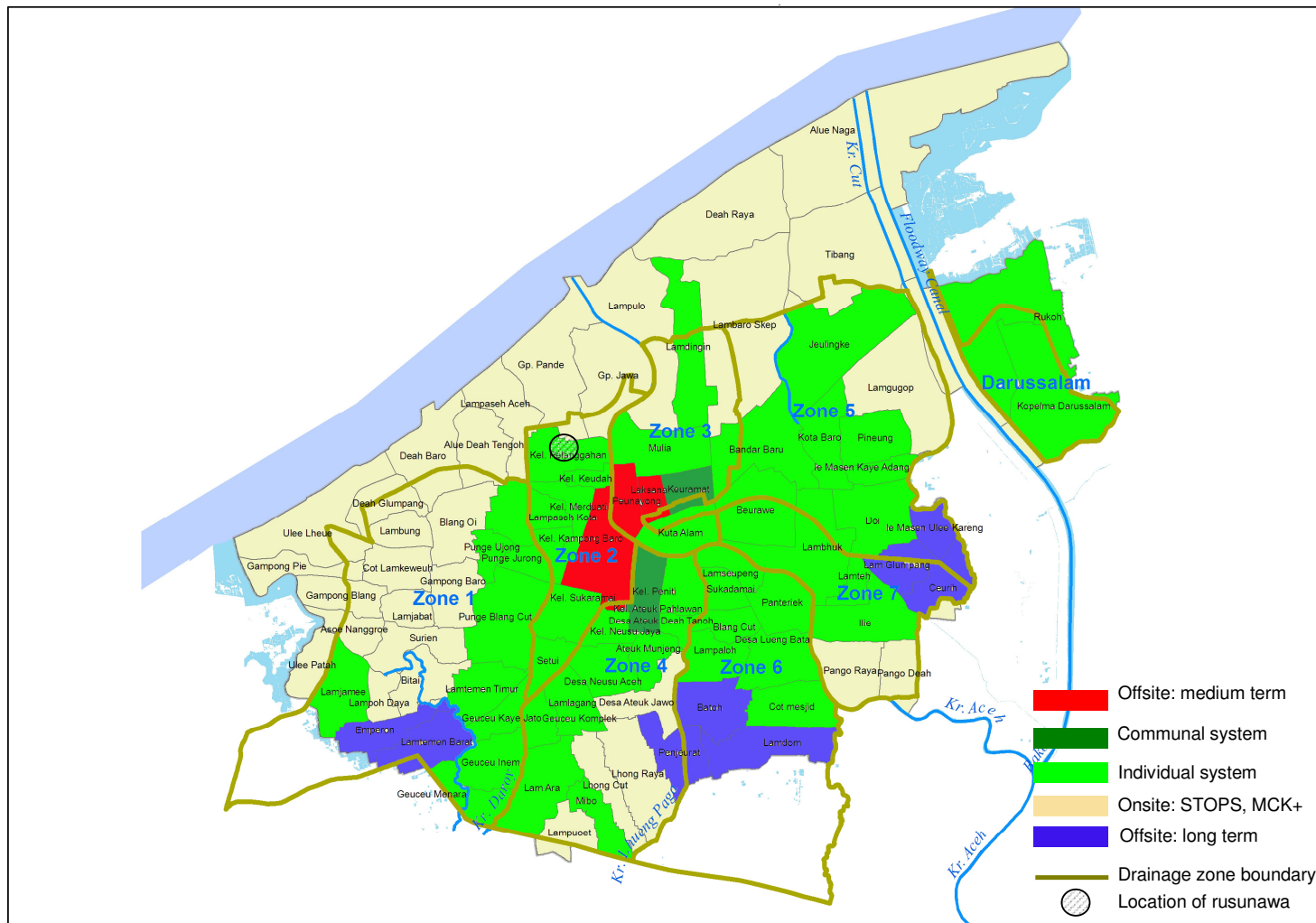
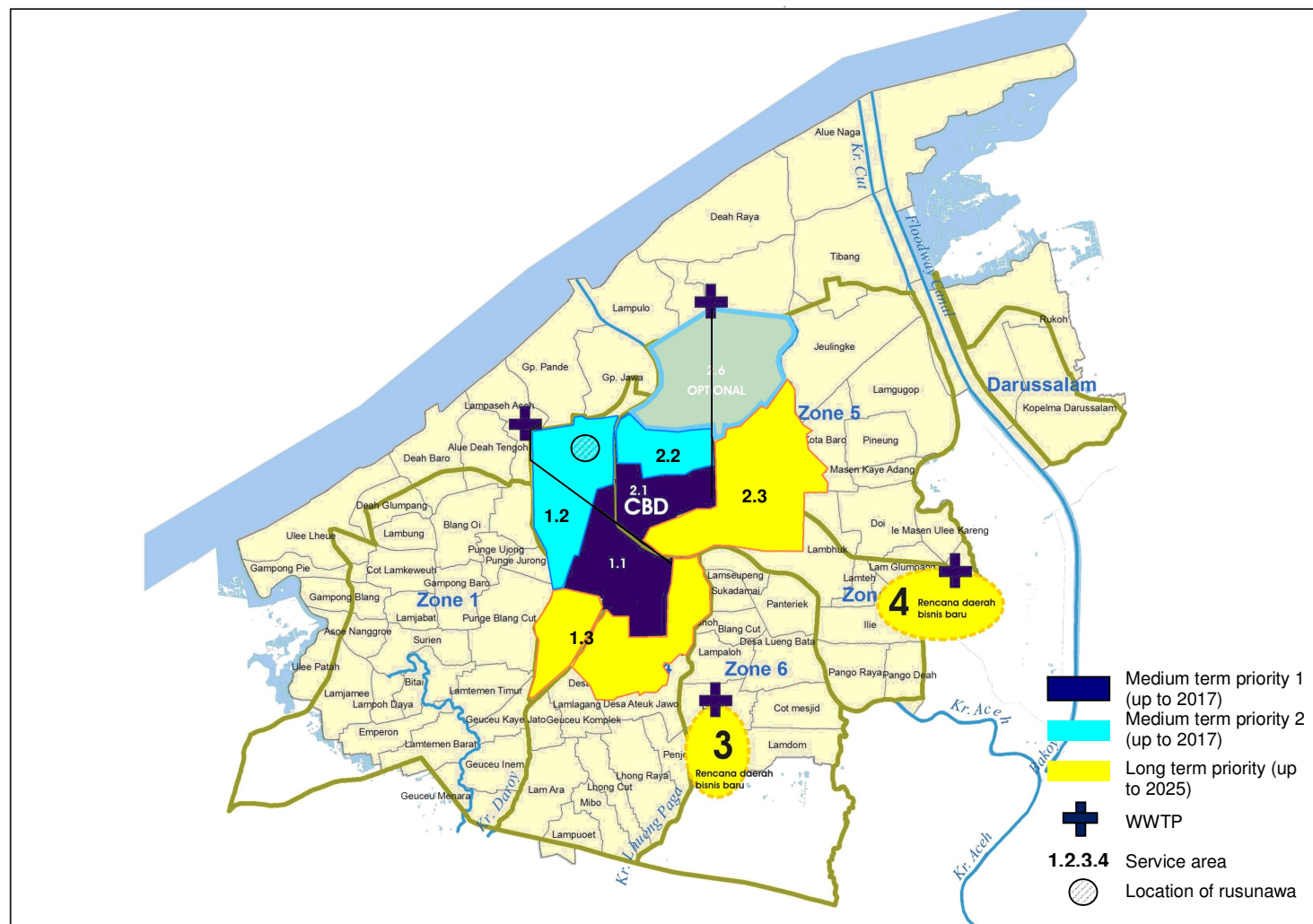


Figure 4-5 Phased implementation of offsite sanitation system in Banda Aceh up to 2025

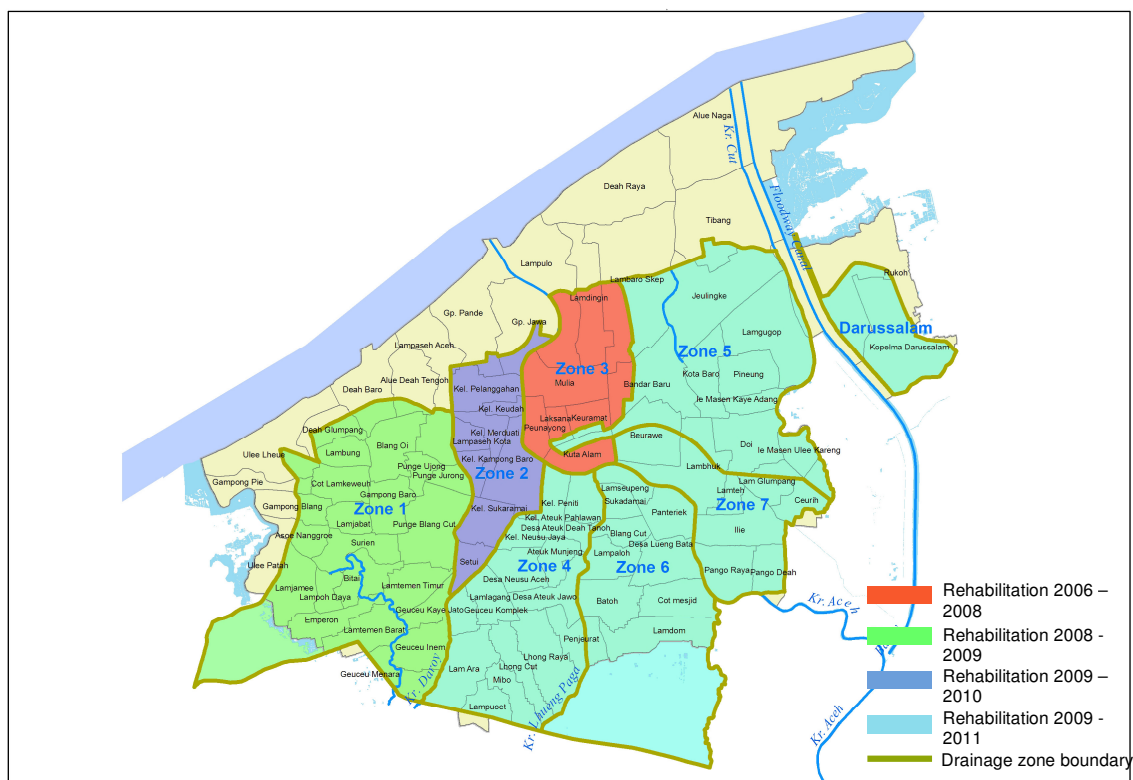


4.3 Drainage

a. Major drainage system and main drains

Banda Aceh applies eight (8) drainage management zones. Currently, rehabilitation of main drains is ongoing in all zones with support from many parties. Summary of the ongoing drainage rehabilitation is presented in the following figure. Completion of the rehabilitation works for the major drainage system is expected in 2011.

Figure 4-6 Banda Aceh drainage zones and rehabilitation schedule for main drains



b. Micro drainage system

Pilot project for inventory and rehabilitation plan for micro drainage networks is being done in three areas; Peuniti, Peunayong and Lamprit. Total length of drain in the pilot areas is 81,6 km or equal to 7% from total length of drain in Banda Aceh. Total volume of sediment which requires cleaning is 13.851 m³ and the complete cleaning is estimated to take 1,5 months.

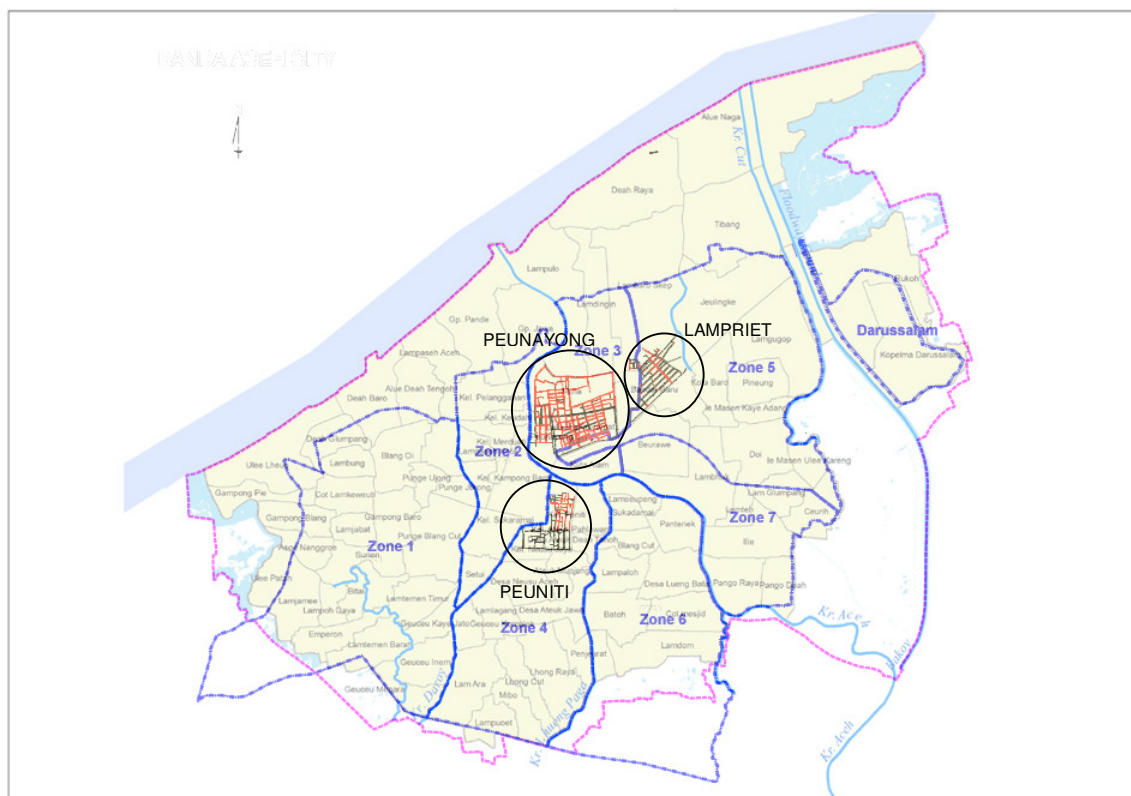
Based on the pilot project experience, micro drainage classification has been developed. The classification is presented in Table 4-1.

Table 4-1 Micro drainage classification

Type	Classification	Area (Ha)	Estimated length of drain (km)
Type 1	L > 350 m/ha	641	279
Type 2	200 < L < 350 m/ha	2.496	686
Type 3	L < 200 m/ha	1.167	146
Total		4.304	1.111

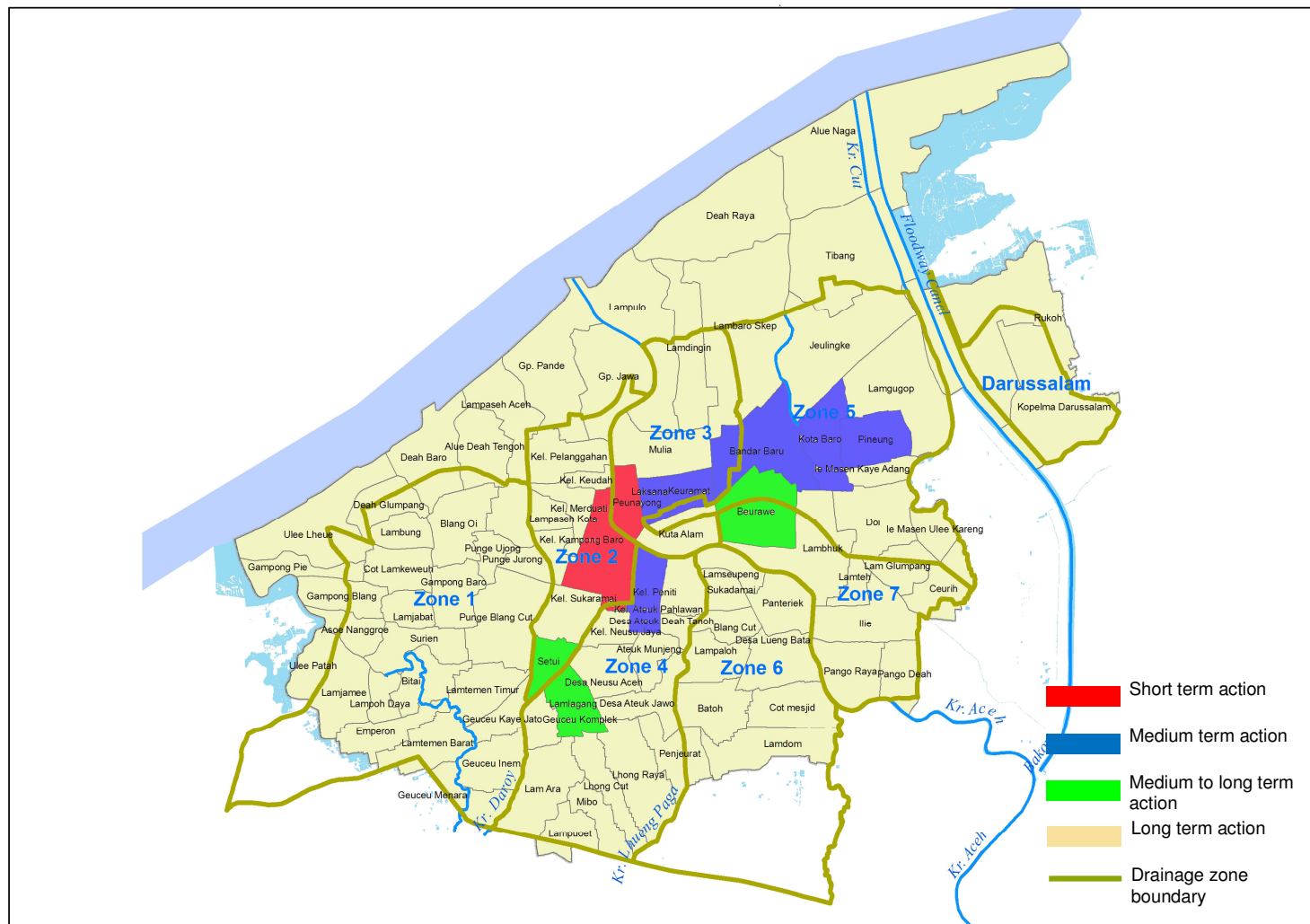
Figure 4-7 provides distribution of those three types of micro drainage according to the above classification in Banda Aceh.

Figure 4-7 Distribution of micro drainage type 1 in Banda Aceh (location of pilot areas)



To develop micro drainage system in Banda Aceh, priority setting has been prepared based on five criteria refer to the SPM; population density, tidal influence (rob), land use (trade and service area and commercial area), inundation area and health risk. Detailed explanation on the criteria and its analysis process is given in the CSS Volume 2. Figure 4-8 gives result of the priority setting.

Figure 4-8 Priority setting for micro drainage system in Banda Aceh based on 2007 population data



4.4 Solid waste

a. Solid waste generation

Solid waste generation will be reduced 20% from the existing condition in medium-term by intensifying 3R (*Recycle, Reuse, Reduce*)² activities. Objective of this reduction is to reduce pressure on the final disposal site in order to extend lifetime of the disposal site.

The reduction will be achieved by 2012 through the following activities:

- Develop the pilot project on plastic recycling in order to develop solid waste recycling in general,
- Further development of household composting,
- Develop solid waste separation at source activities. These activities will support reduction of solid waste generation and will directly influence composting and recycling activities.

b. Waste collection and transport

Percentage of waste collection will be increased to 100% in the long run. This will be done by increasing the service coverage from 76% (2008) to 100% by 2012. Figure 4-9 describes the existing solid waste collection and transport in Banda Aceh (source: Solid Waste Masterplan Banda Aceh).

In addition to the increasing of service coverage, collection frequency of 2 times a week is planned for all areas in Banda Aceh (as required by the SPM).

c. Final disposal

Currently, final disposal site for solid waste in Banda Aceh is located in Gampong Jawa. The disposal site has a capacity of 160 tons/day with a total area of 21 hectares. It is estimated that by 2010 lifetime of the Gampong Jawa disposal site will finish and a new disposal site is required.

To anticipate this problem, development of a regional disposal site in collaboration with Aceh Besar has been started. The new regional disposal site will be located in Aceh Besar. A detailed plan (DED) has been completed and communication between Banda Aceh and Aceh Besar is ongoing and intensified. This regional disposal site is planned for operation after 2010.

d. Medical waste

Medical wastes are still disposed in the Gampong Jawa disposal site. DKKK and UNDP are planning to develop a special cell for medical wastes in the Gampong Jawa disposal site. Coordination between Dinas (especially Department of Health and DKKK) will be improved to avoid mixing of medical wastes during transport process if separation has been done at source.

Besides the development of a special cell at the Gampong Jawa disposal site, the use of incinerator at Meuraxa Hospital will be intensified. Improvement of the incinerator is required in order to accept medical wastes from other parties. In short-term Tim Sanitasi should facilitate cooperation on the usage of this incinerator.

e. Priority setting

Based on the criteria in the SPM, development areas for solid waste management can be identified. There are two (2) main criteria in the priority setting for solid waste management, which are land use (commercial or residential, tourist areas, ports and terminals as well as major public facilities such as college) and population density. Detailed explanation is available in the CSS Volume 2. Figure 4-9 presents result of the priority setting.

² *Recycle, Reuse, Reduce* (3R) dalam bahasa Indonesia dapat diartikan sebagai Mendaur ulang sampah, Menggunakan kembali sampah, dan Mengurangi timbulan sampah.

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Figure 4-10 Priority setting for solid waste management in Banda Aceh based on 2007 population data

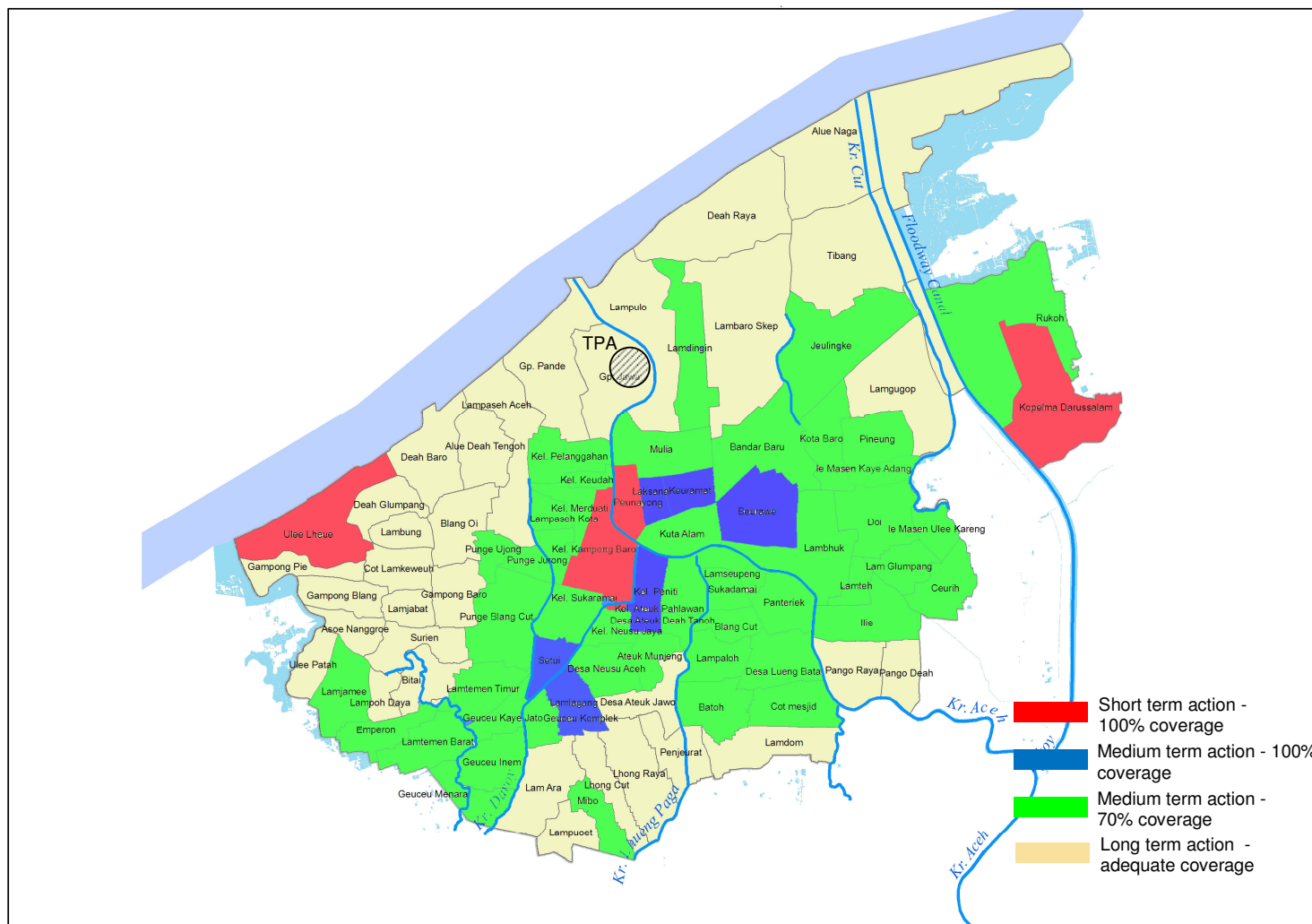
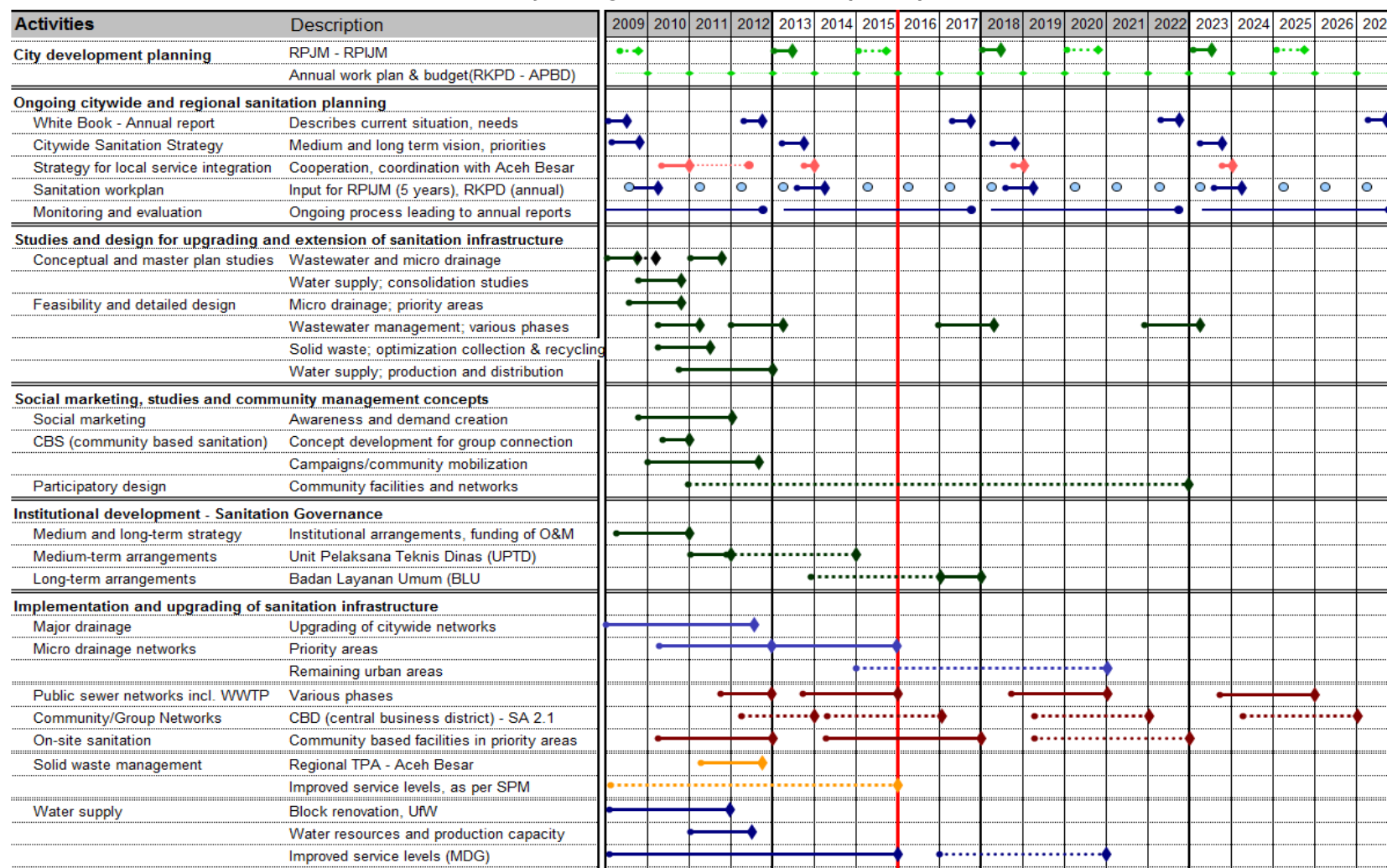


Table 4-2 Summary of long term sanitation development plan in Banda Aceh



CHAPTER 5 : STRATEGY ON PUBLIC PARTICIPATION 2010 – 2025

5.1 Monitoring of sanitation services

Issuance of UU Perlindungan Konsumen has increased bargaining position of customers. Pemko and sanitation services provider should give more attention in order to give better sanitation services to customers.

To improve sanitation services, feedback from beneficiaries is very important. This feedback is a result of independent sanitation services monitoring activities. Community monitoring needs to be developed since monitoring is very important for the improvement of sanitation services. This activities will be organized from the lowest level (village level) and will be available in all villages. Later on, a monitoring network will be established that will have more role than just a customer forum (forum pelanggan) which is already known in water supply sector.

Tim Sanitasi has a role as a catalisator to initiate development of this monitoring activities. Socialization in the level of village will be the short term action in parallel with preparation of a manual on independent monitoring and preparation of a reporting manual from the monitoring activities.

Initiative of this sanitation monitoring activity has gained responds at least from two Gampong (village). These responds mostly concerning poor condition of microdrainage which causes inundation problems. Tim Sanitasi has done several identification together with the Gampong and also facilitation and coordination to the related dinas to solve the inundation problems.

5.2 Community participation

Community participation is one of success keys on the sanitation development program. This participation is important since it increases sense of belonging from the community to the sanitation infrastructures that will sustain sanitation services at the end.

An important document concerning a statement of commitment from all city elements to involve and actively participated on the sanitation development program has been produced. This document is a “Deklarasi Bersama” which explicitly shows the commitment of all city elements to support and actively participated in the sanitation development based on their own potential and ability.

Based on this declaration, strategy to increase community participation is developed. In short term, it will be done through following activities:

- Strengthening activities which put beneficiaries in the whole decision making process of sanitation infrastructure development and management. This principle has been adopted during reconstruction and rehabilitation after Tsunami in “Petunjuk dasar pengelolaan sanitasi yang berkelanjutan” (see **Box 5** for detailed explanation).
- To support gotong royong as an alternative to ensure sustainability of sanitation services. An initiative to support gotong royong has been done in Ateuk Pahlawan which mainly focused on microdrainage cleaning (see **Box 4**). Replication in other areas in Banda Aceh is required.
- To establish Gampong Sadar Sanitasi to organize participation of the community from the lowest level of municipal government. Gampong Sadar Sanitasi is based on community participation in four subsectors: water supply, wastewater, drainage and solid waste. Competition on Gampong Sadar Sanitasi will increase motivation of gampong/village to improve their sanitation condition.
- Consolidate researches, developments, and technology option dissemination to support community empowerment. This strategy will be implemented by preparing a proper sanitation technology which can be used by the community as an implementation of informed choice principle.

Box 3: Banda Aceh Sanitation Declaration

Commitment for involvement from the city component in Banda Aceh is signed by a declaration which resulted from a seminar “*Pembangunan Sanitasi untuk Pelayanan Warga Kota Banda Aceh yang Lebih Baik*” on 3 – 4 August 2009. Two main aspects of the declaration are: (1) awareness from all city components about the importance of sanitation in order to improve community welfare through improvement of community health, and (2) support from city components on the acceleration of sanitation development. Scan of this declaration can be found in the appendix of this document.

Besides the short term strategy, the following strategy will be applied in medium and long term:

- Strengthening and give support to the community organization and gampong in planning, implementation, monitoring and evaluation of the sanitation services development program.
- To develop and strengthen development program for the youth. Membangun serta memperkuat program pembinaan bagi anak-anak di bidang sanitasi. Pembinaan usia dini ini menjadi salah satu kunci bagi adanya keterlibatan masyarakat dalam jangka panjang. Pembinaan ini dilakukan baik melalui pendidikan formal maupun pendidikan non-formal. Kegiatan yang dilakukan untuk mendukung strategi ini adalah pembentuk sekolah³ sadar sanitai.

Box 4: Gotong royong in Ateuk Pahlawan, Banda Aceh

The process of gotong royong consists of the following seven (7) steps:

1. Identification of needs and priorities - How it can be improved
2. Mobilize and meet with community leaders
3. Plan activities and Organize support
4. Hari Gotong Royong
5. Publicity in the media
6. Evaluation and field inspection after cleaning
7. Follow up meetings with community

During the process of the Gotong Royong in Ateuk Pahlawan the following lessons were learned

- Neighbourhood drainage systems can be cleaned by local communities, whereas cleaning the main drainage systems, which generally has larger dimensions, is typically a task of the government
- A Gotong Royong is a process that needs to be facilitated
- A precondition is the commitment of community and Tim Sanitatsi
- Additional support is needed from Pemko to make Gotong Royong effective and motivate community
- Support from a Task Force Gotong Royong will improve the effectiveness of the Gotong Royong
- The Task Force Gotong Royong should be a well organized and operating professionally
- This Task Force requires the mandate to provide information and equipment (trucks) to communities
- The Task Force Gotong Royong should understand the problem and be able to explain what the community can do themselves
- Community can provide in-kind contribution, consisting of labor, snacks, and tools
- Gotong Royong events are a good opportunities to improve awareness and commitment at community level, providing the opportunity to discuss issues regarding sanitation

5.3 Private sector involvement

Private sector and business involvement in the sanitation development need to be improved. In order to improve this active role, private sector participation approach in the routine sanitation management activities needs to be improved. Partnership with private sector can be done through a Joint Operation (JO) or by establishing a Joint Venture Company between government and local and/or foreign private.

In a smaller scale, replication of ongoing private involvement in sanitation sector Dalam skala yang lebih kecil, beberapa pengelolaan sarana sanitasi yang telah dilakukan dengan jalan melibatkan sektor swasta perlu diperluas. Contoh nyata dari kegiatan ini adalah pengelolaan fasilitas mandi dan kakus di Masjid Baiturrahman yang dijalankan dan dikelola oleh swasta.

Untuk mendukung visi misi kota dalam bidang pariwisata, penyediaan serta pengelolaan fasilitas toilet umum menjadi penting. Dalam jangka pendek, pengelolaan fasilitas ini dapat dikerjasamakan dengan swasta.

5.4 Communication

One of problems in the development and management of sanitation is community knowledge on the importance of sanitation is low.

Agar partisipasi masyarakat publik meningkat dalam pembangunan serta pengelolaan sanitasi, pengetahuan, kesadaran dan kepedulian terhadap arti penting sanitasi serta kelestarian lingkungan harus ditingkatkan.

In the short term, communication will be done by optimizing the available campaign and socialization media to deliver sanitation messages to the community/public. Some media that can be used, among

³ School is defined as any education institutions including Islamic Boarding School.a

other city websites, information on the village board, and optimize the role of the clergy and khotib Friday.

To ensure sustainability of this communication activity involvement of local institutions, both formal institutions and informal education, NGOs and other institutions, should be increased. This is important because socialization and campaign activities should consider diversity on customs, cultures, and habits in the targetted community. In addition, a citywide communication strategy should be developed.

CHAPTER 6 : STRATEGY OF SANITATION GOVERNANCE 2010 – 2025

6.1 Development of Tim Sanitasi

a. Long term role of Tim Sanitasi

Up to this moment, Tim Sanitasi has more roles in the sanitation development in Banda Aceh. During the workshop of CSS preparation in Medan on June 2009, Tim Sanitasi has produced ten reflections on the long term role of Tim Sanitasi as the respond of an input from Sekda Banda Aceh as chairman of Tim Pengarah Tim Sanitasi. These ten reflections are mentioned below:

- 1) Tim Sanitasi becomes an independent team which provides second opinion to the municipal government and it can be also act as a pressure group to improve sanitation services;
- 2) The existence of Tim Sanitasi should be felt by all elements in the City of Banda Aceh;
- 3) Tim Sanitasi can provide input to improve performance of SKPD;
- 4) Tim Sanitasi should report regularly (every two months) to Sekda Banda Aceh as the chairman of Tim Pengarah Sanitasi;
- 5) To reactivate regular meeting and reporting;
- 6) Strengthening commitment of Tim Sanitasi and commitment from each of the Head of SKPD on the development of city sanitation;
- 7) Regular reporting from each member of Tim Sanitasi to the head of SKPD. The report can be made in the form of Minutes of Meeting (MoM) which is prepared b
- 8) Pelaporan rutin dari masing-masing anggota Tim Sanitasi kepada kepala SKPK masing-masing. Laporan ini dapat dibuat dalam bentuk notulensi rapat yang disusun oleh salah satu anggota tim sanitasi yang dilakukan secara bergiliran. Copy dari laporan ini dapat dikirimkan ke Camat. Sebelumnya dilakukan sosialisasi terhadap para camat mengenai tim sanitasi;
- 9) Tim Sanitasi should prepare a sanitation action plan;
- 10) The need of cooperation between Tim Sanitasi and universities;
- 11) Tim sanitasi perlu dikenal di masyarakat agar dapat menangkap permasalahan sanitasi yang ada. Hal ini dapat dilakukan melalui: pembuatan stiker, pemanfaatan MIMS, media TV maupun radio dan baliho;

b. Strategy of Tim Sanitasi strengthening

Based on the above mentioned reflections, it is expected that the role of Tim Sanitasi become greater when compared to tasks and responsibilities as stated formally in the Mayoral Decree No. 304 Year 2008. In order to achieve this expectation, the following activities will be done:

- Institutional form of Tim Sanitasi until 2012 will remain as a task force which consists of representatives from various SKPK. In future, the institutional status of Tim Sanitasi might changes consideration the need of scope and membership of Tim Sanitasi in order to answer challenge of those ten reflections. One of the possible institutional forms that can be considered is Sanitation Board, although not limiting other forms of institutions (council, committee or remain as a task force).
- Strengthening of Tim Sanitasi begins with the preparation of a set of tasks and responsibilities for internal Tim Sanitasi (Tupoksi) to avoid overlap during with other agencies. This activity is conducted in 2009 and 2010.
- The development of Tim Sanitasi resources (both human and financial) will be done through:
 - Conduct training on facilitation and coordination;
 - Conduct training on sanitation budgeting;
 - On-the-job training through technical assistance activities from a team of experts;
 - Clarify budget allocation from APBK for Tim Sanitasi;
 - Cooperation with universities/academics in the context of capacity building for the member of Tim Sanitasi.

6.2 Strengthening local regulations for Banda Aceh sanitation development

a. Preparation of sanitation policies

Sanitation services policy should for the successful of sanitation development program. This policy will be in the form of local regulations (Qanun) refers to the SPM and the Millennium Development Goals (MDGs). In addition, the technical principles which has been formally issued will also be one basis for the preparation of this sanitation qanun (see Box 5 and 6).

The sanitation qanun will cover at least:

- SPM on water supply services;
- SPM on wastewater services;
- SPM on drainage services, and;
- SPM on garbage service.

b. Regular update for sanitation documents

Policy on periodic update of the sanitation documents (White and SSK) needs to be strengthened. This can be done by entering the policy into the formal rules and might become an input for the aforementioned sanitation qanun.

c. Village sanitation policy

In addition to the preparation of qanun, a village regulation about sanitation is also required. This village regulation will become operational regulations for the sanitation management at village level.

d. Strengthening implementation of sanitation policies

Integration of sanitation requirements into the Building Permit (IMB) process will be done as a short term strategy. The integration has an objective to ensure availability of proper sanitation infrastructures according to the SNI for every new built building.

In addition, the following two series programs need to be implemented in short to medium term:

- Conditioning of a sanitation policy program; this is done through advocacy and dissemination of policies and regulations at SKPK, DPRK and community, as well as implementation of a trial period for the new sanitation regulation.
- Empowerment of local sanitation agencies program; this program is essential to be implemented to avoid development of sanitation services always as a government driven program. Implementation of this program will ensure wider access from the community to sanitation services. This program will be implemented through the following activities:
 - v. Formation of sanitation cadres and sanitation students pioneer;
Sanitation cadre is an empowerment agent at community level who is placed to develop active participation from community groups in the development of sanitation.
 - v. Establishment of Gampong Sadar Sanitasi;
Gampong Sadar Sanitasi is established to make sanitation as a primary concern in the village development process. In addition, this program is prepared to encourage proper management of existing sanitation infrastructures.
 - v. Establishment of Sanitation Help Desk;
This help desk gives explanation to the community concerning sanitation issues in Banda Aceh.

Box 5: Sustainable sanitation management guideline for the Aceh and Nias Reconstruction Program

1. No untreated wastewater may be released into public drains
2. All sanitation systems must have primary and post- treatment as a minimum
3. Septic tanks must be watertight
4. Every housing and sanitation project should have a community management component to involve the community in all stages of planning, implementation, operation and maintenance.

Sumber: BRR dan Pemprov Aceh

Box 6: Aceh Province Building Code concerning wastewater

Requirements

1. All wastewater must be processed before it is disposed of in the city's communal wastewater conduits or carried to communal wastewater processing plants if available;
2. Disposal systems must be equipped with smell traps
3. On-site treatment should be done in waterproof septic tanks equipped with infiltration well/fields.
4. Wastewater containing hazardous and poisonous waste, and radioactive elements, must be treated specifically, according with prevailing regulations.

Detail

Septic tank refers to SNI 03-6379-2000

- Except city with sewerage system;
- Distance between septic tank and leaching field with shallow well at least 10 m;
- Septic tank may located in front of the house or back of the house, depends on the accessibility to discharge wastewater from toilet/bathroom with consideration on the minimum distance of septic tank and shallow well;
- Design of the septic tank and leaching field refers to ke SNI 03-6379-2000;
- Area with high groundwater level (less than 1 m), septic tanks should be constructed higher with horizontal infiltration.

Source: Aceh Province Building Code, Dinas PU

6.3 Funding strategy

Acceleration of sanitation development needs strong funding support especially for infrastructure development. In order to get support under this strategy needs to be done:

- Advocacy to DPRK to increase funding allocation for sanitation to 7.5% of the ABPK by 2012.
- Advocacy to the Provincial Government of Aceh to obtain funding support from the province.
- Funding for sanitation development through a loan can be done after a comprehensive and thorough study.
- In addition, funding for operation and maintenance (O&M) is also rely on the effectiveness of the fee/retribution collection. Collection of sanitation fees will be improved to cover at least 75% of the O&M costs. However, in the long run calculation of the sanitation fee will be based on the full cost recovery principle. As a first step, pilot areas have been established to improve the effectiveness of fee collection for solid waste management services.

6.4 Project preparation and budgeting process

Project preparation should be done properly to have a sustainable sanitation development activity. For that reason, the following activities need to be done:

- Preparation of feasibility study and masterplan. Currently the solid waste management master plan is available and has been approved by the DPRK as well as for the drainage sector. Masterplan for water supply system and waste water management will be prepared and it will be the short term priority.
- Further study will be conducted in the form of Detailed Engineering Design (DED) preparation. This activity produces estimation of costs which become input during preparation of RKPK in each Dinas according to the applied planning and budgeting process (see figure 2.2).

Appendix: Collective Declaration on Sanitation Development

Halaman 1:

DEKLARASI BERSAMA
PERCEPATAN PEMBANGUNAN SANITASI BAGI PELAYANAN
WARGA KOTA BANDA ACEH

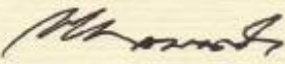
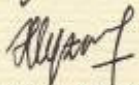
Assalamu'alaikum Wr. Wb

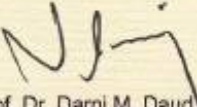
Dengan rahmat Allah SWT, kami dari seluruh komponen Kota Banda Aceh menyampaikan dukungan terhadap upaya percepatan pembangunan sanitasi di Kota Banda Aceh. Kami menyadari bahwa sanitasi yang terdiri dari pelayanan air bersih, pengelolaan air limbah, drainase lingkungan serta pelayanan persampahan merupakan aspek yang sangat penting dalam rangka peningkatan kesejahteraan masyarakat melalui peningkatan derajat kesehatan warga.

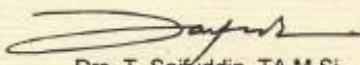
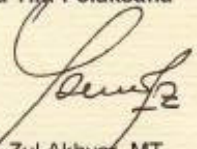


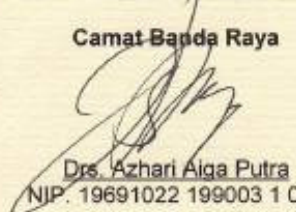
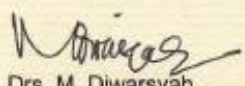
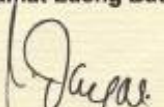

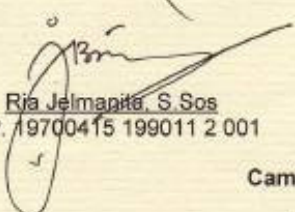
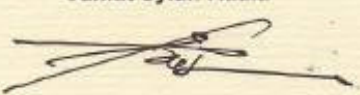
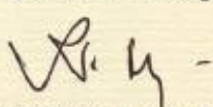
Dukungan ini akan kami wujudkan melalui adanya partisipasi bersama upaya pembangunan sanitasi berdasarkan kemampuan dan potensi yang ada dari setiap komponen Kota Banda Aceh. Semoga niatan tulus ini senantiasa mendapatkan berkah dari Allah SWT.

Wassalamu'alaikum Wr. Wb.

Ditandatangani oleh seluruh komponen Kota Banda Aceh
pada hari Senin tanggal 3 bulan Agustus tahun 2009

Walikota Banda Aceh  Ir. Mawardy Nurdin, M. Eng.Sc	Wakil Walikota Banda Aceh  Hj. Illiza Sa'aduddin Djamal, SE
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Translation of the Declaration

DEKLARASI BERSAMA **PERCEPATAN PEMBANGUNAN SANITASI BAGI PELAYANAN WARGA KOTA BANDA ACEH**

Assalamu'alaikum Wr. Wb

With the bless from Allah SWT, we from all components of the City of Banda Aceh declare our support for the acceleration of sanitation development in Banda Aceh. We realize sanitation which consists of water supply, wastewater management, neighborhood drainage and solid waste management is a very important aspect to improve community welfare through improvement of the health condition of the people.

Our support will be realized through joint participation from all city components to accelerate development of city sanitation based on capacity and potency of each city component. Hopefully, this earnest intension is blessed by Allah SWT.

Wassalamu'alaikum Wr. Wb.