



SANITATION POLICY INCLUDING SANIMAS IN INDONESIA

Presented in
ADBI-JSWA-JSC Regional Workshop on
Sanitation (Wastewater and Sludge
Management) in The Asia-Pacific

Tokyo, October 5th 2011

by:

ERLY NURMEIDA SILALAH

Directorate of Environmental Sanitation Development
Directorate Generale of Human Settlements
Ministry of Public Works Indonesia



Indonesia at a Glance



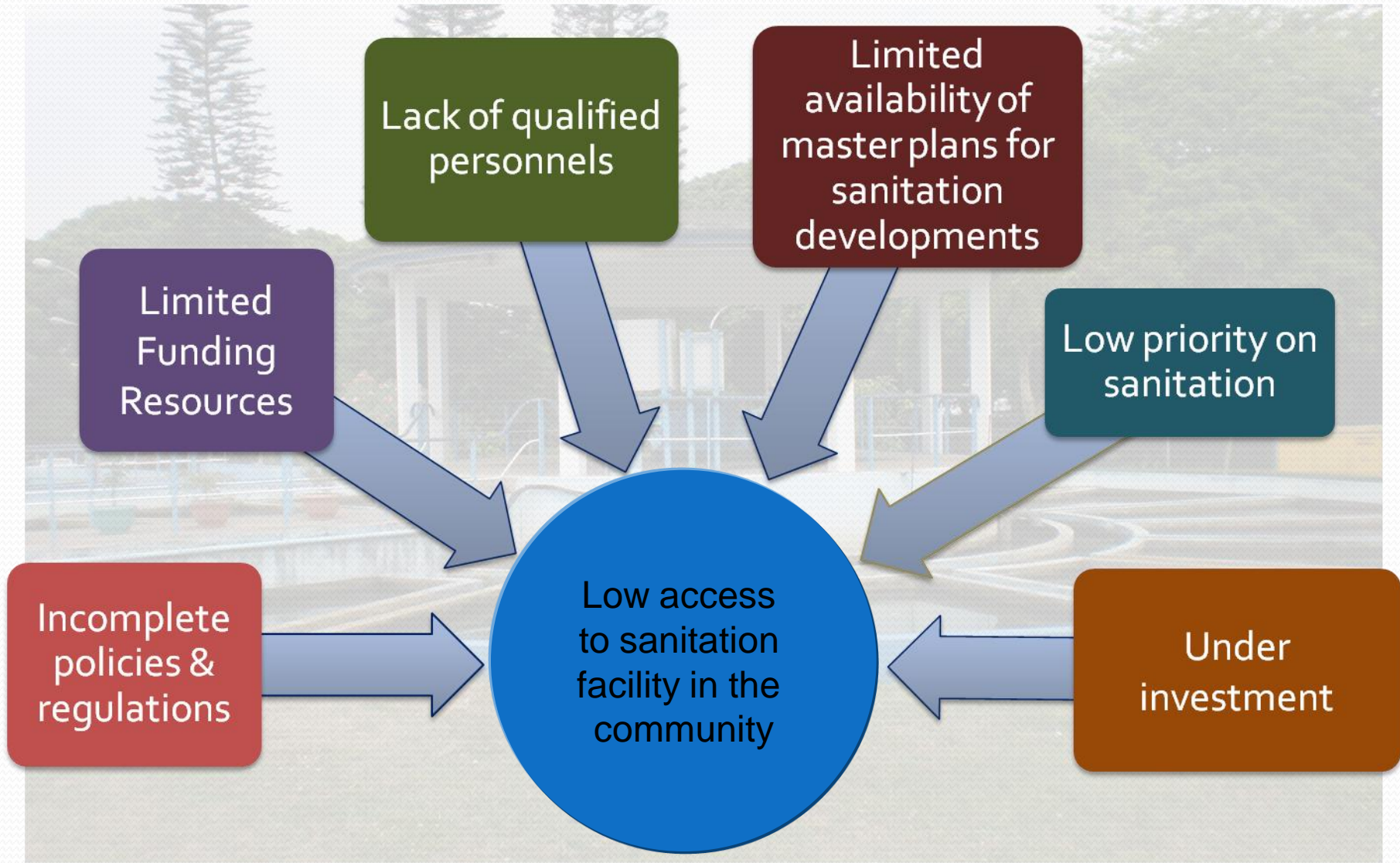
- Population up to 230 million with 57,86% live in urban areas (Statistics Indonesia, 2009)
- 17,504 islands 1,890,754 km² (Statistics Indonesia, 2009)
- GDP per capita US\$ 4,149 (Moody's Index, 2009)
- Human Development Index ranking 111 of 182 countries (UNDP, 2009)

II

Problems and Challenges



Sanitation



II

Problems and Challenges



Sanitation



Waste in drainage channel

Industrial waste water without treatment



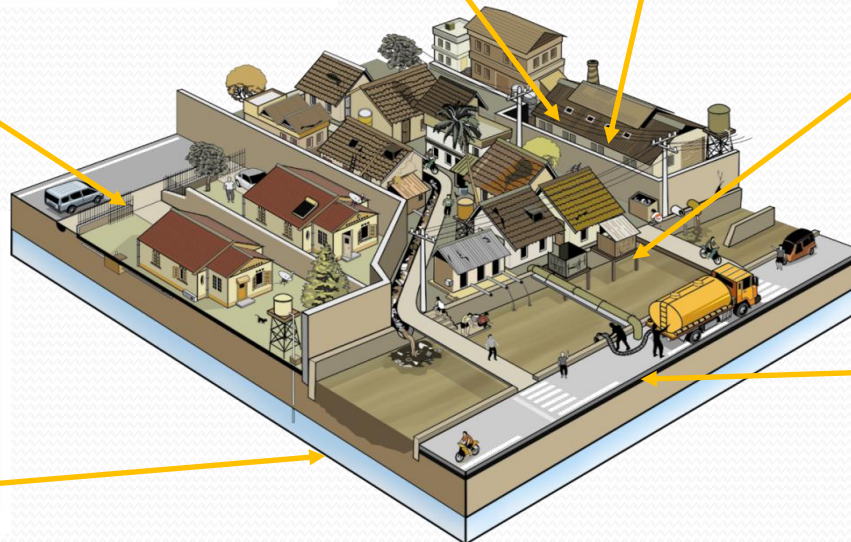
Open defecation



Makeshifts Latrines



Illegal dumping of sewage sludge



Washing and bathing in polluted rivers

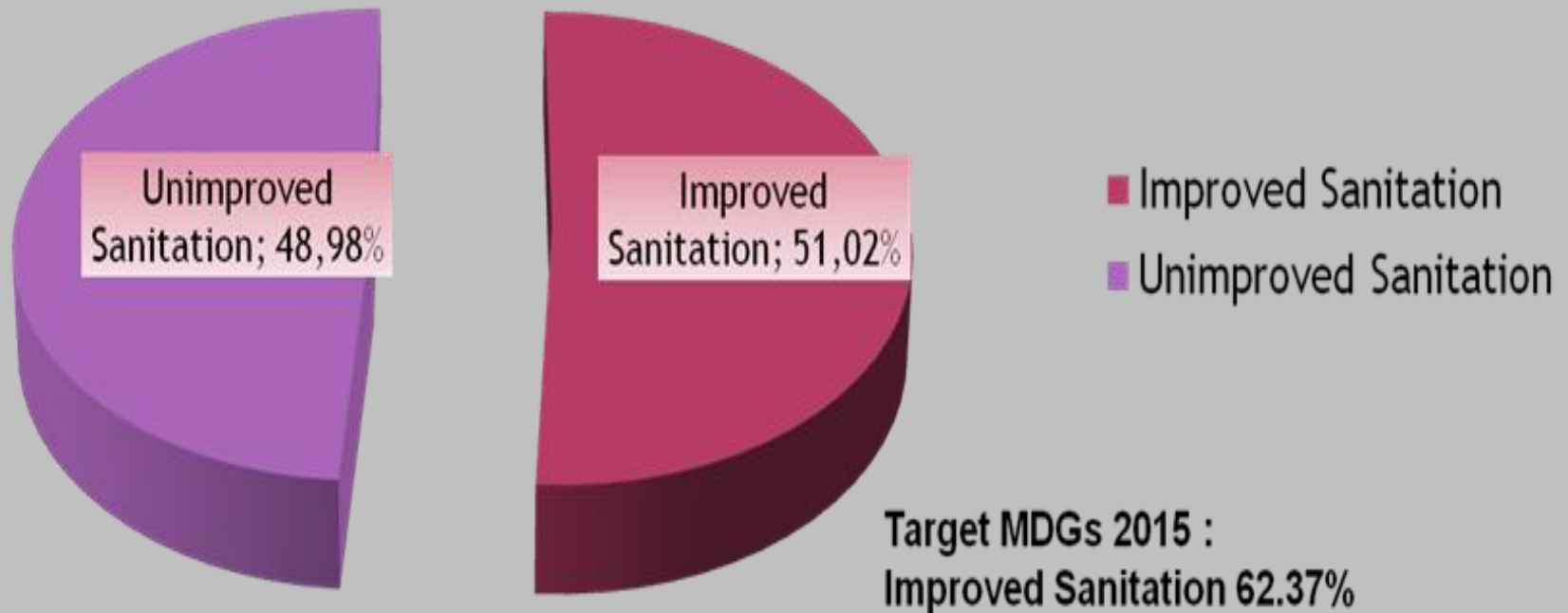
II

Problems and Challenges



Sanitation

Sanitation in Indonesia in Year 2009 (BPS, 2010)



Improved Sanitation: Public/shared/private toilet with water closet and septic tank.



Millennium Development Goals



Goal 7 Target 10

Indicator		2015 Targets (%)	Status 2010 (%)	Status 2009 (%)
goal 7: ensuring environmental sustainability				
7c	Proportion of households with sustainable access to sanitation in urban and rural	62,41	55,53	51,19
	Urban	76,82	72,78	69,51
	Rural	55,55	38,47	33,96

IV

Policies and Strategies



Sanitation

1. Increase access to wastewater facilities, both on-site and off-site systems, in urban and rural areas to improve community's health
 - Increasing access to on-site systems in urban and rural areas through communal system;
 - Increasing access to off-site systems in Metropolitan and big city.
2. Increase both community and private sectors participation in the management of wastewater
 - Changing community's behaviour and increasing their awareness on the importance of wastewater management
 - Increasing private sector participation in the implementation and management of wastewater



IV

Policies and Strategies



Sanitation

3. Developing Regulations Related to Domestic Waste Water Management

- Establishing regulations related to domestic waste water management
- Promoting the regulations
- Implementing the regulations

4. Strengthening Institution and Improving Operator's Capacity Related to Waste Water Management

- Facilitating the establishment of management institution
- Advising the establishment and reinforcement of management institution
- Improve coordination and partnership among institutions
- Pushing for improvement of political will among stakeholders to give wastewater management a priority



IV

Policies and Strategies

Sanitation

5. Increasing and Developing Alternatives of Financial Resources for Sanitation

- Increase allocation of fund for wastewater development by exploring alternatives financial resources and investment pattern
- Joint investment by Central and Local Government for wastewater development



Sector	Objectives	Unit	Actual Needs (US\$3,07 Mio)	Scenario 1 Optimistic (US\$2,74 Mio)	Scenario 2 Moderate (US\$1,58 Mio)
Wastewater	Area with access to off-site wastewater system	City	16	16	11-16
	Area with access to on-site wastewater system	City	226	210	210
Drainage	Reduce inundation	City	50	50	50
		Ha	22.500	11.250	4.600
Solid Waste	Improvement of Sanitary Landfill	City	240	240	180
	Amount of waste collection system	Unit	1.500	500	250
	Amount of waste Reduce, Recycle, and Reuse (3R) system	Location	2.000	500	250



Programs

CONSTRUCTION and DEVELOPMENT OF SEWERAGE SYSTEM ON 11 METROPOLITAN/ BIG SCALE CITY IN INDONESIA

- **Bandung:** WWTP Bojongsoang
- **Cirebon:** WWTP Ade Irma, Kesenden, Perumnas, and Perumnas Utara
- **Yogyakarta:** WWTP Sewon
- **Surakarta:** WWTP Mojosongo and Semanggi
- **Bali:** WWTP Suwung
- **Medan:** WWTP Pulo Brayan
- **Prapat:** WWTP Aji Bata
- **Balikpapan:** WWTP Margasari
- **Banjarmasin:** WWTP HKSN, Lambung Mangkurat, Pekapuran Raya
- **Jakarta:** WWTP Setiabudi and Malaka Sari
- **Tangerang:** WWTP Sukasari

WWTP Suwung, Bali



WWTP Sewon, Yogyakarta



WWTP on Cirebon



SEWERAGE IN INDONESIA

City	System	Total Capacity (m ³ /day)	Used Capacity (m ³ /day)	Installed House Connections
Medan	UASB	60.000 installed 10.000	16.000	11.769 target 18.000
Prapat	Aerated Lagoon	2.000	400	220
DKI Jakarta	Aerated Lagoon			1.326
Bandung	Lagoon	243.000 installed 80.000	40.000	97.952
Cirebon	Lagoon	24.566 installed 20.547	9.667	13.165, waiting list 14.585 SR
Yogya	Aerated Lagoon	15.500	7.314	11.000
Surakarta	Aeration, Fakultatif, Biofilter	4.536	1.679	10.983
Bali	Aerated Lagoon	51.000	31.185	8.647, on DSDP 2 target 15.000
Banjarmasin	RBC	5.100	5100	1,973
Balikpapan	Extended Aeration	800	723	9.865, on 2015 target 17.273
Tangerang	Oxydation Ditch	5.500		



Aims

- ❖ To improve access for dense, slums and low income communities in urban areas with limited access towards sanitation
- ❖ To have community based sanitation as an alternative choice for a sustainable sanitation infrastructure

3 models of URBAN COMMUNITY BASED SANITATION

**Community Solid
Waste Management**

**COMMUNAL
SEPTIC TANKS**

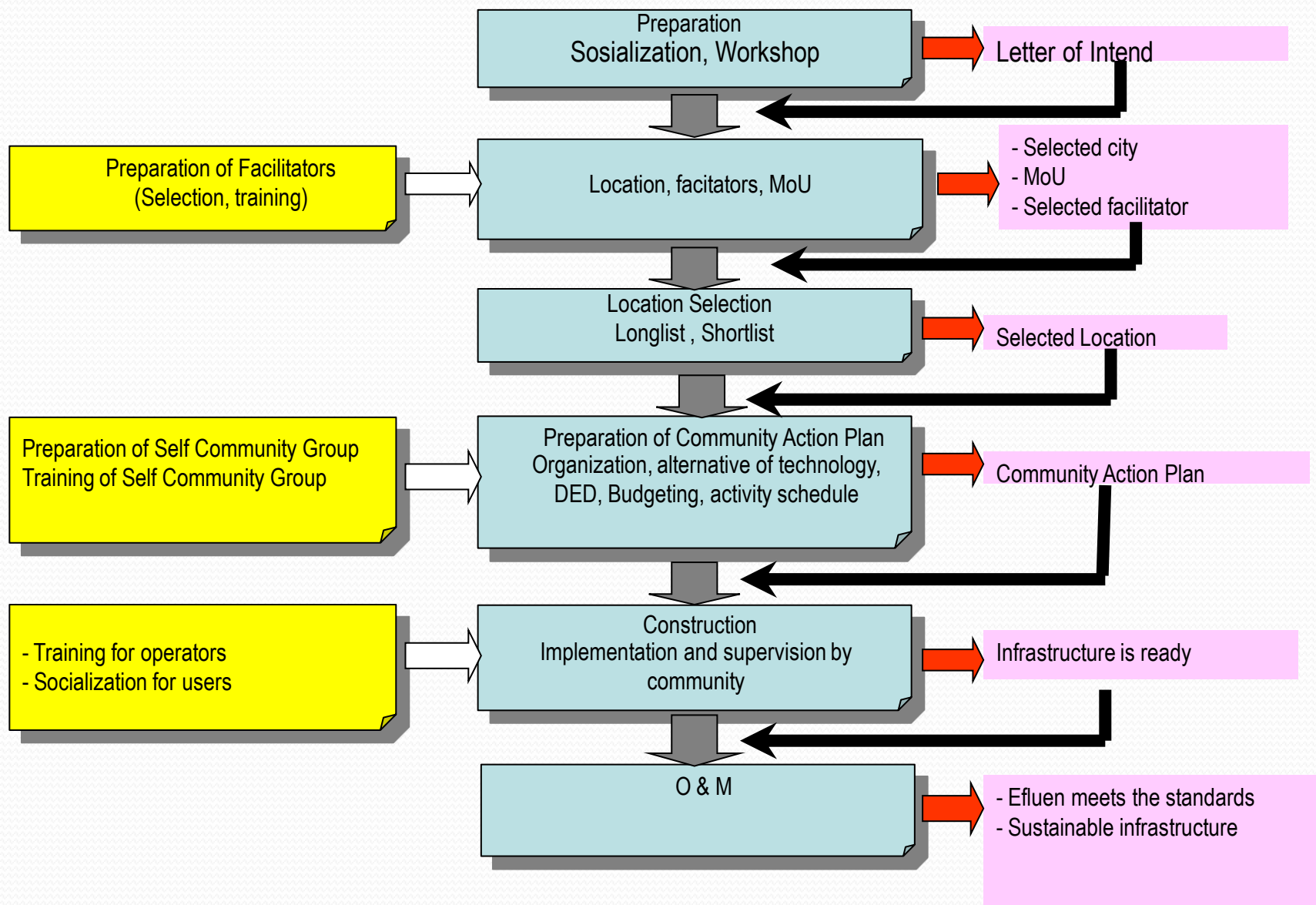
**DRAINAGE
CHANNEL**

**COMMUNAL
SHALLOW SEWERS
FOR 100 FAMILIES**

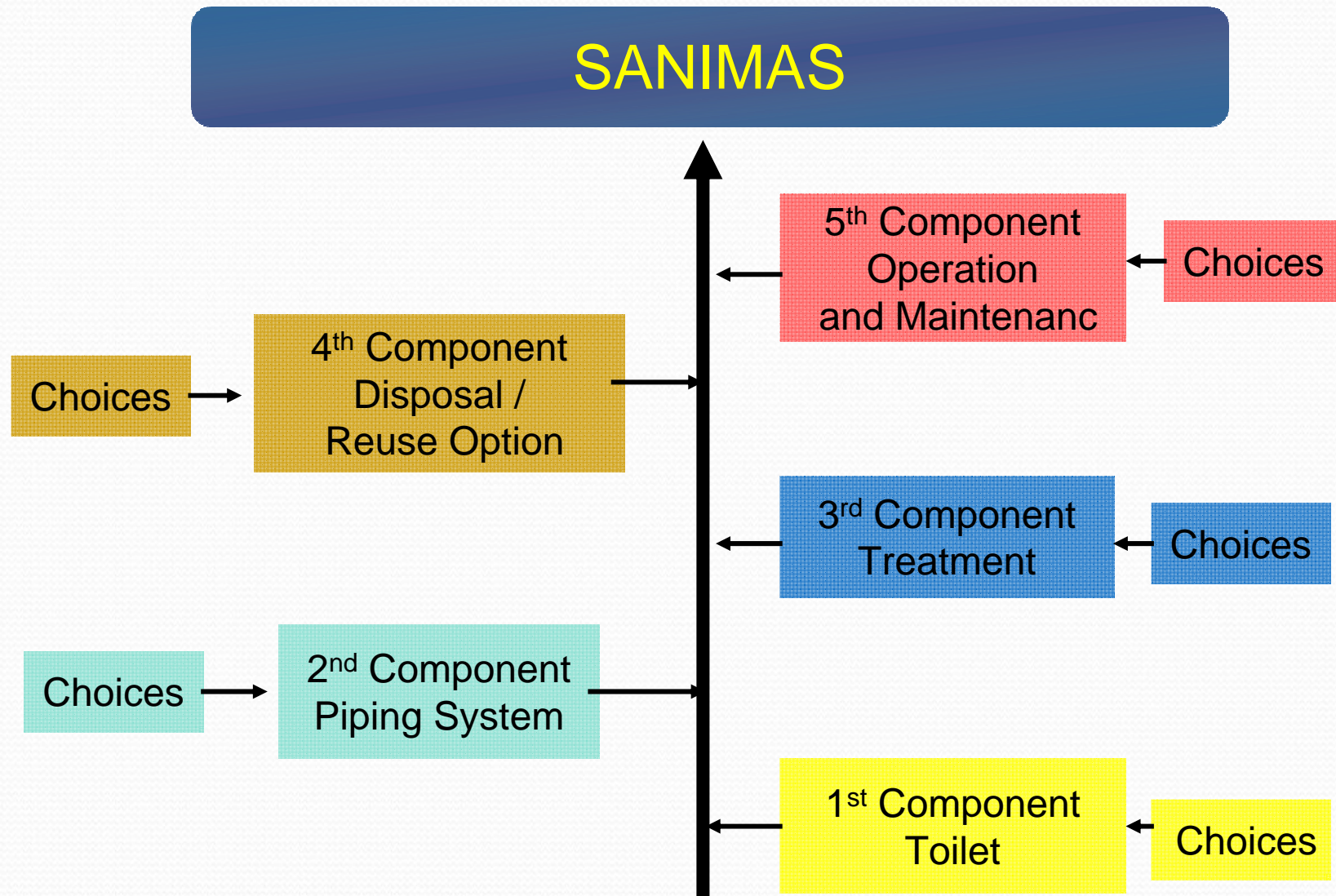
**COMMUNAL
BATH-WASH-
TOILET Plus ++**

- ✿ Requirements:
 - Slum area in urban areas with population density of > 150 pe / ha
 - Will not polluted water supply sources e.g. surface water and ground water
 - SANIMAS construction is built with cheap local material
 - Alternative of technology is chosen by the community according to local needs

- ✿ Basic Principles of Alternative Technology:
 - cost consideration
 - efficient
 - ease in operation and maintenance
 - low energy usage
 - appropriate technology



VI SANIMAS





**SOCIALIZATION OF SANIMAS
SANIMAS SEPATAN, TANGGERANG**



SOCIALIZATION IN YOGYAKARTA

VI

SANIMAS - Construction

CONSTRUCTION IN YOGYAKARTA



VI

SANIMAS - Construction

FINISHING PROCESS





SANIMAS FACILITY
SANIMAS SIDOKARTO, GODEAN, SLEMAN, DIY



FRONT VIEW OF SANIMAS FACILITY
SANIMAS BANDAR HARJO, NORTH SEMARANG, CENTRAL JAVA



SANIMAS SUNGAI LIAT, BANGKA BELITUNG



Table: Recapitulation of SANIMAS, built in 2003-2011

Year	2003	2004	2005	2006	2007	2008	2009	2011	Total
Province	2	2	3	20	22	16	17	17	24
City/ District	6	7	10	53	88	69	65	37	131
Location	6	8	11	65	125	108	97	56	476

Thank you for Kind Attention!

