

Presentation from the
**Workshop on
Innovations for Scaling up to
Citywide Sanitation**

October 16-17, 2012, Ahmedabad



Organised by PAS Project, CEPT University



International
Water Association

Achieving Improvements in Urban Sanitation at Scale

international experiences in city-wide sanitation

IWA's role in incentivizing change through demonstration and dissemination

Innovations for Scaling up to Citywide Sanitation

CEPT University,

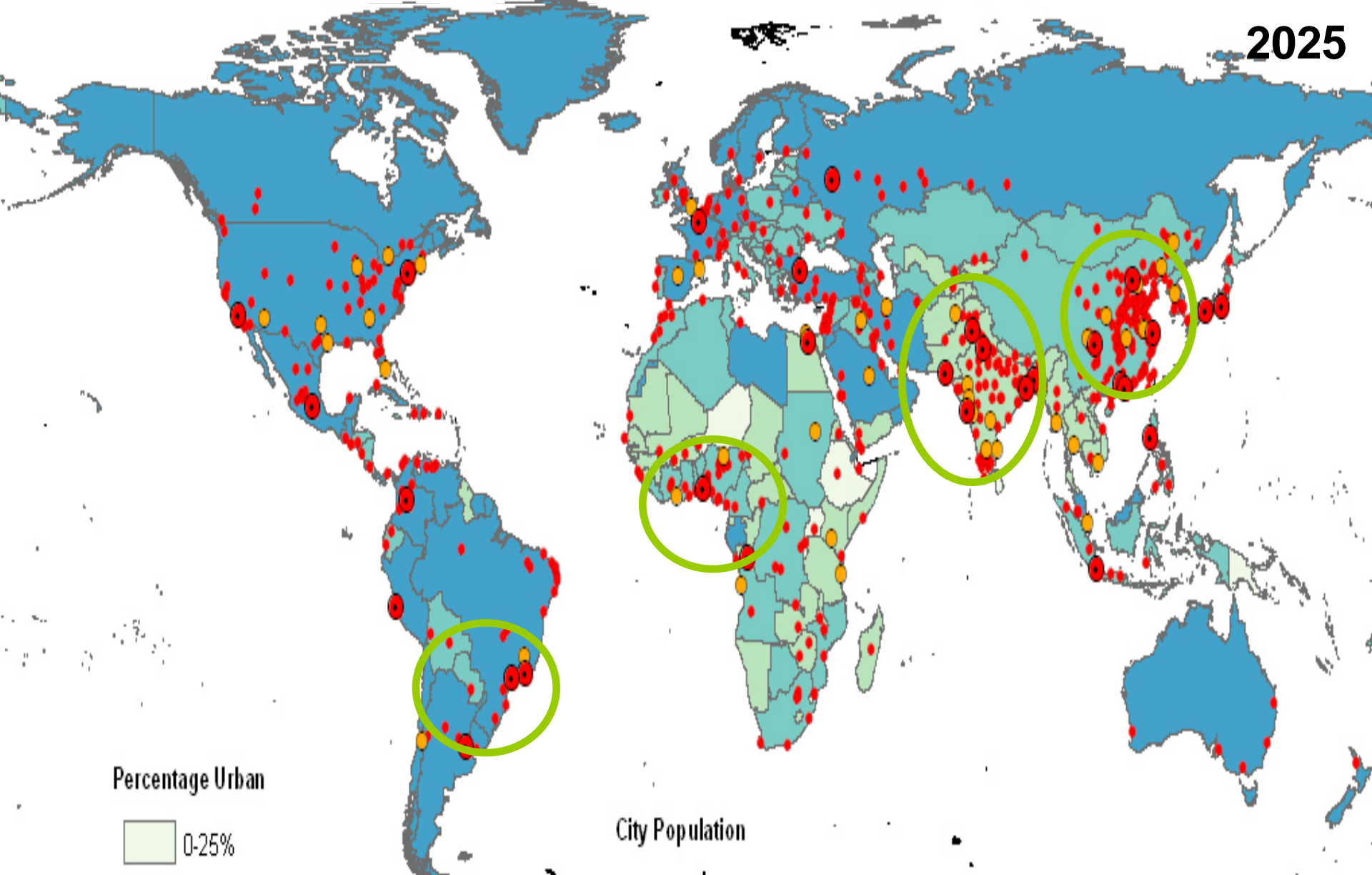
Ahmedabad, India

October 16 -17, 2012

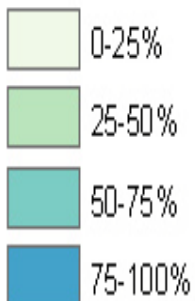
Jonathan Parkinson

*Programme Co-ordinator -
Urban Sanitation Initiative*

2025



Percentage Urban



City Population



*World Urbanization Prospects,
The 2009 Revision*

Need for integrated solutions to tackle sanitation problems at household, communal and city levels



Household level health risks



Public environmental health risks



Pollution of watercourses

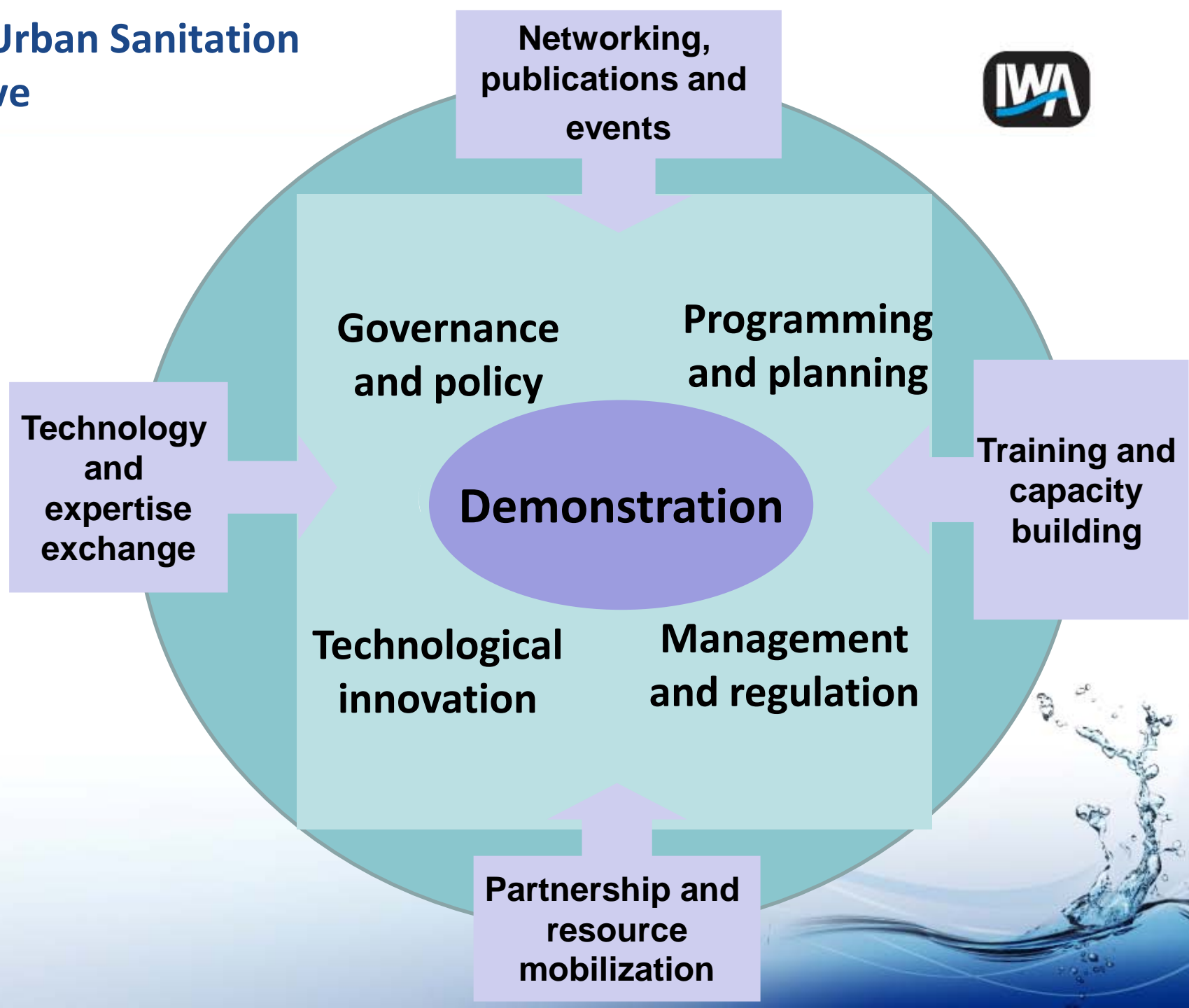
Access and equity

Public health and municipal services

Environmental protection, amenity and resource management



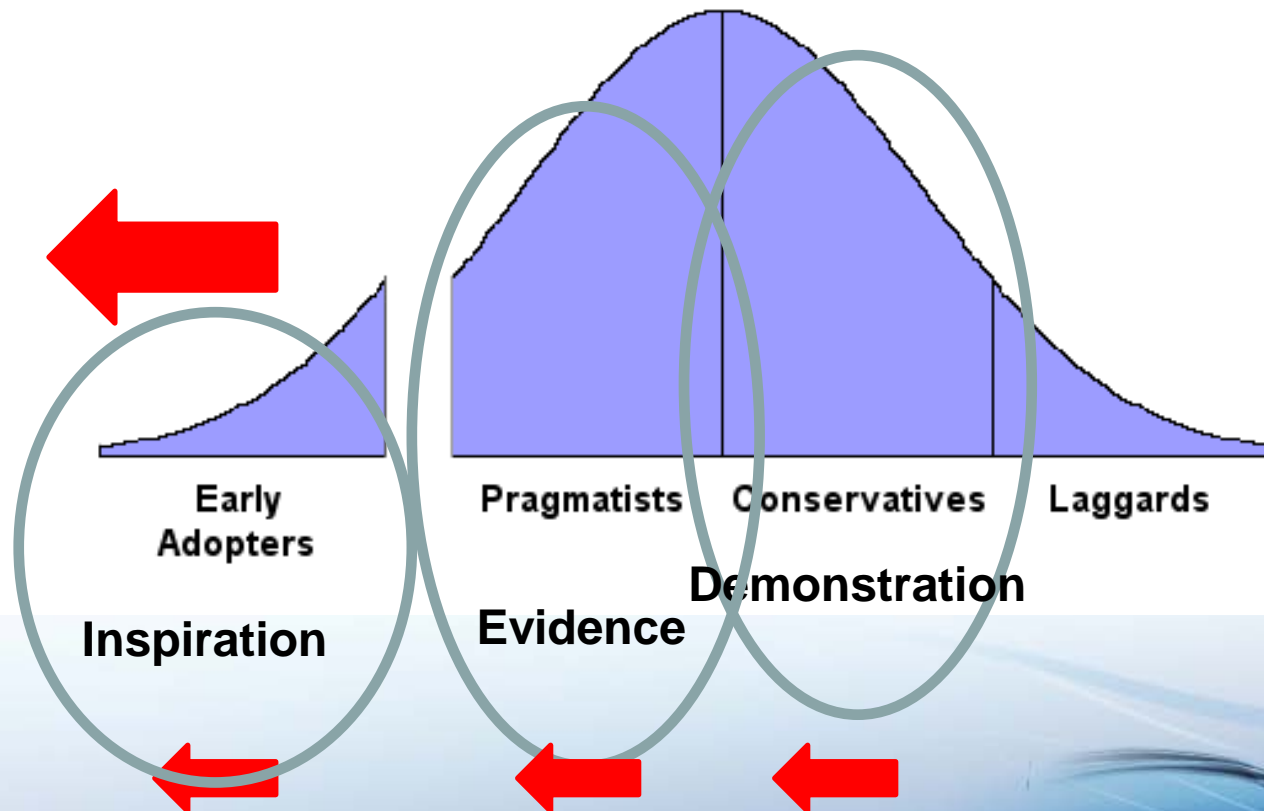
IWA's Urban Sanitation Initiative



Promoting innovation – *theory of change*



- “Innovation” is not the same as “invention”
- Full scale implementation of an idea
- Bringing solutions to the marketplace
- Innovate requires a collective action



Goal : *Universal access to affordable sanitation services and effective waste water management systems; ensuring sustained improvements in environmental health and sustainable use of natural resources.*

1. **URBAN FOCUS**: including cities peri-urban areas and small /medium sized towns.
2. **INTERNATIONAL OUTREACH** : with regional focus reaching out to target countries and city-level engagement
3. **POLITICAL COMMITMENT** :_ working in cities where there is commitment from relevant governmental authorities and service providers
4. **LONG TERM ENGAGEMENT and CAPACITY BUILDING** :_short, medium and long term objectives.
5. **PARTNERSHIP BASED**: partnering with range of organisations to build on competitive advantages and resource mobilisation/co-ordination.



Examples of best practice



- Indonesia Sanitation Sector Development Program 2006 – 2010
- Bahia Azul (Blue Bay) – Salvador da Bahia, Brazil
- Dumaguete City Septage Management System, Philippines



Indonesia Sanitation Sector Development Program 2006 - 2010



Aim : to raise the profile of urban sanitation on the national development agenda and to create an enabling environment for accelerated progress in urban sanitation nationwide.

1. Worked intensively in 12 cities to build capacity and formulate city sanitation strategies
2. Lessons from this experience to inform advocacy, government sanitation strategy and design technical assistance from national level.
3. Program culminated in the adoption of a 'Roadmap to the Acceleration of Sanitation Development 2010-2014' with commitments to scale up both planning and investment in over 300 cities.



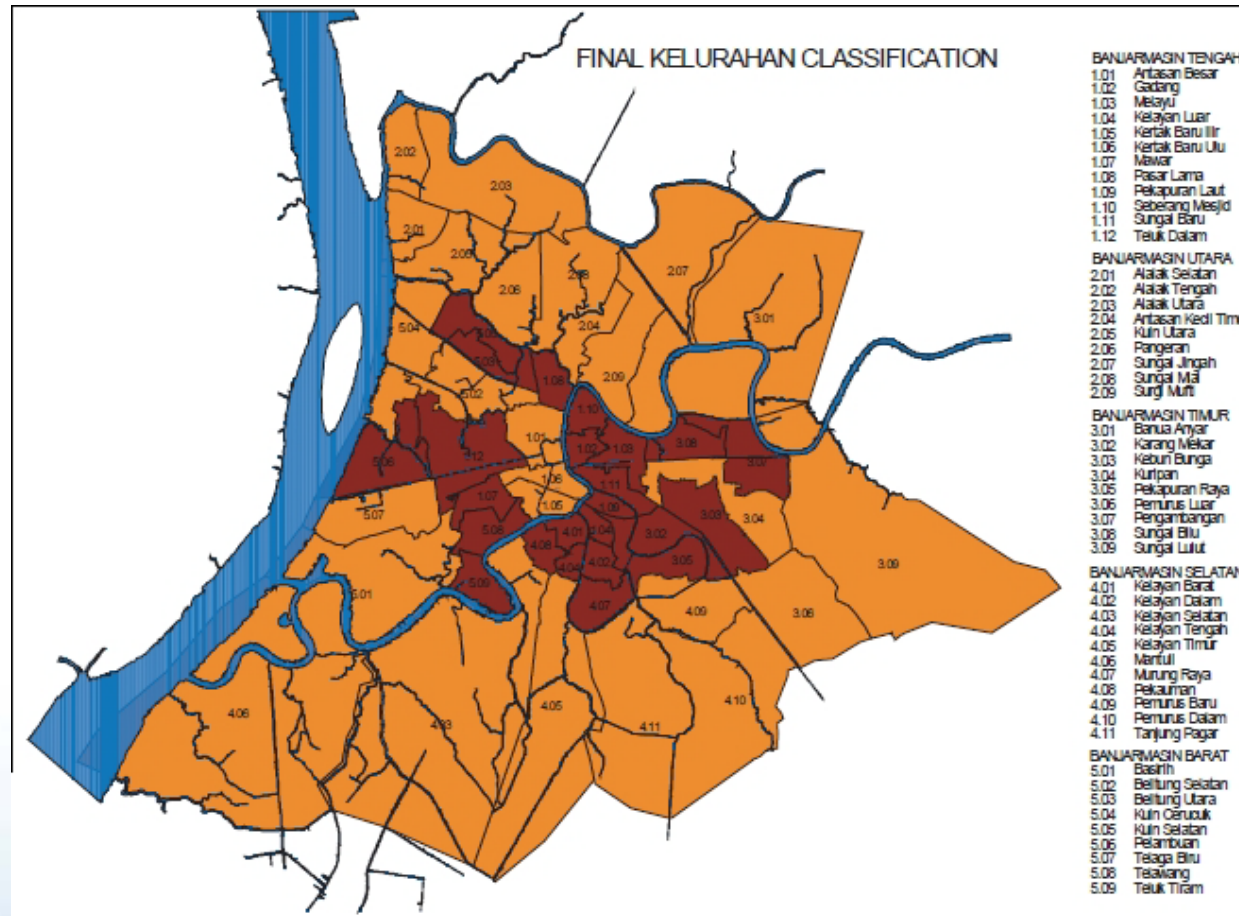
Political motivations

- High-level political support from the Vice-president
- National motivation **‘triggered’ through vocal mayors** and sanitation planning in cities
- Results from WSP’s Economics of Sanitation Initiative used for advocacy
- *Peer pressure and competition* among cities increased motivation and mayors commitment

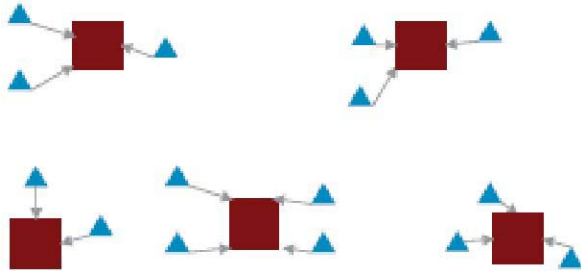


ISSDP : Investment prioritization

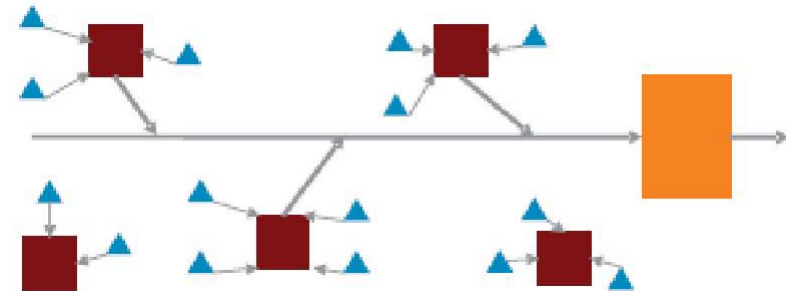
Priorities identified by mapping of sanitary conditions and Environmental Health Risk Assessments (EHRAs).



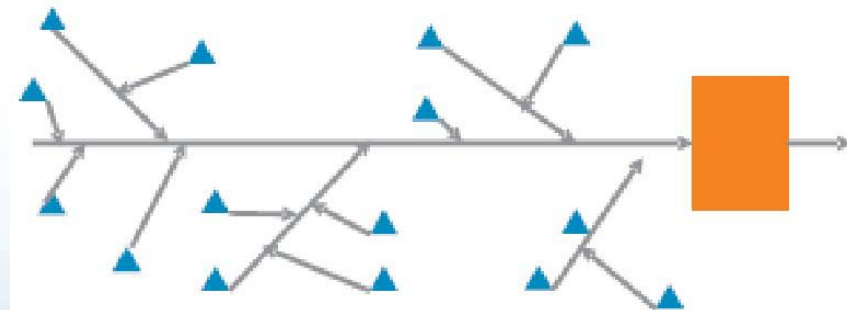
Indonesia – technology



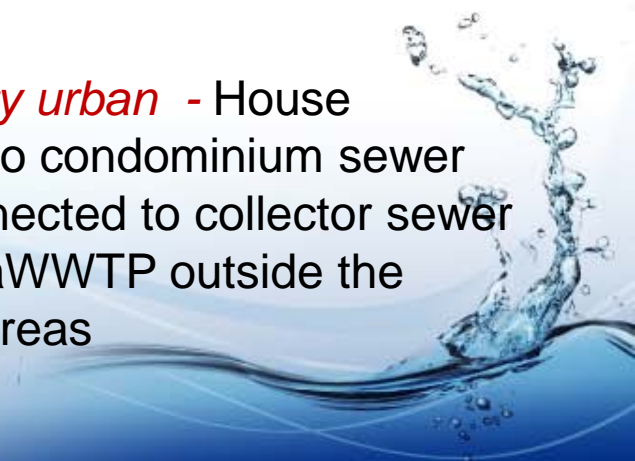
Low density peri-urban : communal on-site (septic tanks) and individual on-site facilities



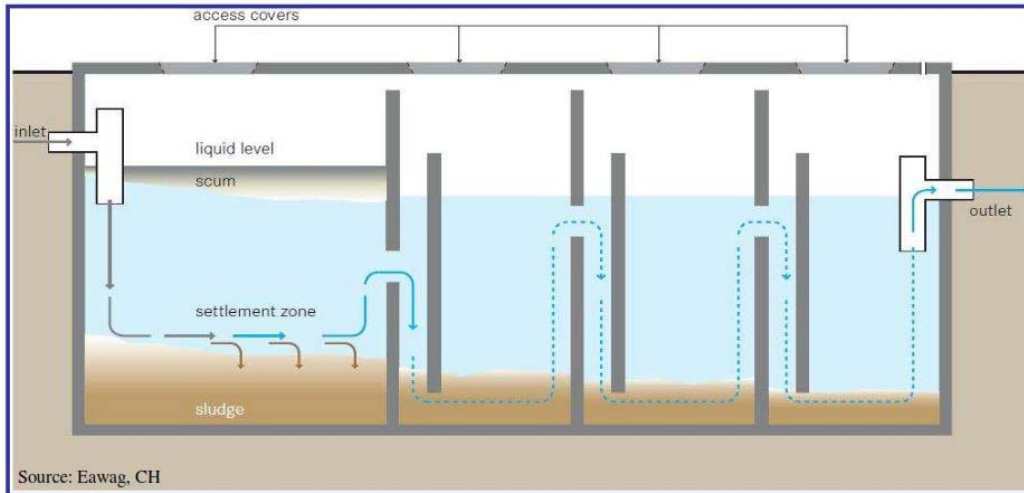
Medium-density urban - overflow from septic tanks connected to small-bore sewerage system draining to WWTP. New houses connected directly to small bore or simplified sewer.



High -density urban - House connection to condominium sewer system connected to collector sewer draining to aWWTP outside the residential areas



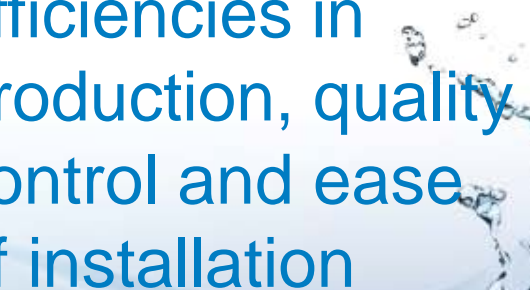
Indonesia – DEWATS



Upflow anaerobic
baffled septic tank



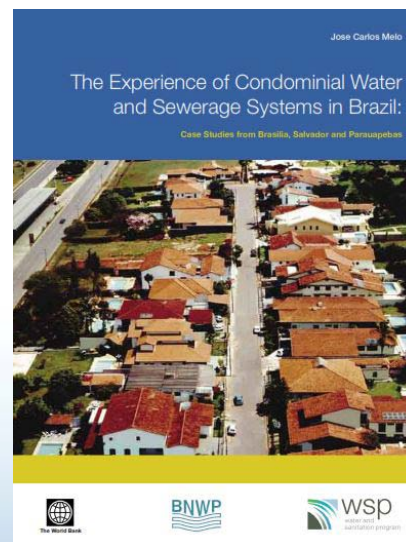
Prefabricated unit
for cost-
efficiencies in
production, quality
control and ease
of installation



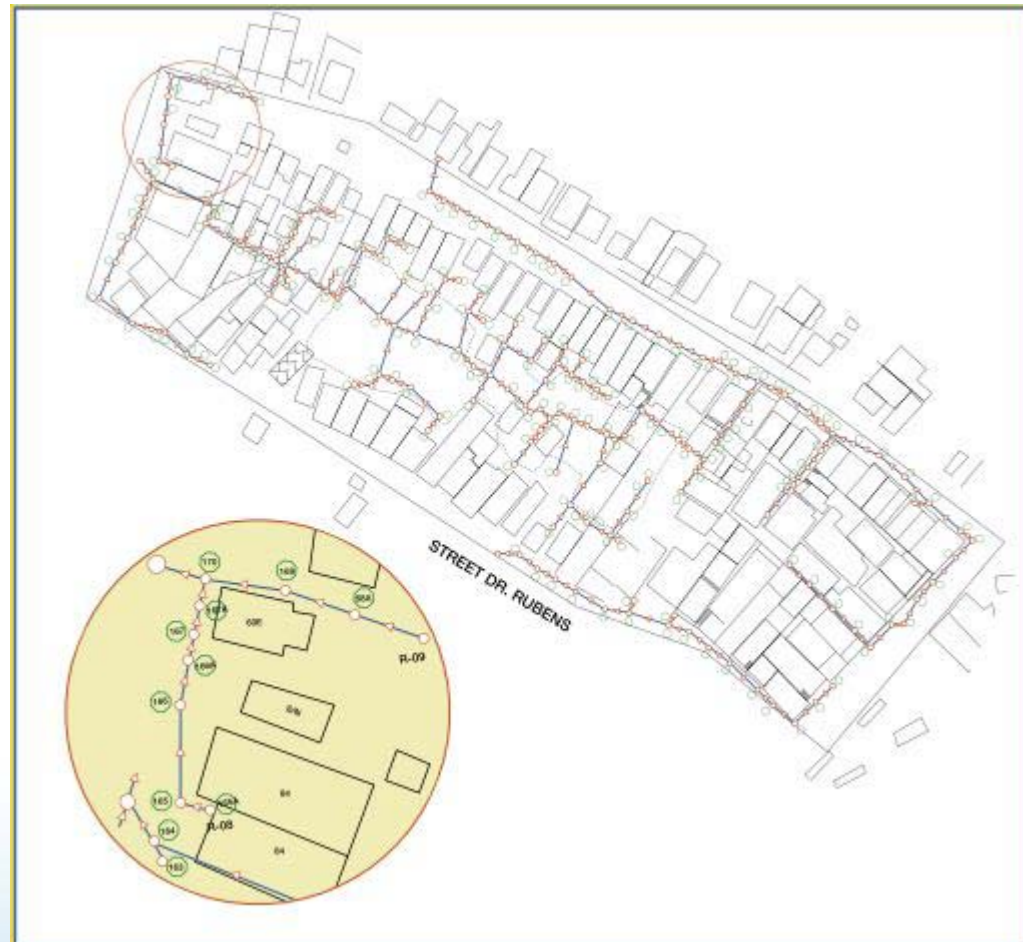
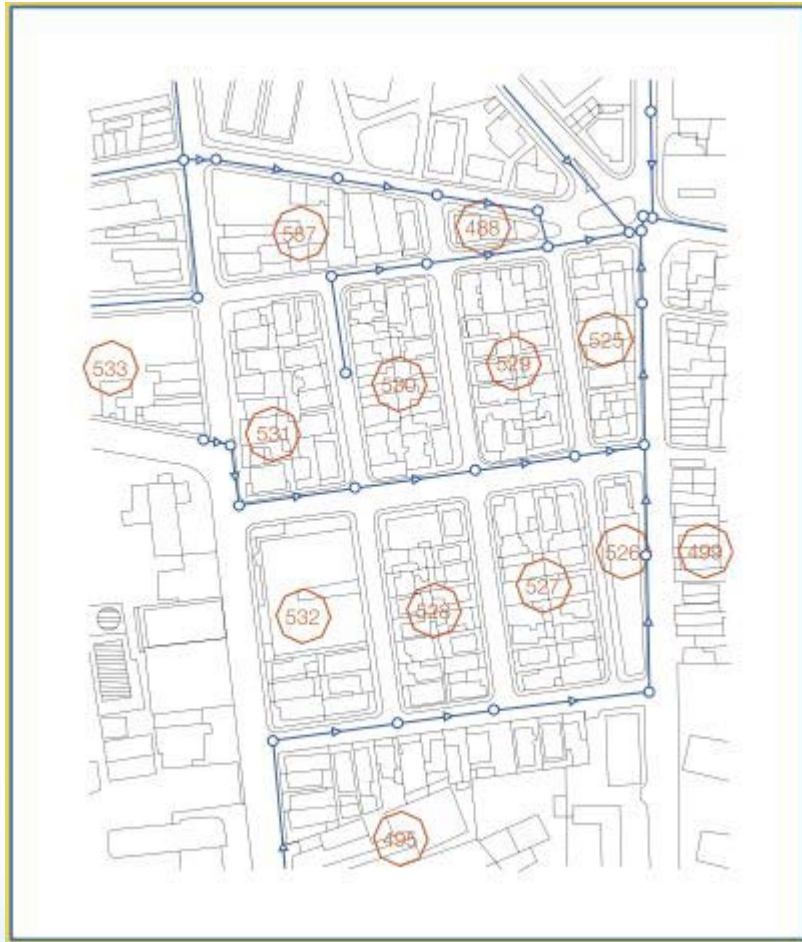
Bahia Azul (Blue Bay) – Salvador da Bahia, Brazil



Before the Civil Works



Example of condominial sewerage layout



Technical innovation



Sewers laid at low depths in areas where surface loading is low.



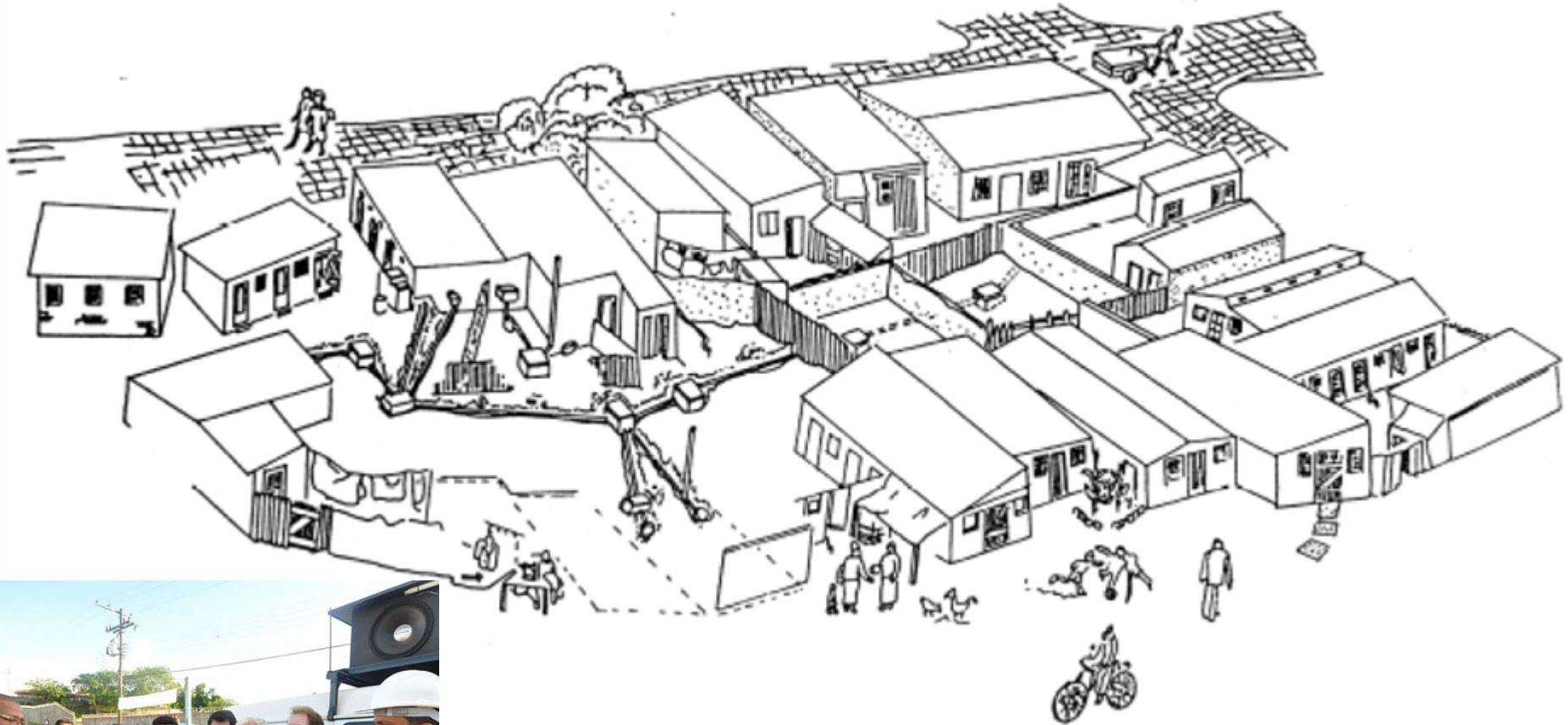
Sewers above ground in areas where ground conditions are too rocky to lay sewerage

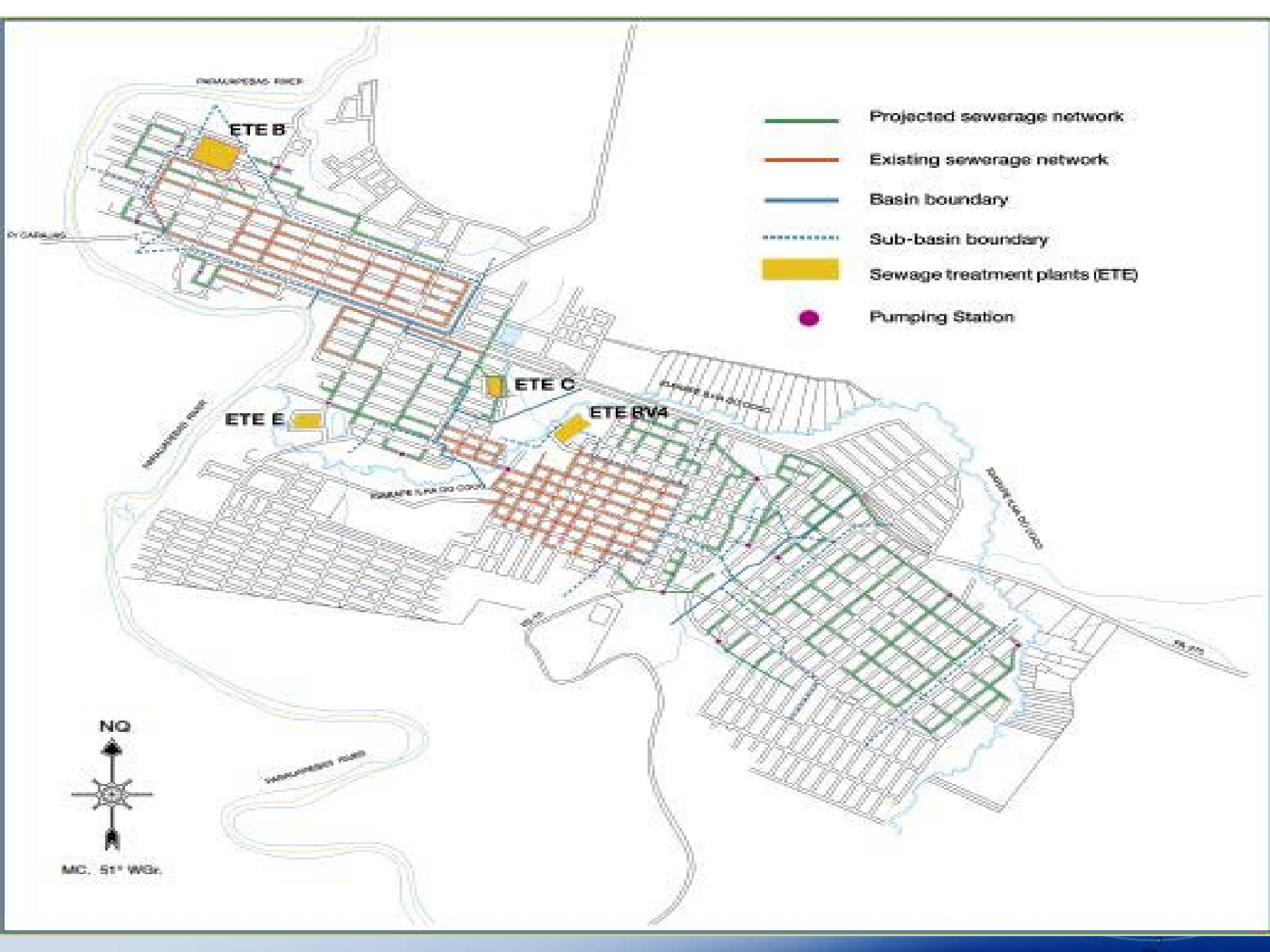


Pre-fabricated sewer pipes and access chambers



Social innovation





Promoted the National Water Agency (ANA) in Brazil since 2001 to finance construction of new or rehabilitation, upgrade or expansion of existing WWTPS.



Funding based on agreements between :

- ANA
- State government
- River basin committee (RBC)
- Municipal authorities
- Wastewater treatment plant operators



PRODES – River Basin Clean-up Programme

Since 2001, PRODES has supported 42 projects with US\$ 93 million

ANA commits US\$25 million for PRODES in 2011

Prodes contracts will cover:

- 30% of project budgets in cities > 200,000
- 30-100% in municipalities with populations 20,000 - 200,000
- 100% for towns with < 20,000.



PRODES – WWTP Performance Targets



Constituent	(minimum removal efficiencies of pollutant loads)								
	A	B	C	D	E	F	G	H	I
BOD	30%	60%	75%	85%	85%	90%	90%	90%	90%
SS	40%	60%	75%	85%	85%	90%	90%	90%	90%
Coliforms					99.999%		99.999%		99.999%
P and/or TKN								85% and/or 80%	85% and/or 80%
Population (inhab)	Rebate values per capita (R\$/inhab.)								
< 10,000	20	35	55	80	85	100	105	120	125
10,001 to 20,000	20	30	50	70	75	90	95	110	115
20,001 to 50,000	15	25	45	60	65	80	85	100	105
50,001 to 100,000	10	20	40	55	60	75	80	95	100
100,001 to 200,000	10	20	40	55	60	75	80	95	100
> 200,000	10	20	40	55	60	75	80	95	100

Monitoring and regulation

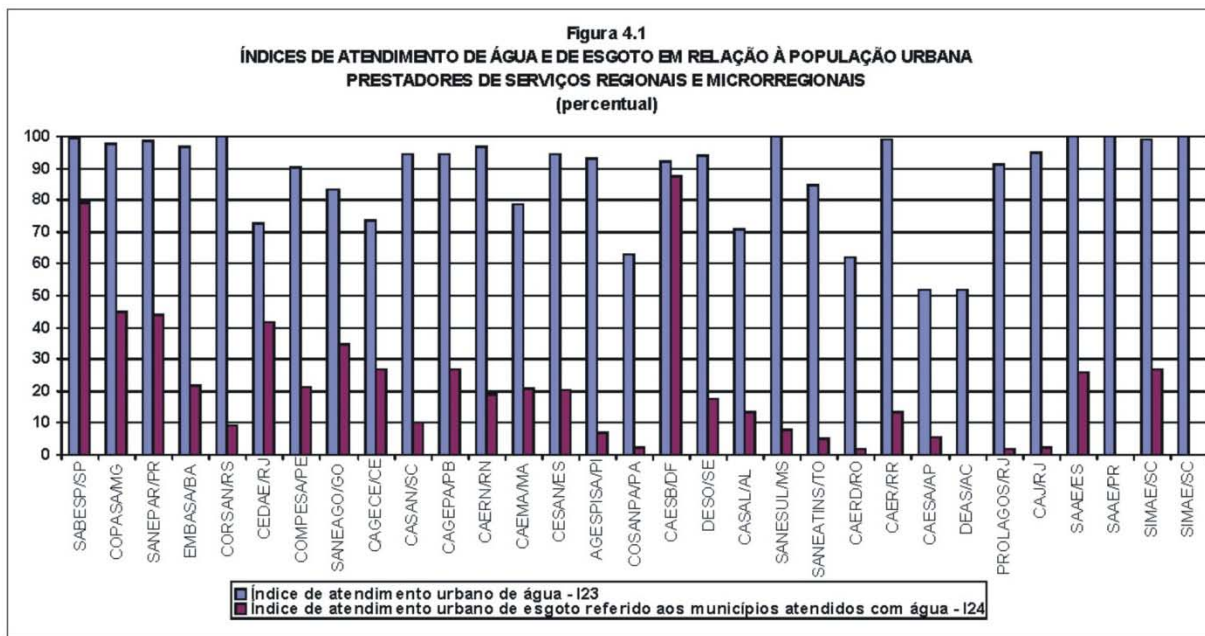
- Payments made after the achievement of the agreed goals on water quality indexes are demonstrated.
- Standardised framework of performance evaluation for regulatory purposes.
- Monitoring and verification of water quality objectives by ANA based on a process of self-evaluation and auditing.

Brazil PWSS Sector Modernization



Federal Government provides funds for the sector modernization through the PMSS program (Water and Sanitation Modernization Program)

General sector performance is monitored by the SNIS program (National Service for Water and Sanitation Information), where all service providers have their operational indicators registered



Water and Wastewater Services Coverage



Dumaguete City Septage Management System, Philippines



- National Sewerage and Septage Management Program (NSSMP) - Philippines
- Project motivated came from an assessment which identified 20,000 poorly designed and improperly maintained septic tanks
- First city-wide septic tank maintenance program in the Philippines financed by the local government.
- Equal partnership between the water utility company and the local government of Dumaguete in which revenue is evenly split.
- Project aims to achieve full cost recovery through user fees after five years.
- Supported by USAid through the Waterlinks Programme



Dumaguete City Septage Management System, Philippines



Septage Management Ordinance signed in 2005 giving the municipality overall responsibility for septage management

- Extensive media campaign
- Coordination of scheduling between desludging and treatment
- Extensive training for desludging crews and staff of treatment facilities



Community members and Manila Water staff watch as their private contractor desludges a septic tank in their neighbourhood



Dumaguete City Septage Management System, Philippines



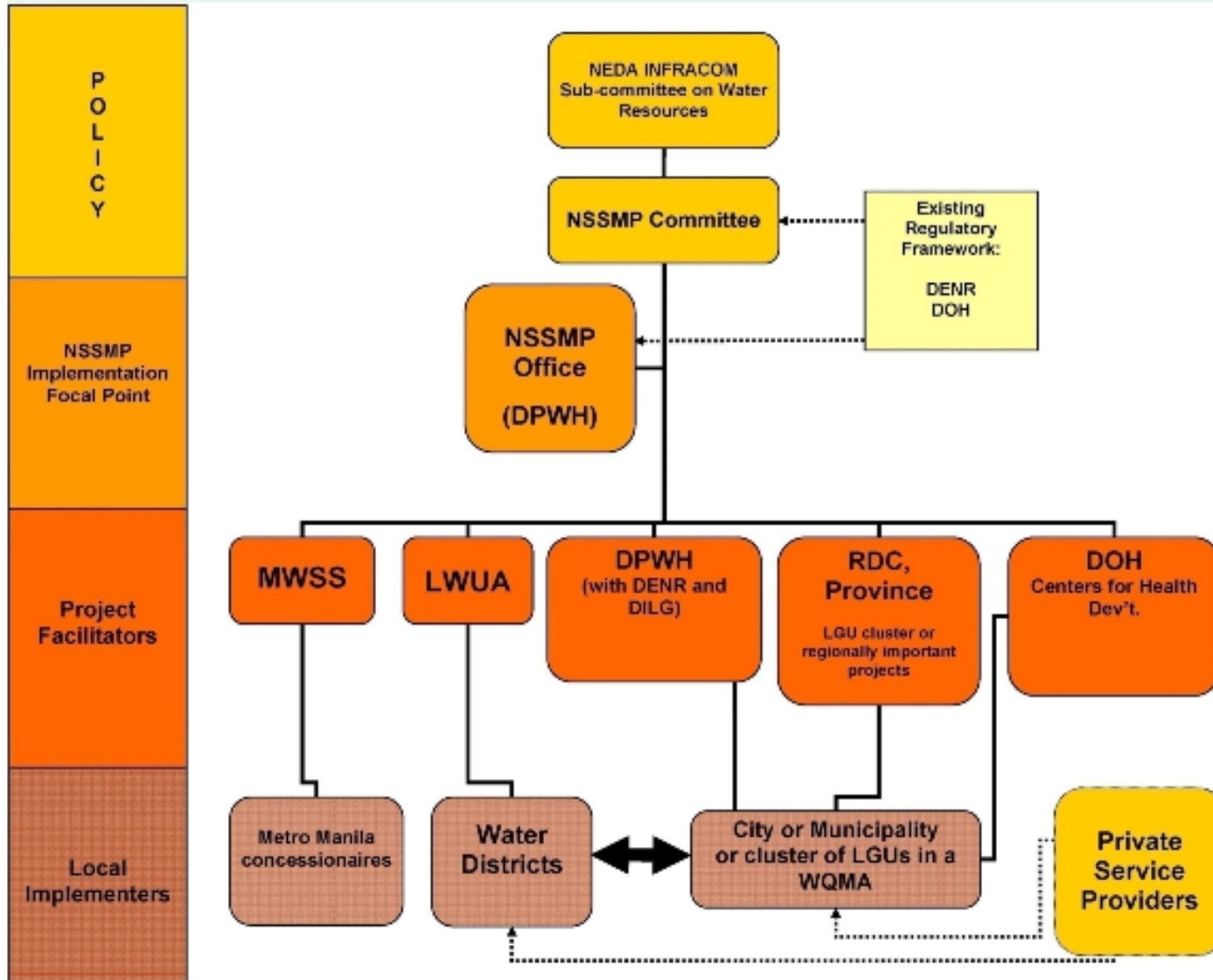
The city selected a non-mechanized system consisting of stabilization ponds that has the advantages of being low-tech and ideal for the tropical location with lots of available land.

Institutional and financing arrangements

- Collection and transport of septage to the treatment facility is the responsibility of the water utility company
- Treatment facility responsibility of the municipality
- Finances attached to monthly water bill.
- 20% set aside as reserve/contingency funds



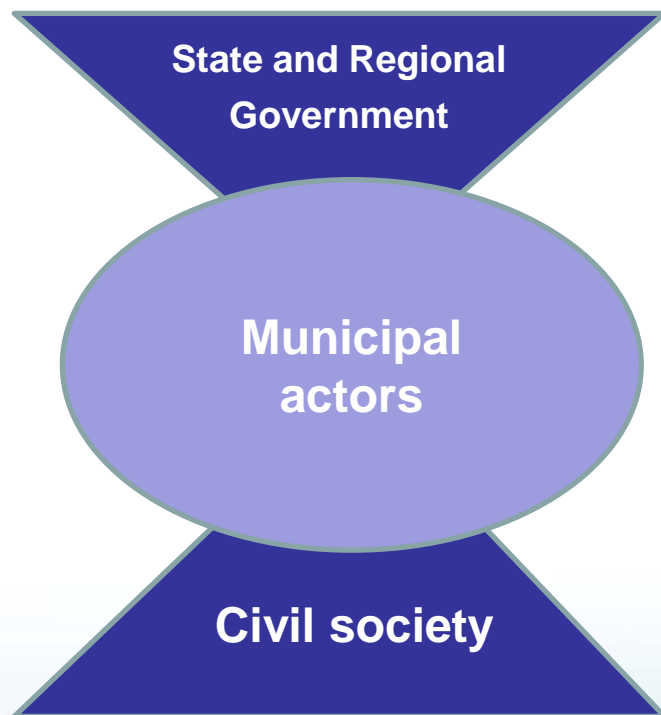
National Sewerage and Septage Management Program (NSSMP) - Philippines



Key to success



Examples of city sanitation initiatives which have achieved implementation of technical and social innovation characterized by :



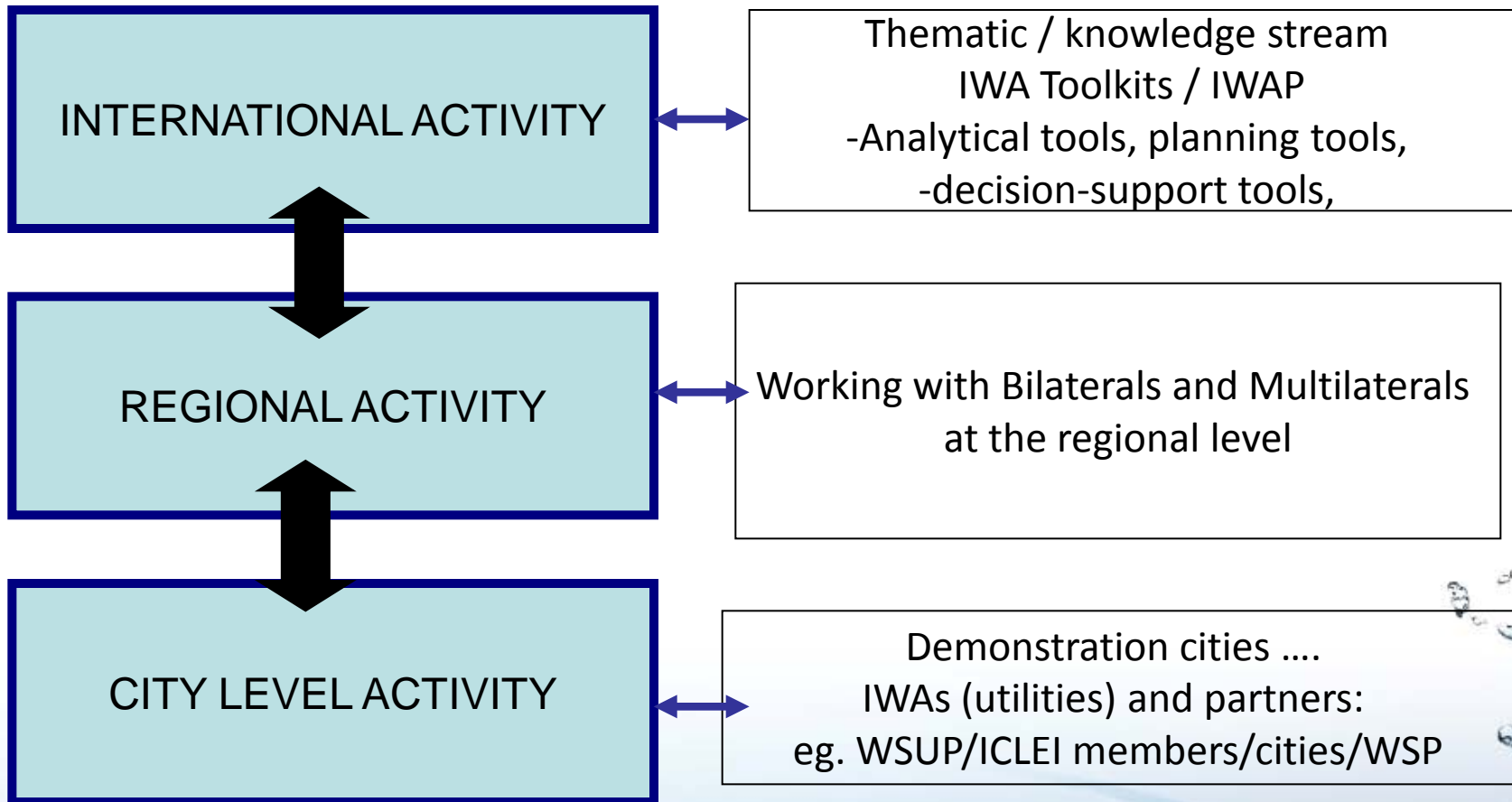
Advocacy and development of national policy

Definition of roles, responsibilities and regulatory framework

Facilitation, engagement and stakeholder participation



Working across scales



Promoting international dissemination and learning about innovations in service delivery





Conference on Decentralised Wastewater Management in Asia

Meeting urban sanitation challenges at scale

Home

Registration & Accommodation

Conference Information

Conference Programme

Conference Committee

Organisers Profiles

Procedure for Paper Submission

Key Dates

15 September 2012
Submission of full papers

1 September to 5 October 2012
Early Bird Registration

Conference Outline



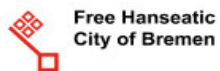
In co-operation with:



Co-organisers:



Supporting Organisations:



International Water Association



Thankyou for your attention

For partnership and
collaboration on the USI

Contact :

Jonathan.Parkinson@iwahq.org

