

Integrated Urban Water Management Approaches

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The IWA Principles for Water-Wise Cities



17 Principles for Water-Wise Cities

1 Regenerative Water Services

- Replenish Waterbodies and their Ecosystems
- Reduce the Amount of Water and Energy Used
- Reuse, Recover, Recycle
- Use a Systemic Approach Integrated with Other Services
- Increase the Modularity of Systems and Ensure Multiple Options

2 Water Sensitive Urban Design

- Enable Regenerative Water Services
- Design Urban Spaces to Reduce Flood Risks
- Enhance Liveability with Visible Water
- Modify and Adapt Urban Materials to Minimise Environmental Impact

3 Basin Connected Cities

- Plan to Secure Water Resources and Mitigate Drought
- Protect the Quality of Water Resources
- Prepare for Extreme Events

4 Water Wise Communities

- Empowered Citizens
- Professionals Aware of Water Co-benefits
- Transdisciplinary Planning Teams
- Policy Makers Enabling Water-Wise Action
- Leaders that Engage and Engender Trust

5 Building Blocks



Vision



Governance



Knowledge
& Capacity



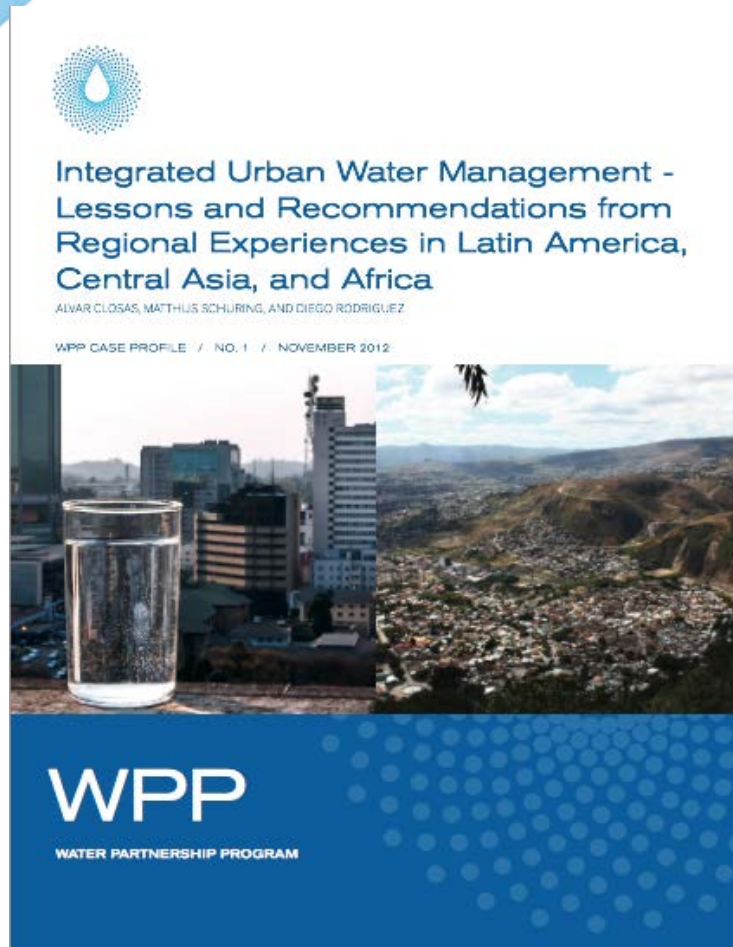
Planning
Tools



Implementation
Tools

<https://vimeo.com/184670795>

Resources: <https://openknowledge.worldbank.org>



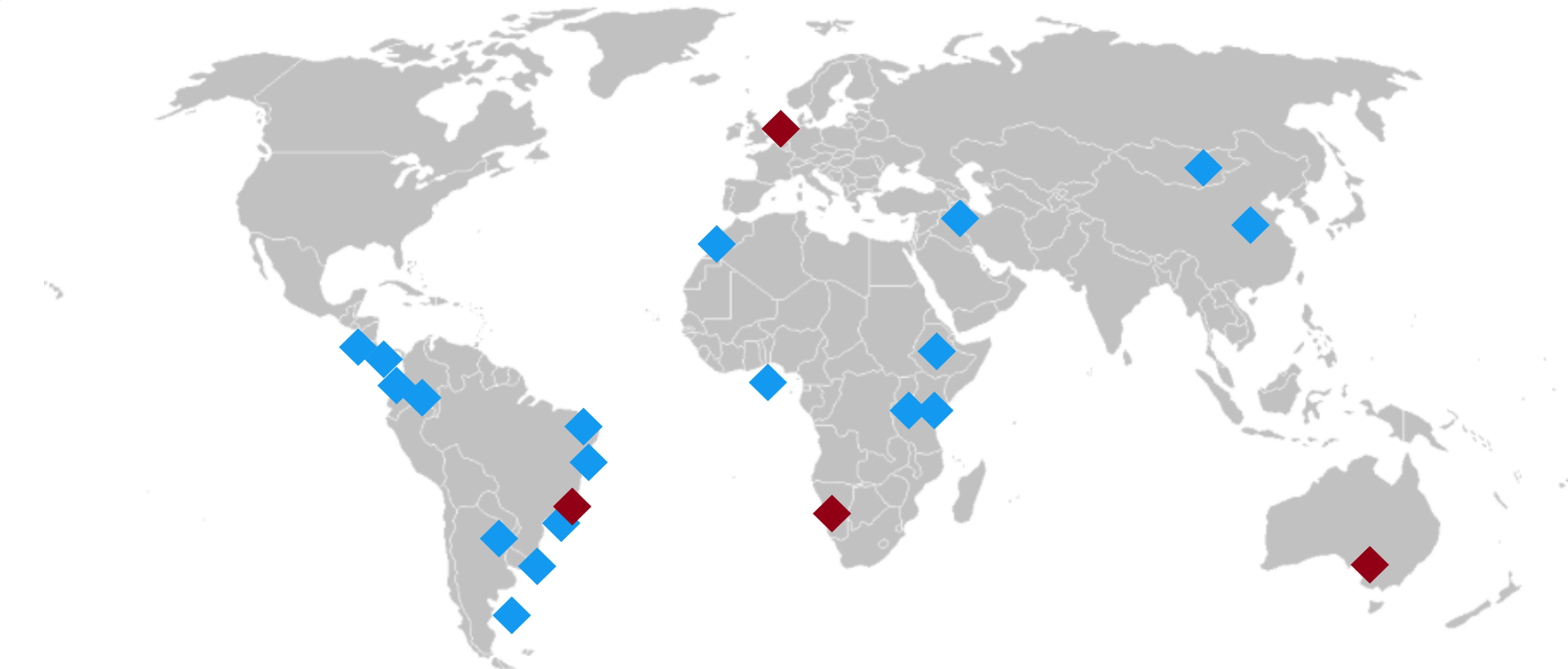
**MAINSTREAMING WATER RESOURCES
MANAGEMENT IN URBAN PROJECTS:
TAKING AN INTEGRATED URBAN WATER
MANAGEMENT APPROACH**

A GUIDANCE NOTE



A product of the IUWM Knowledge Silo Breaker,
supported by the Urban, Environment and Water Global Practices

World Bank Involvement in IUWM



- ◆ World Bank Technical Assistance/Knowledge/Investment Lending for IUWM activities
- ◆ Guidance Note Case Study

Case Studies - Two cities in developing countries

↪ World Bank engagement in a fast-growing city:
Vitória, Brazil



↪ A water-scarce city:
Windhoek, Namibia



Case Studies - Two cities in developed countries

↪ A dense, flood-prone city:
Rotterdam, The Netherlands



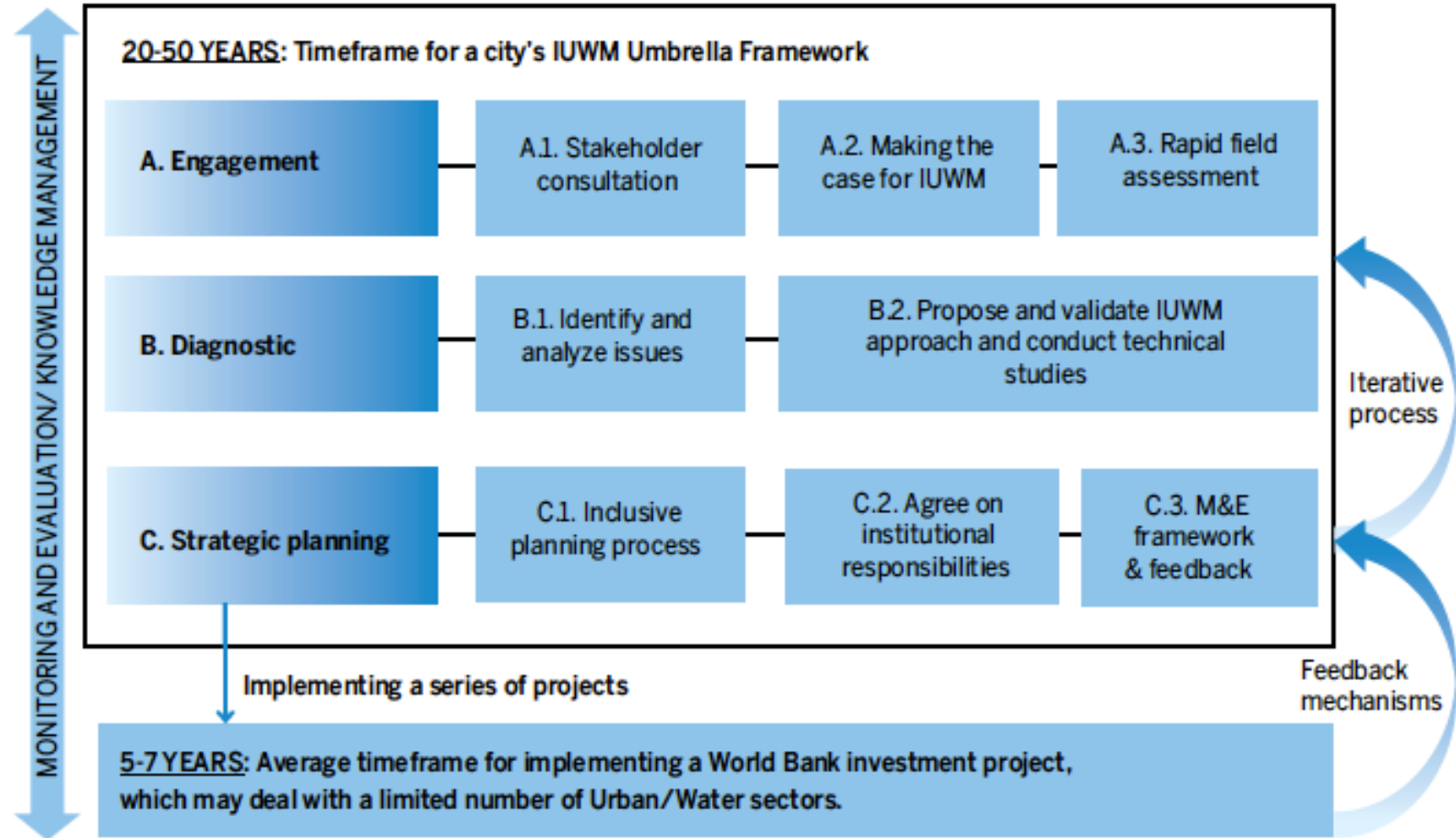
↪ An expanding city subject to
climate variability:
Melbourne, Australia



Applying an IUWM Approach in a City

Differentiates between:

- ↳ Engaging with a city under an **IUWM umbrella framework** (long-term planning, 20-50 years)
- ↳ Designing/ implementing a **Project** (5-7 years) which may only deal with a limited number of Urban/Water sector issues



Note: The implementation timeframe of the IUWM umbrella engagement is long-term and inclusive of all relevant urban/water sector activities, while that of the project is short-term, with a more limited objective.

Engagement

- ↪ Determine whether an IUWM approach is appropriate to deal with the city's challenges and development goals
- ↪ Determine whether there are drivers and an enabling environment for IUWM

1. Engagement

Conduct desk review of urban and water sector

Identify, engage and consult with urban and water stakeholders; analyze the institutional context and the political economy.

Make the case for an integrated approach.

Conduct a Rapid Field Assessment of urban and water challenges.

Diagnostic

- ↳ Analyze urban challenges
- ↳ Propose a set of options to solve these challenges under an integrated approach.

2. Diagnostic

Conduct technical studies, including economic and financial analyses of IUWM measures.

Identify nonstructural measures and non-structural measures to reach agreed objectives.

Strategic Planning

- ↪ Validate the proposed IUWM approach
- ↪ Clarify institutional responsibilities, cost-sharing and implementation mechanisms

3. Strategic Planning

Inclusive planning: determining outcomes, activities, and options for an integrated approach.

Agree on institutional responsibilities and cost sharing.

Design M&E Framework, feedback and revision mechanisms, and knowledge management

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 AMÉRICA LATINA
Iniciativa Gestión Integral de Aguas Urbanas

EL CASO DE LA GESTIÓN INTEGRAL DE AGUAS URBANAS

El saneamiento y el suministro de agua juegan un papel integral en la agenda de crecimiento económico como requisitos fundamentales para la salud humana, el desarrollo económico y la sostenibilidad ambiental. Es imposible imaginar un futuro verde sin agua potable limpia, saneamiento para todos, agua para el comercio y la industria, protección contra las inundaciones urbanas, ríos, lagos, pantanos y áreas costeras marinas vibrantes. La mayoría de los países de América Latina pueden lograr esta visión del sector del agua en una generación si consiguen tomar decisiones serenas sobre reformas institucionales y si las inversiones se conciben de inmediato. Sin embargo, los retos que enfrenta esta visión del futuro son desafiadores y entre ellos encontramos lo siguiente:

- **Rápida urbanización:** La demanda creciente del agua, el uso desorganizado de los suelos y la contaminación no controlada ponen en peligro el suministro de agua, incrementan los riesgos de inundación y afectan la calidad de vida de los habitantes de las áreas urbanas.
- **Vulnerabilidad ante el cambio climático:** La gestión del agua debe considerar acabar con el estrés hídrico proveniente del aumento de temperaturas, cambios en los patrones de precipitación y variabilidad climática.
- **Gestión ineficiente del agua:** Los enfoques actuales promueven mayormente de un sector específico o del sector local, y carecen de innovación y avances para abordar los retos transsectoriales. Los enfoques actuales promueven mayormente de un sector específico o del sector local, y carecen de innovación y avances para abordar los retos transsectoriales. Los enfoques actuales promueven mayormente de un sector específico o del sector local, y carecen de innovación y avances para abordar los retos transsectoriales.

Fortunadamente, con el crecimiento económico, los sistemas legales sólidos, los sistemas políticos democráticos y el florecimiento de movimientos medioambientales, la mayoría de los países de América y el Caribe se encuentran en una situación óptima para abordar estos retos. Si

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Síntesis

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Gestión Integral de Aguas Urbanas
 Estudio de Caso
Bogotá

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Process

PHASE 1



ENGAGEMENT
Activity Planning

PHASE 2



ASSESSMENT
Diagnostic

PHASE 3



PARTICIPATORY PLANNING
Final Diagnostic & Strategic Action Plan

PHASE 4



IUWM IMPLEMENTATION
AND MONITORING

Engagement & Assessment



PHASE 1

ENGAGEMENT Activity Planning

- Stakeholder identification
- Establish (small) local planning Team

Key Challenges

Willingness of sector institutions to work together and political will



PHASE 2

ASSESSMENT Diagnostic

- Training and brainstorming on water, urban issues and relevant information available with stakeholders
- Qualitative and quantitative assessment largely based on information already available

Key Challenges

Reliable data/information • Modeling

Planning & Implementation



PHASE 3

PARTICIPATORY PLANNING

Final Diagnostic and Strategic Action Plan

- Evaluation of possible strategies
- Consensus on objective, goals and actions
- Identification of potential funding sources

Key Challenges

Uncertainty • Risk • Multiple objectives and constraints



PHASE 4

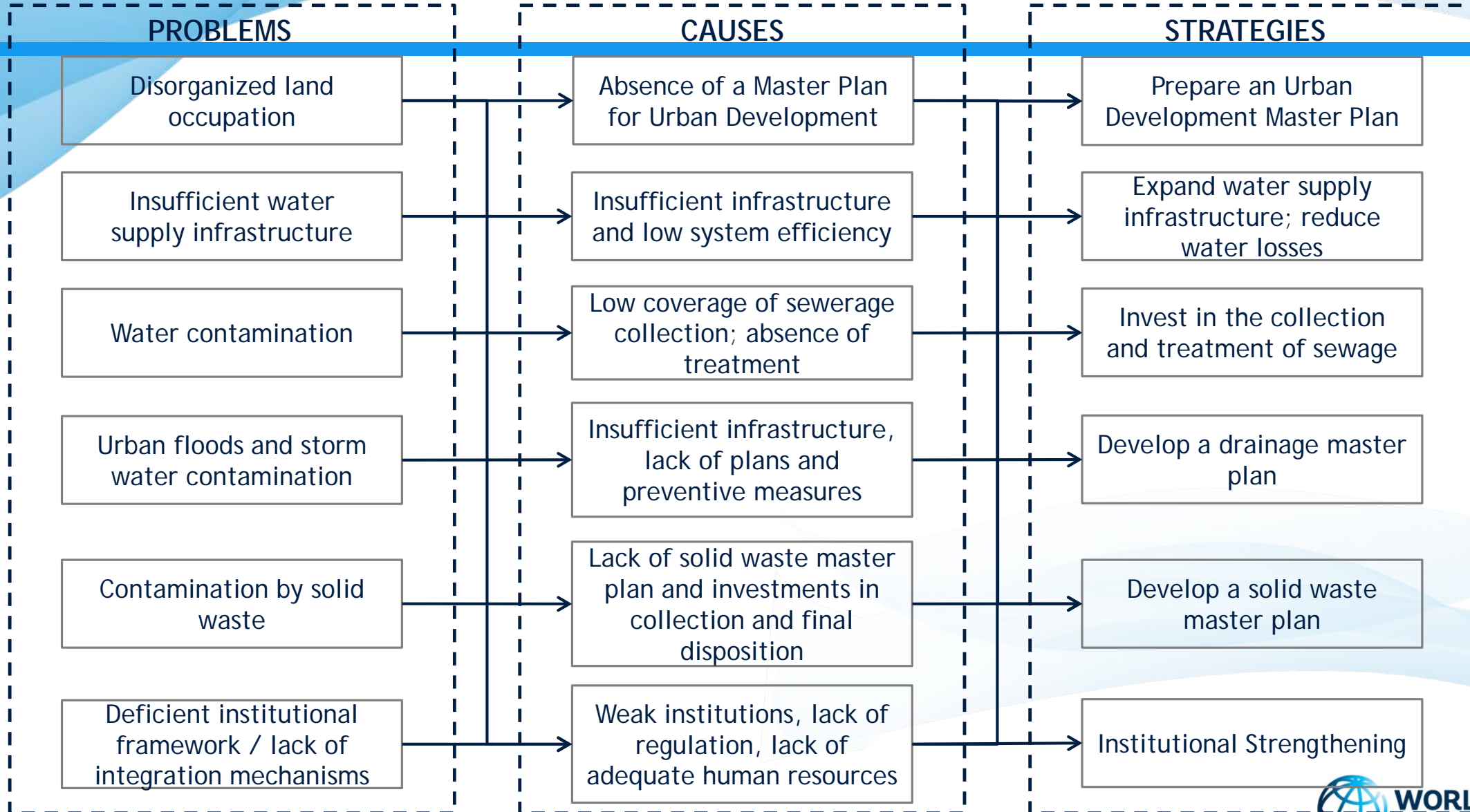
IUWM IMPLEMENTATION AND MONITORING

- Coordinated implementation of the strategic action plan
- Design mechanism to maintain engagement and information flow across institutions
- Frequent review and update of assessment and strategic action plan as additional information/data becomes available

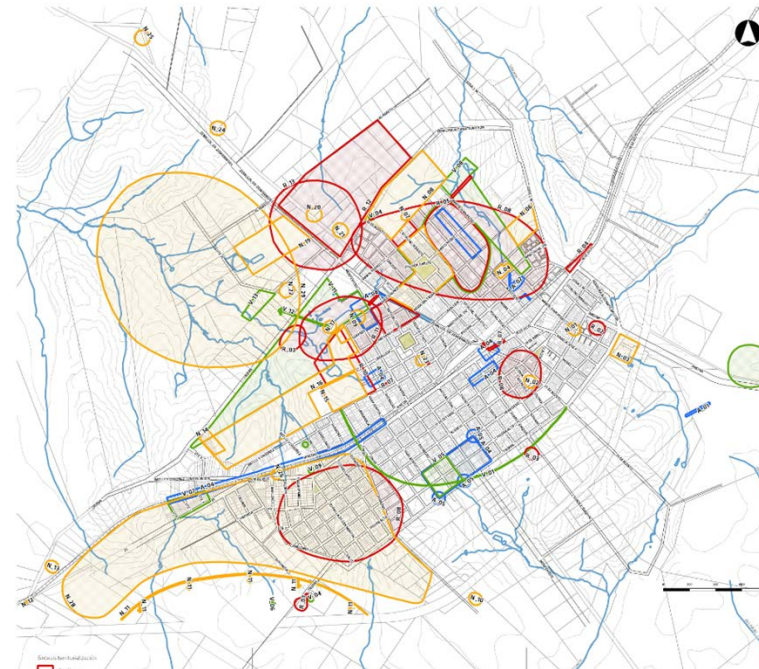
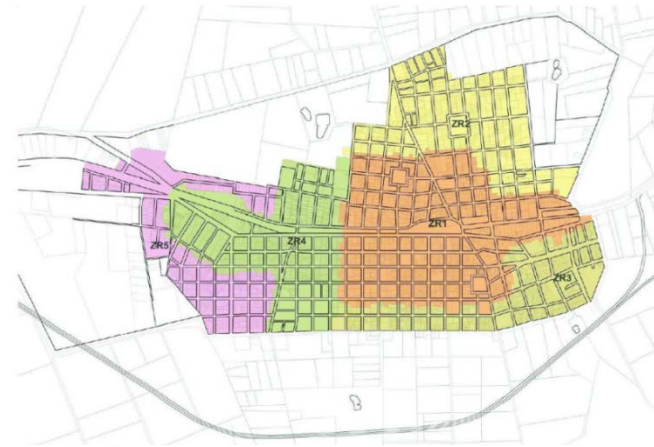
Key Challenges

Good science • Modeling

An Example from Asunción Paraguay

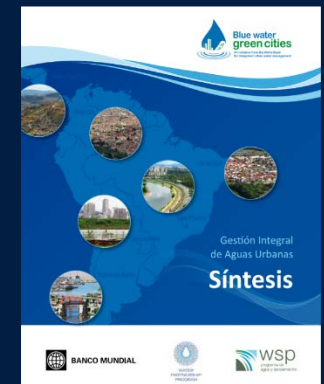
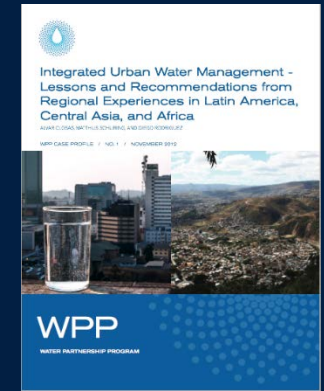
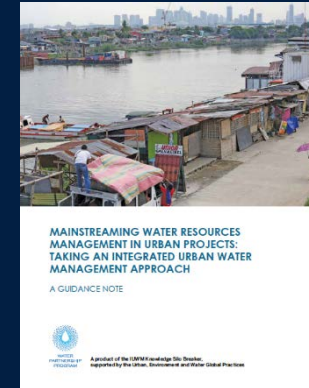


An Example from Uruguay – Salto & Young



THANK YOU ... Now over to you!

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