Sustainable Water Management in Cities: Engaging Stakeholders for Effective Change and Action

Zaragoza, Spain
13-17 December 2010

FINAL REPORT

www.un.org/waterforlifedecade/swm_cities_zaragoza_2010

INDEX

1. INTRODUCTION

The 'Sustainable Water Management in Cities: Engaging Stakeholders for Effective Change and Action' conference took place from 13 to 17 December 2010 in Zaragoza, Spain. The event was jointly organised by the city of Zaragoza, the United Nations Office to Support the International Decade for Action 'Water for Life' 2005-2015, which implements the UN-Water Decade Programme on Advocacy and Communication, the SWITCH consortium – which includes both UNESCO-IHE and the IRC International Water and Sanitation Centre and the United Nations Human Settlements Programme (UN-Habitat).

1.1 About the organisers

The **Zaragoza City Council** is a partner of SWITCH and one of the demonstration cities for the project. It has made remarkable achievements in water saving though the involvement of stakeholder groups in demand management. Water savings have been made possible through improvements to the distribution networks, reducing leakage associated with private connections, and stimulating changes in the water consumption patterns of households.

The **United Nations Office to Support the International Decade for Action 'Water for Life' 2005-2015 (UNO-IDfA)** is hosted by United Nations Department of Economic and Social Affairs (UNDESA) and implements the UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC). The Office facilitates information-sharing, implements communication activities and raises awareness in the framework of the Decade. The International Decade for Action 'Water for Life' 2005-2015 was approved by the United Nations General Assembly through its resolution 58/217 of 9 February 2004. The primary goal of the Decade is to promote efforts by different stakeholders to fulfil by 2015 the international commitments made on water and water-related issues. Such commitments include the Millennium Development Goals to reduce by half the proportion of people without access to safe drinking water and basic sanitation by 2015, and the objectives established in the Plan of Implementation of the World Summit on Sustainable Development of developing integrated water resources management and water efficiency plans, and stopping countries from exploiting water in a non-sustainable way. The Decade provides a unique opportunity to build on efforts made to date to protect, use and manage freshwater resources in a sustainable manner.

The **SWITCH consortium** is led by UNESCO-IHE, Institute for Water Education, and includes activities on stakeholder

engagement and social inclusion in urban water management that are led by the IRC International Water and Sanitation Centre. The international consortium has 32 partners from 13 countries and has been organised in partnership with the Directorate General Research of the European Commission. The aim of the project (2006-2011), working in cities around the world, is to make a significant impact through developing innovative and sustainable urban water management approaches, technologies and financing mechanisms.

The **United Nations Human Settlements Programme (UN-HABITAT)** is the United Nations agency for human settlements. It is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all. UN-HABITAT's programmes are designed to help policy-makers and local communities get to grips with the human settlements and urban issues and find workable, lasting solutions. The organisation's mandate is outlined in the Vancouver Declaration on Human Settlements, Habitat Agenda, Istanbul Declaration on Human Settlements, the Declaration on Cities and Other Human Settlements in the New Millennium, and Resolution 56/206. UN-HABITAT's work is directly related to the United Nations Millennium Declaration, particularly the goals of member States to improve the lives of at least 100 million slum dwellers by the year 2020, Target 11, Millennium Development Goal No. 7, and Target 10 which calls for the reduction by half of the number without sustainable access to safe drinking water. UN-HABITAT's strategic vision is anchored in a four-pillar strategy aimed at attaining the goal of *Cities without Slums*. This strategy consists of advocacy of global norms, analysis of information, field-testing of solutions *and* financing. These fall under the four core functions assigned to the agency by world governments – monitoring and research, policy development, capacity building and financing for housing and urban development. UN-Habitat hosts the Global Water Operators' Partnership Alliance Secretariat at its headquarters in Nairobi. The **Global Water Operators' Partnership Alliance (GWOPA)** is a key global initiative with a common commitment to helping water utilities help one another. GWOPA helps establish direct and effective partnerships and networking among operators. The decision to establish the Global Water Operators' Partnerships Alliance (GWOPA) stems from concern about the risk of missing the water and sanitation targets of the Millennium Development Goals (MDGs). Utilities urgently need capacity support if they are to fulfil their crucial role in meeting the Millennium Development Goal targets for water and sanitation.

1.2 Focus and objectives

Sustainable, efficient and equitable management of water in cities has never been as important as in today's world. Achieving important internationally agreed goals – in a sustainable manner – including the Millennium Development Goals in developing country cities, requires that we do better than we have done in the past. It requires that we

institutionalise and act upon lessons learnt in the arena of urban water management and urban development. Capacities to make change happen are typically diffused between many different stakeholders. Therefore, there is an increasing awareness of the holistic approaches, methods and skills needed to enable successful cooperation and collaboration. This includes those communication techniques which enable stakeholders to improve their performance; exchange knowledge, views and preferences; and act collectively with a feasible vision of the future.

This was the main focus of this global meeting, which brought together experts, local government officials, media specialists, key water operators and political representatives of cities and stakeholder groups to discuss key urban water issues, propose practical ways to meet the challenges of achieving water and sanitation for all, disseminate ideas to a wider audience, and reflect on different developmental and regional contexts. The meeting was also an intermediary step in the preparation for World Water Day 2011, which focused on the issue of urban water management.

1.3 Programme agenda

The programme agenda is included in Annex 1.

2. OPENING SESSION

Urbanisation and sustainable cities are a key part of the development agenda. Cities are the nexus of so much of the development dialogue and the Rio+20 discussions because cities are where the majority of people on the planet now live. The international agenda has been driven by a number of factors including the economic growth of emerging economies, the rapid increase in urban-rural migration, the new focus on how to grow green economies and the impacts of climate variability. This conference was framed as a means to distil best practice and solutions to real world urban water problems, sharing transferable examples and insights.

Main challenges for local governments were outlined by speakers. Of particular concern was the question of how to make water more accessible to poor urban communities. Indeed, most urbanisation is occurring in poor or developing countries, and slums are growing at an unparalleled rate.

Inclusive approaches to stakeholder involvement were described as key. There is a need to move beyond top-down management processes run exclusively by professionals. Civil society engagement is important and increases the effectiveness of policies, particularly for the poor.

The vision of political leaders in Zaragoza and Aragon for changes in water management and stakeholder engagement were highlighted. A strong vision for a green economy, citizen participation, cooperation between public administrations (state, regional and local), and commitment to action through state investment and municipality policy have all contributed to improvements made in urban water management.

Lessons from stakeholder engagement processes in the SWITCH project were presented. Physical demonstration projects proved useful for engaging and convincing stakeholders. Given the complexity of cities and diversity of contexts, there is no blueprint for stakeholder engagement; flexibility and the ability to make changes to the approach as the project proceeds is important, as is good facilitation and the use of learning alliances to engage stakeholders at multiple scales.

3. STAKEHOLDER ENGAGEMENT: CITY EXPERIENCES

A variety of city experiences were presented, allowing for discussion and comparison of the challenges and success factors for multi-stakeholder processes, the benefits and opportunities of working with a multi-stakeholder approach, and tools for engaging stakeholders in urban water management. Despite the diverse contexts and some evident differences between the cases, some shared challenges and transferable lessons emerged:

3.1 Challenges in stakeholder engagement

- **Gap between solutions and users.** There is often poor uptake of research findings and solutions; there is a need to bridge this gap between researchers proposing solutions and the users of solutions.
- **Institutional fragmentation.** There are fragmented institutional arrangements in cities for water with limited linkages.
- **Complexity.** The problems of urban water management are so complex they cannot be solved by one stakeholder alone. Working one part of the problem may create a problem elsewhere. Technological solutions alone will not work.

- **Diverse contexts.** The history and context of the city is hugely important when designing approaches. Different solutions will be appropriate to different cities. Flexibility and the willingness to change through adaptive learning is essential.
- **Hard to reach areas.** Stakeholder engagement is more alien and difficult to implement in some areas such as slums, illegal settlements, and places where there is an unbalanced welfare distribution.
- **Maintaining the interest and motivation** of stakeholders.
- **Different capacities to engage.** There are challenges in involving people who are not well educated/trained.
- **Attitudes and perceptions.** E.g. the poor are often not considered 'serious' customers.
- **Scaling up** from local level to city level and then to metropolitan level. Issues are more complex at city level as conflicts arise more often.
- **Institutionalising** multistakeholder processes
- **Communication.** Difficulties in communication can arise between the research component, municipalities and other stakeholders; there is a need for an understandable and common language.
- **Engaging politicians.** Overcoming the short-termism and election interests of politicians.

What has been your experience of working with politicians as stakeholders in Accra?
"This has been very challenging. Politicians often have a short-term mandate. New politicians in office have to produce results. They are currently working towards the next elections. So politicians are looking for something fast which they can achieve. You have to deal with election interest of politicians. But also sometimes you do get politicians that are interested in doing something that lasts beyond the next election. We were lucky as we had some politicians involved from the beginning who were concerned about water and especially sanitation; we were then able to make plans together."
Bertha Darteh, *Facilitator, SWITCH Accra Learning Alliance*

3.2 Transferable lessons and success factors for stakeholder engagement from the SWITCH project

- **Creating the right incentives.** It is important to communicate clearly the long-term benefits to stakeholders (reduced pollution, new policies, increased ownership, reduced conflicts, etc.), as well as the short-term benefits throughout the process to keep actors engaged and motivated.

- **Vision.** A strong and clear vision for the future from the start is important. A broad vision rather than fixed objectives may be necessary at first to get all stakeholders on board.
- **Demonstration.** Physical demonstrations (e.g. demo projects) are useful for engaging and convincing stakeholders, and provide the strongest potential for realising action research. Seeing something helps involve stakeholders who are otherwise hard to reach.

What has been your experience working with researchers and how can you ensure research is linked to practice?
I am a researcher, a social anthropologist. In 1980 I was placed in an environment with technical specialists and it took 10 years to prove myself. Building relationships, trying to understand the perspectives of the people you are working alongside, being able to ask questions are all important parts of learning. The big challenge of SWITCH is not only getting people to move outside their discipline, but also getting the researchers to feel that they are part of the Learning Alliance and getting them to engage with city stakeholders and understand where they are coming from so they can address some of their concerns and issues raised.
Alastair Sutherland, *Natural Resources Institute, Greenwich University, United Kingdom*

- **History and context.** Considering the history and context of cities is important when building alliances.
- **Intervening at the right scale.** The city is not always the best scale to start at. Working at multiple scales can be very effective.
- **Skilled and intensive facilitation.** The role of a facilitator is key, and includes learning and documentation, maintaining relationships and translation between languages/cultures/domains. Facilitators should not be involved in politics. Outsiders can be used as champions.
- **Flexibility.** Given the complexity of urban water management, there is no blueprint approach. Flexibility is essential, being willing to make changes to the approach as the project proceeds.
- **Lead organisation qualities.** The lead organisation needs to have legitimacy, credibility and skills.
- **Clear purpose.** The stakeholder engagement exercise needs to be clear in intent and not bring in other agendas.
- **Who to include**? Be clear on who to include and don't try to include everyone. An initial stakeholder analysis can help identify stakeholders and their interests. Each stakeholder needs to have a **specific role.**
- **Inclusive stakeholder engagement.** There are benefits to be gained from shifting away from top-down management processes run exclusively by professionals. Civil society engagement increases the effectiveness of policies, particularly for the poor. Stakeholder analysis can help understand power relations and identify ways to level the playing field for marginalised groups.

- **Building trust.** A safe space must be created in order to bring stakeholders together and enable open discussion.
- **Willingness to change.** The willingness of stakeholders to change their perspective on what is important, and their willingness to reconsider their role and position in relation to urban water management is an important ingredient for success.
- **Training.** Investment in training can ensure that everybody, especially the poor, is better able to participate and negotiate in water management.
- **Sharing information.** It is important to create a common baseline of information.
- **Planning and policy.** Often there is a need to change and strengthen the way water is addressed in planning and policy processes. It is important to work on and link formal and informal planning processes.
- **Learning Alliances** improve collaboration among all professionals who influence the shape of the urban space (it is not a question of whose 'vision' wins).
- **Communication tools** (websites, social networks, etc.). They facilitate engagement of stakeholders at different levels and keep them aware of progress. Communication also helps develop and maintain a common vision. Building a good relationship with the media can help build awareness and promote the project.

3.3 City experiences: specific examples of what works

3.3.1. Belo Horizonte, Brazil

General facts about Belo Horizonte

Belo Horizonte is situated at the centre of a metropolitan region with more than 5 million inhabitants. The city has 2.5 million habitants and was planned to become the capital of the state of Minais Geras by the end of the nineties. In the 1960-80s there was a dictatorship – this marked a lot the urban planning and still reflects many difficulties in stakeholder involvement – the democratisation process is ongoing. There was an emphasis on the decentralisation of public policy formulation and public services management.

Water and sanitation figures

- Almost all people are connected to the water supply system
- Water sources are relatively well protected by a special regulation

- Almost 92% of the population are connected to the sewer system
- A key problem is the lack of interceptor pipelines (most of the wastewater is dumped without any treatment)
- The typical problems are: floods, wastewater dumped into creeks, very poor sanitation and general quality conditions.

Innovative initiatives at municipal level:

- Participatory planning
- Participatory budgeting
- City conferences
- City councils: urban sectors, territorial scale

Was there a turning point moment in the process of stakeholder engagement?
The first big moment was when we invited 100 people to talk about SWITCH for the first time. Before the meeting, the university and municipality had had many opportunities to talk to one another, but it was really this big group meeting which improved discussion at an institutional level. The second moment was an idea that came later, of associating a local learning alliance to each demo. We benefited a lot learning from the experience the Municipality of Belo Horizonte is having with public participation. The third moment was when we had the SWITCH scientific meeting, which mobilised a lot of stakeholders. There was a good exchange between other cities which involved researchers working in other contexts. The key for success was the dissemination of knowledge among the stakeholders.
Nilo Nascimento, *Department of Engineering and Water Resources, Federal University of Minas Gerais. Brazil.*

Urban water management

Belo Horizonte is the first city in Brazil to have a committee on sanitation, water supply, stormwater management policies. The environmental sanitation plan and fund were very important in facilitating the participatory process. Indicators were also a key tool. The municipality is divided into 152 catchments – so indicators facilitate a broad view of how urban water is managed in Brazil.

Drenurbs river restoration initiative

The river restoration initiative was aimed at addressing problems related to flood control and the consequences of floods (many people live in flood prone areas). The approach was not to focus only on the river, but on the entire catchment management to achieve sustainability. One of the big challenges was scaling up from local level to city level, and then to metropolitan level. Another challenge was the unbalanced welfare distribution.

SWITCH demo projects in Belo Horizonte

The demo projects focused on:

- Detention and infiltration trenches, to respond to problems linked to growing urbanisation
- Artificial wetlands
- Rainwater harvesting and its applications in urban agriculture

- There was an emphasis on non-structural approaches such as vulnerability analysis, assessing people's perceptions of risk, and emergency planning.

The demo experiments were very successful because:

- They were developed at different levels (municipal and metropolitan levels) and each stakeholder had a specific role
- All demo projects have involved the municipality and the local community
- All demos included a strong training component (theoretical and practical).

Learning Alliances (LAs): lessons learned

- LAs have performed very well at local level
- LAs are more complex at city level (where conflicts emerge more often and it is more difficult to maintain motivation)
- Procedures for investing in demos were time-consuming for the Municipality and the University
- LAs require continuous hard work, strengthening alliances with partners from different areas
- Planning must be reviewed regularly
- Stakeholder involvement was very successful for the artificial wetland demo but it required long and detailed negotiations
- LAs require full-time and well trained staff
- Website and other communication tools are very important for the success of the LAs

3.3.2. Lodz, Poland

In Lodz, the major challenges are flooding, river degradation, water quality, and wastewater treatment plant overload. The SWITCH urban water management initiative was based on the logic that improved monitoring and understanding of ecological and hydrological processes will lead to better designed management interventions. Ecohydrology principles and a system approach was employed to lead to more effective and sustainable solutions that minimise environmental impacts. The aim was to connect research better to city stakeholders and city planning and decision-making processes, in order to stimulate more effective and usable research results.

Demonstration projects

- Revitalisation of the Sokolowka Urban River Valley
- Using sewage sludge to grow energy crops

Learning Alliance (LA)

The LA started in 2005-2006 with a very small group, all working on water management issues. It grew in time to a far wider network of stakeholders including media, school,

governmental organisations, NGOs, and researchers, from very different levels, covering different issues and extending beyond the water sector. Stakeholders are engaged at different levels: for example, universities are more involved in eco-hydrological regulation and control of biological systems as a management tool, while the media have been engaged in the communication of environmental issues. The purpose of the multi-stakholder platform was to share knowledge and identify a solution around water issues.

Lessons learned

- Identifying core people in the establishment of the LA was critical to the success of the entire project.
- Communication between the research component, municipalities and other stakeholders was a challenge. There is a need for clear, comprehensible and common language.
- A clear time line, budget and activities means there is an impetus for moving ahead despite the political process.
- The use of international examples can be used to inspire and inform people in the city.

Achievements of the LA

- Development of a strategic document that will be used by the city authorities
- Provided a forum for different city organisations to communicate and align their activities
- The recognition and impact in the city achieved through a series of meetings and international workshops
- Development of a common vision and integrated voice towards changes and implementation
- Creation of a safe place to discuss issues that were never addressed or that were previously discussed behind closed doors

3.3.3. Zaragoza, Spain

Water is one of the strategic focuses of the urban plan of Zaragoza. The objective to reduce the total water consumption of the city from 106Hm^3 to 65Hm^3 by 2010 was achieved in 2006.

Action points of the strategy

- Achieve good water quality. The Ebro River is naturally polluted at the origin; agriculture (diffuse pollution), cities and industry add more contaminants along its

path. A water quality management plan was required, which included upgrading the network.
- A plan for the promotion of water use efficiency in public centres and organisations.
- A new tariff policy to ensure equitable and fair prices: a tariff which incentivises water saving behaviour and penalises wastage.

All these cannot be achieved solely through the actions of politicians; they require education, awareness-raising, participatory processes and also a regulatory framework. Since 1980, the city has regularly decreased its water consumption despite its population growth. Since 2000, an investment of 280 million euros has been made (including European funds, national and municipal funds).

Communication has been key for success. There has been an investment of 7 million euros in communication and awareness-raising (4 million euros from the city).

Tools and examples
- Creation of an environmental education and awareness-raising municipal centre.
- Partnerships with other stakeholders (ECODES, FUNC, CHE, etc.)
- San Valero Foundation: introduction of technology to reduce water wastage in irrigation (reduction of water consumption in 68% in 3 years)
- Citizen participation: launch of the '100,000 citizens' commitments' campaign (tp great success with 144,000 commitments made)
- Launch of the 'Green Homes' programme to provoke reflection on the effects of daily actions (250 households in 2008, 300 households in 2009). Reduction of water consumption by 4.8% (the daily consumption was already particularly low at 82 l/day).
- Creation of a water and environment documentation centre

The SWITCH project in Zaragoza
The SWITCH project aimed to improve water management in the city. It introduced new ways of thinking and allowed stakeholders to share experiences. The project included the following components:
- Introduction of water network sectorization (smaller units to facilitate leakage control)
- Improved leakage detection and control in municipal distribution networks
- Reduction in commercial water loss, e.g. using treated wastewater to clean streets in place of potable water
- Promoting the adoption of water-saving devices and technologies, and water-saving behavioural change
- Education campaigns in schools and neighbourhood associations

- Motivation for citizens' involvement to participate in a European project.

Looking forward

- New strategic plan for 2020 toward a green economy model
- The 'water cluster; with 20 companies already involved, working on 39 proposals related to water demand
- There is a recognised need to adapt to climate change which may reduce water availability by an estimated 20%

3.3.4. Other cities

Bogota, Colombia. The main problem was with pollution from upstream tanneries. A 90% reduction in pollution was achieved by introducing cleaner production processes, as result of stakeholder engagement and action research.

Lima, Peru. In this extremely water scarce city, the SWITCH project adopted reuse of wastewater for greening productive areas. The project brought together NGOs, local government and national government to test technologies and approaches and to create new national policy guidelines.

How did you communicate your work and results within Lima?
We worked on developing a political framework. One big weakness was that politicians were not aware of the value of wastewater for irrigation; communication was key to change this. We introduced different strategies: meetings with decision makers, development of 'digestible' information materials to capture their interest (containing key facts, photos, etc.). We also did research and generated publications that were more targeted at experts. Generating different communication/information materials for different actors was key.
Gunther Merzthal, *Regional Coordinator on urban agriculture*

Accra, Ghana. Accra undertook a Resource-Infrastructure-Demand (RIDA) exercise which examined the situation in Accra in terms of water services. They did not have a strong information-base, but by developing this tool, people started to gain interest, understanding, and an appreciation of urban water management. Having common access to a set of reliable information changed the way stakeholders were involved and created a common framework for collective action.

Alexandria, Egypt. The finalisation of an integrated urban water management plan for Alexandria was a big challenge, both technically and socially: technically, because the streets are very narrow and do not have basic infrastructure; and socially because there are many conflicting laws and decrees about water supply and sanitation. A lot of attention was required to communicate to officials what was needed. The process started with a social inclusion workshop with the participation of people from the area. Their needs were identified through a series of surveys. The process of engaging the residents of the slum community was a key element for success. This process was not simple – it was a struggle to ensure that these peoples' voices were heard.

How did you go about engaging the less powerful groups in discussions in Accra?
We engaged with local farmers for our demonstration projects. We went to the farms, sat with them and asked them the challenges they have with water. Together we came up with simple ways for treating water (making demo projects with less resources). We also introduced using urine for fertilizing crops. One of the farmers won an award at national level.
We also engaged with local assembly members; they are the social capital of the project. When we had a change in government, we were able to get a chief executive on board. Making them feel part of the process is very important.
Bertha Darteh, *Facilitator, SWITCH Accra Learning Alliance*

3.4 Stakeholder engagement: challenges, benefits, opportunities, 'do's and don'ts'. Summary of group discussions

3.4.1 Challenges

Asia

- **Sustainability** of the stakeholder platform
- **Conflict management**
- Conflict and post-conflict zones present specific challenges
- **Identifying stakeholders** and initiating a stakeholder platform
- **Data availability**
- Delivering water and sanitation services to the **poor**
- Achieving **municipal autonomy**
- **Building trust** between stakeholders
- Developing **frameworks and legal regulatory mechanisms** for stakeholders
- Creating a **local community environment** for local stakeholder engagement
- Stakeholder engagement is a **diverse subject**; there is no panacea and it takes time to generate change

Africa

- **Availability of information and information sharing**: sometimes the institutions are weak, they do not share information and the management is too centralised
- **Coordination** of institutional structures
- **Centralised water management** presents problems for local planning
- There is a need to improve leadership and **attitudes**
- Donor-founded workshop and '**per-diem culture**': building dynamic citizen participation, social change and community takes time and effort

- Local governments:
  - Lack **capacity and knowledge** on water management
  - **Low human resources – attraction**, retention and incentives (salaries)
  - Inability to provide required **leadership**: no respected institution to coordinate plans.

Europe

- Institutional change **takes time** (15 years in Zaragoza, 5 years in SWITCH)
- The **level of investment** in stakeholder engagement
- Overcoming **resistance among academics**; there is a need to find champions that move and shake the academic environment
- **Trust and confidence** among stakeholders
- **Institutional fragmentation**, many actors involved
- **Access to data** at beginning of the project
- Dealing with overconfident institutions (**resistance to change**)

Latin America

- **Maintaining achievements** throughout adequate policies
- **Scaling-up** to different levels (local, city, national)
- Ongoing **education and awareness-raising** of the population.
- Building and improving **infrastructure throughout the entire water cycle**

- **Knowledge management** all the way through to conclusions and lessons learnt
- Inclusion of stakeholders from the **economic sector**
- Creation of **incentives** for better water use
- **Reducing the resistance** towards academics and politicians working together

3.4.2 Benefits

Asia

- **Sustainability**: it increases commitment by stakeholders and increases project ownership.
- **Advice**
- **Economic benefits**
- Communication **reduces conflicts**
- **Trust**
- Increase of **transparency**
- **Knowledge transfer**
- **Effectiveness** is improved

Africa

- **Collective responsibility**
- **Team work**
- Sharing experiences and ideas: **innovation**
- **Resources mobilisation** become easier (not only finances)
- Better **identification of challenges**
- **Impact on the targets** became more significant
- Increased sense of **ownership**
- Facilitates **knowledge transfer** and informs **policy formulation**

Europe

- Researchers have great ideas with **greater leverage** (Lodz)
- More **economic benefits** for investors in a better integrated, attractive city (Lodz)
- Multi-stakeholder platform engagement builds **trust**
- Sharing knowledge is **empowering**

Latin America

- **Increased environmental awareness** and its inclusion in the agenda
- Implementation of **good practices and demo projects** generating: low consumption, reduction of pollution, increase in efficiency, environmental recovery of water bodies
- **Multi-level governance**

- Conflict management; **conflicts as opportunities.**
- Making **informed decisions**

3.4.3 Opportunities

Some of the challenges can be turned into opportunities:

Asia

- **Success stories** could be used to promote stakeholder platforms elsewhere
- Turning **science** from studying to **problem solving**
- Building **civil participation**
- **Education**

Africa

- Public awareness campaigns for **kids and youth**
- Integrate the **management of storm water and sewage** for agricultural use
- Increase the level of **capacity building**
- Inclusion of **additional stakeholders**; everybody that lives in the city is a stakeholder
- **Decentralisation will lead to a common agreement**: different groups expose different identification of problems and so problems that were not previously taken into account with a centralized process come to light
- Public awareness has worked very well in **Namibia** (thanks to mass media)
- More room for **needs-drive research** to obtain unconventional water such as fog harvesting
- **Water saving** can save utilities and consumers money

Europe

- **Making water visible** to stimulate stakeholder engagement
- **Job creation and volunteering** in environmental projects
- Realising about one's own flaws through joint assessment
- **Data sharing** can be empowering and builds the Learning Alliance
- Because formal systems are not working, informal systems are required, but these may be perceived as being suspicious or illegal. Therefore, there is a need to **make informal processes formal** to give them credibility. SWITCH LAs began informally but had formal organisations involved, allowing for the formalisation of informal processes.

Latin America

- Recognition of **water as a human right**
- **Better knowledge of reality** when promoting new projects

- Development of an **integral vision of the water cycle**
- **Improvement of relations and cooperation** between academia and government
- **New technologies**
- **Development of industry** and environmental projects
- Multi-stakeholder participation in decision-making processes
- Identifying the crisis as an opportunity to involve all stakeholders in the entire project
- **Education** at the heart of the process

3.4.4 Do's for stakeholder engagement

Asia

- **Identify problems** properly
- Provide **data**
- Include **local knowledge** and integrate **cultural practices;** stakeholder engagement activities should be compatible with the social and cultural context of stakeholders
- **Engage** people
- Participation of the **marginalised**
- Do a **demonstration site**
- Find an **appropriate time and venue** for the stakeholders
- **Availability, flexibility and openness** of the stakeholders
- Develop mechanisms for **monitoring and accountability**
- Be **open-minded**.
- Get **organised before** the forum
- Use **simple language**
- Identify **'core' members**
- Provide **information feedback**
- **Demonstrate** to stakeholders that stakeholder engagement is a **positive process** (e.g. via short-term benefits)

What tools can help in stakeholder engagement?
Sometimes you can make things more complicated than they need to be. A meeting is a useful tool. Getting the right people around the table is very important, and it is probably better not to have too many people at the beginning as it becomes difficult to manage, have a good dialogue, and build the necessary trust. IRC is very experienced and has a lot of tools to facilitate engagement. You can use ice-breakers. You need to consider the context to choose the appropriate tools to encourage them to relax and have confidence.
Alastair Sutherland, *Natural Resources Institute, Greenwich University, United Kingdom*

Africa

- **Create ownership** among stakeholders and build local ownership of the end result
- **Instil self-motivation** among stakeholders
- Develop **viable initiatives**
- **Raise awareness on the benefits** of the proposed initiative
- Use **practical demonstrations** to help stakeholders understand
- Take note of the proposals of the **poorest of the poor**
- Enhance participation of **women**
- Clearly define **levels of engagement**
- Encourage **volunteerism**
- Identify **local facilitators**
- Use **inclusive facilitation**
- Keep **communicating**
- **Improve coordination** at all levels
- Identify **new stakeholders**
- **Budget** for facilitation processes
- **Good time management** is essential
- Have **open discussions**
- Provide **non-biased facilitation**

How do you ensure that vulnerable groups participate?
You need a good stakeholder analysis to get an idea of the history of relations for these stakeholders and work out the power relations. Some people have their own agenda they want to push. You need to consider how to level the playing field, give confidence to lower-level people, and ensure them that there is no hidden agenda.
Bertha Darteh, *Facilitator, SWITCH Accra Learning Alliance*

Europe

- Engage and involve **key institutions** (e.g. the municipality) that go beyond personal networks
- Take advantage of **local specific cities and interests** (e.g. low labour costs)
- **Compare** cities and context to learn about factors of influence
- The regular provision of **transparent information** builds trust
- Use **catalytic events** (Expo, football etc) to capture interest
- Creation of **a space for sharing and engaging**

- A **common baseline of data** needs to be shared and understood from the outset
- Invite people to do a specific task or take on a specific role; **allow them to engage with the process** and see that they can create change
- **Link with other initiatives** to create confidence that SWITCH is legitimate
- Good facilitation, translation and maintenance of relationships
- Have a good lead organisation.

Latin America

- Involve **community leaders**
- Identify and work with key people that give **continuity** to the process
- Maintain sight on the **long-term vision** when presenting preliminary results
- Ensure a **balance between all sectors**
- Dedicate **enough time** to empower the process and to enable full participation

3.4.5 Don't's for stakeholder engagement

Asia

- Don't **intimidate**
- Don't **ban foreign advisor** experts
- Don't allow **monopolisation** of discussions

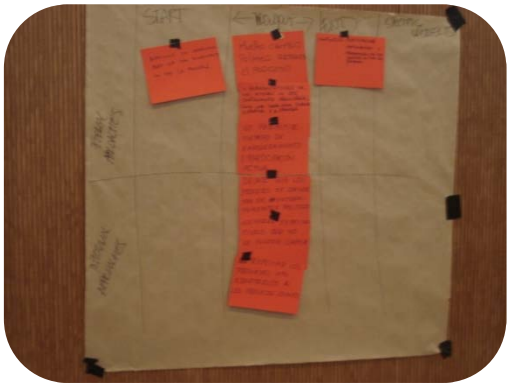
Africa

- Don't rely on **theory only** to motivate people to participate
- Don't use **allowances** to motivate participation; incentives should not be driven by money
- Avoid **discriminating** stakeholders
- Don't force people to participate in a **language** with which they are not comfortable
- Don't come with a **set agenda** (that may not be relevant to the meetings) and **conclusions**
- Avoid too many and **complicated levels and structures**

Are there experiences which should be avoided in stakeholder engagement?
We did not have any bad experiences as such. But with regards to challenges, you should be aware of: (1) maintaining a clear focus or objective for the process; (2) keeping up the interest of the people, keeping them motivated.
Bertha Darteh, *Facilitator, SWITCH Accra Learning Alliance*

Europe

- Don't go formally **too early**
- You need to know the reasons for doing stakeholder engagement; **don't just do it for the sake** of it
- Avoid stakeholder fatigue and stakeholder analysis fatigue



Latin America

- Don't let the processes become a **political confrontation**
- Don't generate **expectations that can't be met**
- Don't replicate processes **without adaptation** to the local context
- Avoid suspension of the process for **bureaucratic** reasons

- Don't confuse participation with **socialising** and presentation of results

4. STAKEHOLDER ENGAGEMENT: TOOLS AND APPROACHES

4.1 Stakeholder engagement: how to make it happen

The second day of the conference drew attention to the available tools and approaches for stakeholder engagement. A number of case studies reflected on the positive and negative lessons learned from their experiences. Delegates addressed the question of how to constructively engage marginalised groups and promote pro-poor policies.

What kind of skills are needed to facilitate stakeholder engagement processes?
One of the key skills is developing trust. Providing a safe space where people can come together and discuss issues is very important and encourages people to share. Being a good facilitator means managing conflicts and getting people to listen to and relate well to each other.
Bertha Darteh, *Facilitator, SWITCH Accra Learning Alliance*

4.2 Highlights of tools and approaches for stakeholder engagement

4.2.1 Engaging small industries and marginalised communities: the case of Bogotá, Colombia

A number of tools, approaches and concepts were adapted and used to address problems of pollution by small-scale industry in Bogota, Colombia. The project specifically engaged marginalised communities, in this case tanners involved in household-level enterprise to process leather. Almost 100 of such businesses represent a serious pollution threat near the source of the Rio Bogota upstream of the city. The process involved an initial stakeholder analysis and problem definition; a relationship building phase where the aim was to build trust and share information; large multi-stakeholder meetings for visioning, redefining the problem and reaching consensus; negotiation of possible actions; commitments made in small focused groups on specific issue areas; implementation; and monitoring.

Tools and approaches:

- Conflict resolution
- Empowerment of the socially excluded to engage in multi-stakeholder processes
- Action research and managed learning
- Negotiation
- The role of change agents

Lessons learnt:

- We often think about social inclusion as the poor being without services; but also polluters in the informal sector are excluded and need support.
- Conflict can present opportunity. There was a shift in perception of the tanners as barriers to opportunities. As their knowledge and awareness of the problem increased, along with their negotiating power, they became agents of change.
- The process of stakeholder engagement allowed for a re-definition of the problem by conflicting parties, and arrival at a consensus on the underlying causes.
- Capacity was built for effective self-organised negotiations.
- Engaging political actors should not be seen as an obstacle (the president of Colombia was involved in the process!)
- Multidisciplinary support from academia is essential.
- The MSEs were knowledgeable and eager to participate if their identity was respected and the process was transparent.
- Qualitative indicators were adopted to monitor the participation process.

4.2.2 Transitioning and strategic niche management

The SWITCH transition framework provides a step-by-step guide for implementing a radical shift from conventional socio-technical systems to next generation sustainable urban water systems. The framework can be used by decision makers and practitioners working to promote or adopt more sustainable approaches and activities for managing the urban water cycle.

The sustainable transition management cycle includes the following 'transition clusters': building stakeholder platforms (transition arenas); co-developing visions and strategic plans (transition agendas); executing demonstration projects with emerging technologies and methodologies (transition experiments); and monitoring / (re)evaluation / learning process which effectively closes the activity loop creating an iterative process.

Transition experiments include the concept of strategic niche management which is crucial for the advancement and development of environmentally sound next generation systems and practices. The transition activity clusters are broken down into the transition management 'steps' to guide and influence a transition.

4.2.3 Visioning and scenario-based planning

In the context of sustainable urban water management, the main aims of strategy development based on visioning and scenario building are to both develop a robust adaptable strategy that has the potential to achieve a shared vision under a whole range of

different scenarios (i.e. different futures), and to encourage stakeholders to take the leading role in an urban water management strategy development process.

The main steps are first, stakeholders develop a shared vision of the water services and environment that they would like to achieve at some specified time in the future. Second, stakeholders develop a set of plausible (although not necessarily equally likely) scenarios that describe different futures. Third, an overall strategy is developed that integrates various components so that it has the potential to achieve the shared vision regardless of which scenario, over time, turns out to be closest to reality.

Lessons learnt

- The use of visioning and scenario building stimulates social and organisational learning and provide a process for enhancing stakeholders' understanding of how to prepare for and manage change, risk and uncertainty.
- Visioning encourages constructive discussion and understanding amongst a diverse group
- The approach helps stakeholders think creatively about important and uncertain factors over which they have no or very limited control. Stakeholders are less likely to fear or ignore these factors and are more likely to consider how they could thrive in a range of future settings.
- The approach is forward-looking and so avoids getting bogged down in current problems
- Success or failure of strategies and plans can be monitored against a target or benchmark

4.2.4 Promoting public participation: the case of Belo Horizonte and Porto Alegre, Brazil

In Belo Horizonte, Brazil, the central challenge is to achieve environmental sanitation for all with public participation. This project focused on grassroots and neighbourhood level participation in urban water management. The aim was to raise awareness around problems related to urban water.

Tools and approaches

- Engaging communities in urban water management demonstration projects in rainwater harvesting and urban agriculture, especially schools
- Training in participatory budgeting as a tool to put new urban water solutions into practice
- Development of a website and newspaper for communication
- Children's activities
- Presentation of films about water, the environment, climate change etc.

- Lectures and technical presentations to inform stakeholders about SWITCH, share lessons from other cities, and technical aspects of urban water management
- Learning alliances to allow the inclusion of different partners' viewpoints in decision-making

Lessons learnt

- Scientific language and expert jargon can be 'translated' and new knowledge made available through training and lectures with non-traditional audiences for a university.
- It can be challenging to get engineers to enter into discussion with the public.
- Games and competitions around water are good ways to engage children.
- Special events such as around world water day can be designed to capture the community's interest.
- The legal framework is very important and can help the development of public participation.
- Public participation can be implemented via an official institutional structure or unofficially (e.g. via direct communication channels to the communities).
- The quality and democratic level of public participation depends on information accessible to the public and the organisation of the people.

4.2.5 The Future Cities Game: the case of Lodz, Poland

This game is played during a two-day event by city inhabitants from diverse backgrounds, representing various disciplines and led by a trained games-master. The aim of the game is to generate the best ideas on how to improve the quality of life either in a specific area within a city, the city as a whole, or in response to the common challenges facing cities around the world. It is therefore not specific to water. Players compete in teams to design, test and present their ideas to a group of city stakeholders, professionals, residents, and each other. The games-master leads the players through three stages - envisioning, testing and presenting - giving the players a set of tools to help them to work together and develop ideas. At the end of the game, the ideas are presented to the local stakeholders. Everyone involved votes on the best ideas and thinks about how they can be taken forward in the city once the game has ended.

Playing the game in Lodz, Poland, resulted in the Eco-Piotrkowska project – the longest 'green street' in Europe – which was later connected to other city initiatives, like green courtyards and the Blue-Green Network.

Lessons learnt

- Stimulates original thinking about how to address local and global challenges, harnessing creativity for innovation
- Builds the skills and knowledge of professionals and communities working in cities
- Creates a tool for international exchange and collaboration
- Creates ideas that are not tied to a particular funding programme or strategy, and that reflect real-world needs and solutions from people living in the city
- Visioning a future city can be fun!
- Getting the municipality involved makes it easier to implement

4.2.6 Institutional mapping

This session explored ideas behind delivering change, and which stakeholders need to cooperate or collaborate in order to do this. Changing to sustainable urban water management requires the utilisation of power to induce that change. Because water management is typically a transboundary problem, action increasingly requires cooperative or collaborative action in order to have the appropriate set of powers to induce change. Unless an organisation has the appropriate incentives to act to promote sustainable water management and to cooperate or collaborate with other organisations, change will not occur.

> "Power is the capacity to induce change", so changing towards sustainable urban water management requires that there exists the power to induce change. So, who has the power? Does anyone have the power? Are there any incentives to use that power? Does the city have the power to induce change?"
> **Colin Green,** *Professor of Water Economics, Middlesex University, United Kingdom*

Institutional mapping is a necessary precursor to making change. It involves the identification of what forms of power reside within which organisations, what are boundaries of their powers, and what incentives they have to use those powers. Analysing and understanding power dynamics can help identify entry points for delivering change. If the powers and incentives already exist, the problem is limited to achieving successful cooperation or collaboration. In other cases, it is necessary to change the powers or boundaries or incentives before change can be achieved.

4.2.7 The Combined Water Information Sharing Platform: the case of Alexandria, Egypt

The Combined Water Information Sharing Platform (CWIS) is a new web-based information-sharing platform to support water management that is linked to a set of simulation models. It can be used as a communications tool for data sharing and/or support strategic planning across all the dimensions of urban water. CWIS simulates a system of interactions in the city that effect water management, providing insight into how

certain activities will influences other parts of the system. The platform includes a database along with several data viewing tools that allow users to explore the physical space of a city (Gis Viewer), to explore its 'logical' dimension by navigating its component elements (spatial and non-spatial) and their interlinkages (System viewer), and to access related detailed information in a web-like browser tool (Reporting tool).

CWIS has been used in Thies – one of the largest cities of Senegal. There was a problem with the city expanding into the surrounding rural area, with the potential for conflict between urban and rural communities. The use of CWIS for information sharing facilitated cooperation between all parties.

Lessons learnt

- Information sharing can be a tool for avoiding resolving conflict and facilitating cooperation.
- The quality of the outputs of the models is dependent on the quality of the data entered. Creating news systems will require people to put data into specific layers of the system, and be responsible for updating it.
- The CWIS can help evaluate alternative strategies.
- In strategic planning, although not all stakeholders will or should use more advanced tools and linked simulation models, there are important stakeholder engagement issues relating to providing simulation results and indicators to support shared decision making.

4.2.8 Water demand management: the case of Zaragoza, Spain

Expansion and improvement of water infrastructure cannot meet growing demands for water at an acceptable social cost and it is therefore essential to turn attention to instruments for water demand management. The Zaragoza case focuses on two key issues related to residential water demand management: behaviour of households as water consumers and instruments available to public authorities for shifting to more sustainable use patterns which are acceptable from an equity perspective. The objective was to reduce water consumption levels and improve water use efficiency.

Tools and approaches

- **Tariffs** which recover the service costs, encourage efficient use, and equitably distribute the costs of supply
- **Awareness-raising campaigns** about changes to water tariffs, the costs of water use, and water scarcity
- **Education** on best practices to reduce water use
- Adoption of **water-saving technologies** in the home

Lessons learnt

- The use of instruments for demand management is strongly affected by the socioeconomic context of each city and the nature of water availability problems.
- The combination of approaches and tools was effective for inducing the required reduction in water use. The tool that had the greatest impact was the successive information campaigns implemented by the municipality of Zaragoza.
- Awareness-raising on the costs of water helped ensure public acceptance of changes to tariffs.

4.3 Pro-poor practices of local authorities in water management

Urban water management policies, processes and practices are likely to significantly impact on social issues in a city in a number of ways. One major issue is that of access to basic services which are essential for maintaining a standard of living for citizens. Major infrastructure and engineering works have the potential to displace people and modify habitats. Urban water management policies can also have a positive impact through the creation of employment opportunities.

The inclusion or exclusion of the poor in urban water management depends on the specific design and details of implementation. It should not be assumed that all actions will lead to social benefits for all citizens. Indeed, if social issues are poorly understood or considered, or if governance is not socially inclusive, urban water management 'improvements' and 'actions' may likely have negative social impacts.

How can urban water management be designed to ensure social inclusion? Engaging disadvantaged groups and confronting prejudice and discriminatory beliefs is not straightforward and can lead to disputes and conflict. Tackling exclusion in an integrated and coordinated way requires resources, commitment, and excellent meditation, negotiations and facilitation skills. Piecemeal efforts are unlikely to be successful.

4.3.1 Challenges for pro-poor urban water management

- **Slum areas and illegal settlements.** For example, in Alexandria, Egypt, there is a government decree that prohibits water provision in informal settlements.
- How to involve people who are **not well educated**?
- **Attitudes and perceptions** that the poor are not viable customers.
- **Lack of water and sanitation** services.
- **Donor-driven environment** leads many initiatives to die out. Lack of linkages with policy.
- How to ensure a **sustainable financing model?**
- **Lack of land titles –** service providers do not want to build connections unless they are sure they will get the payments regularly.

- **Bad quality land prone to flooding** makes it difficult (and sometimes illegal) to build upon.
- Most investments in the water sector **benefit middle and high income groups** in society.

4.3.2 Opportunities and best practice for promoting social inclusion in urban water management

- **Innovative interventions** coming from the population**,** e.g. in Alexandria, Egypt, communities built their own sanitation facilities. In Jakarta, Indonesia, one community facilitated their own water distribution system by negotiating a deal with the water company and fixing leakages.

> "Pro-poor management is about effective utility management"
> **Piers Cross,** *Senior Advisor in Water and Sanitation*

- Innovative solutions for serving slums have often involved **strengthening the community** so that they can manage elements of services provision (e.g. fee collection) and reduce the risk to operators in serving illegal settlements. There are examples of slums being successfully served (e.g. Malawi, Bangladesh, Cambodia).
- There exist mechanisms to ensure that the **poor are viable customers**, e.g. flexible tariff rates, removing blockages (land titles, connection fees), making connections, collecting payments over time in a structured way.
- Put pressure on **governments** to include the needs of the poor**.** Pro-poor approaches must be profiled politically. E.g. In Alexandria, Egypt, the government was persuaded to extend water supply provision to the informal settlements.
- Programmes with **credit facilities.** Improvements can be achieved with minimal investments, for example via micro credits (e.g. Lake Victoria).
- Access to **training , technology** and **conflict resolution** mechanisms.
- Partnerships with companies with **corporate social responsibility** policies.

> **How do you target the poorest of the poor?**
> "The solution is through partnerships, for example between the water authority, women's groups community groups, NGOs. Usually the water authority would provide bulk subsidised water and the community association would distribute it. In the Lake Victoria region, small townships, working with women's groups support local sanitation schemes and build their own toilets"
> **Mohan Peck,** *Senior Sustainable Development Officer, UNDESA*

- There is **no silver bullet**, with many models to choose from.
- In Brazil, the socially excluded communities are supported with **subsidies for housing and training.**
- In Nicaragua, education programmes and a **public banking system** were created for people unable to attain finance from private banks.

- **Developing partnerships.** E.g. in Colombo, there was a successful partnership alliance between water operators, NGOs and a bank, which together delivered improvements in water and sanitation services.
- Pro-poor initiatives need to **simultaneously engage the three groups**: service providers, policy-makers and consumers.
- If the **consumer voice** is valued politically, it can be used by NGOs to leverage political support.
- For operators, better services for the poor means **better revenues**.
- Carry out a **social infrastructure audit** (go beyond a water sector audit) to assess needs and priorities of poor groups.
- **Devolve responsibilities** for water management to communities.
- Ensure **participatory design** for standpipe location.
- **Build a road** to open access to and facilitate business growth in newly connected areas.
- Use **pre-payment or small payment** to encourage poor households.

5. POLITICAL ENGAGEMENT

The third day of the conference focused on the practical politics of transitioning to sustainable urban water management. What is the role of politicians in facilitating change, and how can effective collaboration between politicians and stakeholders be brought about? As Peter Rogers, Harvard University Professor, pointed out in an opening keynote address, the constraints on development and sustainable water management are political and social capital, not technology.

> "It's not about technology, it's about political leadership! The path to resolution of water crises does not require new technologies. We already have in place all the technology that we need. What is missing is political and technical leaders who are willing to take risks"
> **Peter Rogers,** *Professor, Harvard University*

5.1 Challenges in political engagement

- Political interest in water is scattered. **Politicians only respond to urgent issues**, not to a looming crisis.
- **Politicians are risk adverse** and have double roles, both as legislators and PR campaigners.
- **Election interests**
- **Conflicts** between local and national politics
- **Transboundary** water politics
- Water ministers sometimes **lack political clout**.

5.2 Lessons learnt from political engagement

- Conflict is not only inevitable; it is a **creative opportunity** where new things are discovered.
- Politicians can play a role in **balancing conflicting perspectives** between stakeholders.
- **Politicians should be engaged preventively**, not only when there is a crisis.
- Engaging politicians is also a process of **educating them on water and environmental issues**, so that they can adequately address the problems. The linkages between water management and other sectors may not be obvious to politicians.
- **Timing is crucial** – find the right moment to attract attention from politicians and seize opportunities.
- It is a strategic choice which politicians to engage for your project – it is necessary to **get to know and understand local and national politics**.
- **Do a policy analysis**; find out about the politicians' needs and goals and align these with your goals.
- It can be strategic to focus on the politicians who are sensitive and sympathetic to your position, or the politicians who are in a **position to influence and change**.
- There is a need to **work with the critics and the opponents**, not just the champions – work with the people that stall the process.
- It is important to **engage the ministers of finance, education** (water for schools) **and energy**, not only the water minster.
- **Regulatory frameworks for multi-stakeholder participation** are useful as they already incorporate political participation (e.g. in participatory budgeting in Brazil).
- **The media** plays an important role as it sets the agenda and sends strong messages about what issues politicians should be involved in. With the media's cooperation, it is possible to inform, educate and influence public opinion.
- It is essential that **academia and research** is aligned with political realities.
- Science can help by providing a **trusted and external point of reference** to risk-averse politicians.
- Politicians do not want to be associated with negative messages – initiatives and campaigns should be **framed in positive terms**.
- Politicians may often be more decision-approvers rather than decision-makers. **Civil servants can have a strong role in formulating decisions** and it can be a good tactic to engage them.

"The political framework between cities varies hugely and those advocating water need to take this into account. You have to tailor the approach to the type of political governance."
Mohan Peck, *Senior Sustainable Development Officer, UNDESA*

- Working directly with **legislators and political parties** can be a good way of getting water on the agenda.
- **Interventions need to be institutionalised** so that they are not compromised by political change.
- Sometimes the **power for change comes from the people**. In some cases, changes have come about when the opposition party provided water services, leading to the existing party being elected out. Education and awareness-raising amongst the public will impact the actions of politicians.
- It is instructive to engage with **groups that can put pressure on politicians**.
- There is a need to **educate people about the costs of water services provision**, and then gain support of politicians, so that any changes made or increases in costs are not protested against.
- There is a need to engage with people exposed to water-related problems (e.g. floods and droughts) to **unlock their political potential**. Water professionals often treat water as a rational issue, while for the general public it holds strong emotional and cultural significance.
- **Strategic alliances** between concerned parties/stakeholders are key to making progress.
- **Building awareness, alliances and trust** is a necessary prerequisite to addressing difficult and controversial issues (such as fees).
- **Public-private partnerships** can be a solution, but final responsibility remains with the public side/elected leaders. It is them that will be called to account if something goes wrong.

6. MEDIA ENGAGEMENT

The fourth day of the conference discussed the role of the media in water policy changes in cities. Are the media a help or a hindrance for those implementing reforms? How can the media become partners in times of reforms and changes? These questions provoked significant debate amongst delegates: on the role of journalism in society, both as a source of information but also for activism; on the capacity for journalism to change attitudes and behaviour; and on the role of the media in promoting good governance and transparency.

The media crisis

- A lot of information today comes from **non-traditional media** (social networks, organisations' communication channels, etc.) and traditional media does not yet know its place.
- There are **limited economic resources for maintaining traditional media** and quality is declining.
- **Information offered through social media is not always reliable**; this can create an information divide in the near future between those who receive reliable information and those who do not have access to reliable information.
- The situation is **very different outside Europe and the USA**. Traditional media are still very important in developing countries.
- In **social media** it is difficult to know if the writer is the source or an intermediary.

How do you effectively engage with the media?
"There are different ways of communicating. We started by doing some short briefing notes. Particularly for the media, you need to identify if there is a media source which reports on water. In Ghana we found some people reporting on environment issues. Once you have a good relationship with people in the media you can send them stories; you need to understand the media landscape. They love places where the politicians go, so there is a real advantage for getting politicians involved. We also encouraged the media to link with national events such as award schemes."
Bertha Darteh, *Facilitator, SWITCH Accra Learning Alliance*

Lessons learnt from media engagement

- It is much more difficult to deliver a **positive message** than a negative message.
- Media can be a tool to advance **public participation**.
- Media should be regarded as **an essential**

"Love the media! We should be transmitting the message 'don't be afraid to participate in the process: share experiences and let's talk about it'."
Monika Dziegielewska-Geitz, *University of Lodz, Poland, SWITCH facilitator for Lodz*

element of the process of change.
- We should stop talking about talk about 'using the media', and start talking about '**working with media**'.
- Media need to be **better advised** and supported.
- Journalists require **quality and non-technical information** with clear messages that are easy to understand.
- Engagement with the media requires more than just provision of information – it requires actively incorporating them into the entire process.
- Media need **reliable sources**. The United Nations should be a referent for reliable information and create a relationship based on mutual trust with media.
- **World Water Day** each year provides the opportunity to get high media exposure for global water issues and capture the imagination of journalists.
- Identify and engage journalists that are **sympathetic to environmental issues**, or that have an impact on politicians.
- Engaging the media should be an **ongoing process**, not a single one-off action.
- Link the media with experts on specific topics to **share knowledge**.
- Use **creative** means to attract the attention of the media, e.g. public forums, TV advertisements, community theatre, cartoons.
- The media can be a powerful tool for **changing attitudes and behaviour** (from the government to the citizens).

7. CONCLUSIONS & THE WAY FORWARD

The conference brought together a diverse group of stakeholders to discuss the challenges and pathways to more sustainable urban water management. In his keynote presentation on the final day of the conference, Kala Vairavamoorthy, Scientific Director of SWITCH depicted the gravity of the urban water challenge, where multiple and interacting pressures such as urbanisation, population growth, rising standards, and climate change, present unprecedented change and uncertainty for which we must prepare.

Case studies of cities from Africa, Asia, Latin America and Europe highlighted the successful use of tools and approaches for effectively engaging stakeholders and addressing social inclusion in urban water management. Lessons show that the most effective reforms have been gradual changes, based on the realistic scope of cities' institutions and capacities. The way forward to sustainable cities worldwide will include increasing use of Learning Alliances to improve collaboration between stakeholders, and will demand a new approach to planning and development, with greater integration between different sectors and adaptive decision-making to cope with the uncertainties of the future. Sustainable and

equitable decisions solutions require locally-driven, incremental changes within a radical, wider-shared vision.

Urbanisation is a major challenge for the world's poor. Delegates shared many innovative approaches for increasing water management's contribution towards poverty reduction and social inclusion in urban communities. The need to strengthen pro-poor governance was clear, adapting laws, policies, programmes, and information outreach to incorporate social and gender issues. Increasing access to water and sanitation services remains a core challenge and objective, working towards the MDGs and beyond. The importance of water for economic opportunities and improved livelihoods was also underscored. Training and education was presented as a critical tool to increase the negotiating capacity of the poor and enable them to participate more in water management. Addressing disaster prevention and mitigation is also essential for increasing the resilience of the urban poor.

The content and discussions from the conference fed into the preparation process for World Water Day 2011 "Water for cities: responding to the urban water challenge". Bert Diphoon, Director of the Human Settlements Financing Division and Chief of the Water, Sanitation and Infrastructure Branch, UN-HABITAT, presented the draft themes to take forward to World Water Day:

1. The impact of rapid **urban population growth** and the growth in slums
2. The impact of industrialisation, water **pollution**, lack of **sanitation** and environmental degradation on urban environments
3. Improve **governance** and deepening the reform of city and utility **management**
4. Increase **investment and sustainable financial management** of urban water supply, sanitation/ sewerage, wastewater treatment and storm water infrastructure.
5. The impact of **climate change,** conflicts and natural disasters pose huge challenges for urban water and waste management.

8. ANNEX 1: CONFERENCE PROGRAMME

Monday, 13 December	
9.30 - 15.30	**Water Tour**

Tuesday, 14 December. Stakeholder engagement: city experiences	
08.15 - 09.00	**Registration**
09.00 - 09.45	**A look at the ocean (A1)** **Opening session** • Welcome from your host: **Juan Alberto Belloch**, Mayor of Zaragoza; National and Regional Authorities: **Alfredo Boné**, Environmental Counsellor of the Regional Government of Aragon.; **Rosa Aguilar**, Minister of Environment and Rural and Marine Affairs (tbc); • Welcome from **Mohan Peck** (UNDESA) and and presentation of the SWITCH Project: **Kalanithy Vairavamoorthy**, Director of the School of Global Sustainability, University of South Florida, United States. • Overview of the Conference **Josefina Maestu**, Coordinator, UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC).
09.45 - 10.15	**Streams to the sea. Stakeholders in the city: integrating and strengthening sustainable water management (A1)** • Keynote speaker: **John Butterworth**, Senior Programme Officer, IRC - International Water and Sanitation Centre.
10.15 - 10.45	**Coffee break**
10.45 - 11.30	**Following the streams. Presentation of experiences in cities (A2a)** **Panel presentations** • Moderator: **Josefina Maestu**, Coordinator, UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC). • Panelists: Belo Horizonte: **Nilo Nascimento**, Minas Gerais Federal University, Brazil and **Sonia Knauer**, Municipality of Belo Horizonte. Lodz: **Monika Dziegielewska-Geitz**, University of Lodz and SLC consulting. Zaragoza: **Javier Celma**, Director of the Environment and Sustainability Agency, Municipality of Zaragoza City. • Questions and Answers

11.30 - 13.30	**Discussion of city experiences (A2b)** **Small group discussions** • Introduction and coordination: **Ewen Leborgne**, Programme Officer, IRC - International Water and Sanitation Centre. • Participant cities: **Africa**: Accra (Ghana), Alexandria (Egypt), Entebbe (Uganda), Johannesburg (South Africa), Kaolack (Senegal), Lusaka (Zambia), Rabat (Morocco). **Latin America**: Apopa (El Salvador), Belo Horizonte (Brazil), Cali, Bogotá (Colombia), Granada (Nicaragua), Quito (Ecuador). Leon (Nicaragua), Lima (Peru), Santa Tecla (El Salvador), Porto Alegre (Brazil), **Asia**: Aqaba (Jordan), Baguio (Philippines), Chittagong (Bangladesh), Dushanbe (Tajikistan), Jakarta (Indonesia), Islamabad (Pakistan), Lahore (Pakistan), Phnom Penh (Cambodia), Rawalpindi (Pakistan). **Europe**: Barcelona, Gran Canaria (Spain), Lodz (Poland), Reus, Segovia, Vitoria, Zaragoza (Spain). Working Group A Asia | Working Group B Africa | Working Group C Europe | Working Group D Latin America 1 | Working Group E Latin America 2
13.30 - 15.00	**Lunch and informal discussions**
15.00 - 16.00	**Streaming to the sea. Talk show on key lessons from city experiences of stakeholder engagement (A3a)** **Talk show** • Interviewer: **John Butterworth**, IRC International Water and Sanitation Centre. • Panelists: **Bertha Darteh**, Kwame Nkrumah University of Science and Technology, KNUST. **Sonia Knauer**, Belo Horizonte City Hall, Brazil or Nilo Nascimento, Minas Gerais Federal University, Brazil. **Gunter Merzthal**, IPES Promoción del Desarrollo Sostenible. **Carol Howe**, UNESCO - IHE.
16.00 - 17.00	**Group discussions (A3b)** • Introduction and coordination: **Ewen Leborgne**, Programme Officer, IRC - International Water and Sanitation Centre. Working Group A Asia | Working Group B Africa | Working Group C Europe | Working Group D Latin America 1 | Working Group E Latin America 2
18.30 - 20.00	**Cooperation in action: the Water Alliance (A4)** **Open session. Debate series** • **Víctor Viñuales, Mª Jesús Cajal**, Water Alliance • **Manuel Calderón Chévez**, Mayor of Leon, Nicaragua • **César Samperio Blanco**, AMVISA, Vitoria • **Javier Rodríguez Melón**, Social Participation, Municipality of Zaragoza.

Wednesday, 15 December. Stakeholder engagement: tools and approaches	
08.15 - 09.00	**Keynote address** **Biodiversity, Water and Cities, Outcomes of CBD -COP10, Nagoya 2010.** By **David Coates**, Secretariat of the UN Convention on Biological Diversity (CBD).
09.00 - 09.30	**Ripples and reflections (B1)** **Recap and overview** • **Josefina Maestu**, Coordinator, UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC).
09.30 - 10.00	**A compass and a sextant: tools and approaches for stakeholder engagement (B1)** **Interview to keynote presenters** • Interviewer: **Pireh Otieno**, Water, Sanitation and Infrastructure, UN-Habitat. • Interviewees: **Alastair Sutherland**, Natural Resources Institute, University of Greenwich, U.K. **Bertha Darteh**, Kwame Nkrumah University of Science and Technology, KNUST.
10.00 - 10.30	**Coffee break**
10.30 - 11.30	**What the compass tells us: Highlights of the work with tools and approaches for stakeholder engagement (B2a)** • Facilitator: Ewen Leborgne Programme Officer, IRC International Water and Sanitation Centre. • Panelists: a) **Engaging** small industries and marginalized communities, the case of Bogotá, Colombia. Mónica Sanz, UNESCO-IHE. b) **Transitioning** and strategic niche management, the cases of Birmingham, United Kingdom and Accra, Ghana. Alison Duffy, University of Abertay, Dundee, Scotland. c) **Visioning** and scenario-based planning, the case of Alexandria, Egypt, Accra, Ghana and Lodz, Poland. Carol Howe, UNESCO-IHE. d) **Promoting public participation**, the case of Belo Horizonte and Porto Alegre, Brazil. Nilo Nascimento, Minas Gerais Federal University, and Sonia Knauer, Municipality of Belo Horizonte. e) **The Future Cities** Game, the case of Lodz, Poland. Monika Dziegielewska-Geitz, University of Lodz. f) **Institutional mapping**, the cases of Birmingham, London, Alexandria, Belo Horizonte, Beijing. Colin Green, University of Middlesex, United Kingdom. g) **The city water information sharing platform**, the case of Alexandria, Marc Soutter, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland. h) **Water demand management**, the case of Zaragoza, Spain. Ramón Barberán, University of Zaragoza, Spain.
11.30 - 13.30	**In-depth presentation and discussion of different tools and approaches** (2 rounds) **(B2b)**

	Group sessions Working Group A | Working Group B | Working Group C | Working Group D | Working Group E
13.30 - 15.00	**Lunch and informal discussions**
15.00 - 15.10	**Introduction to pro-poor practices of local authorities in water management (B3)** • **John Butterworth**, IRC International Water and Sanitation Centre.
15.10 - 16.00	**Pro-poor practices of local authorities in water management (B3b)** **Group discussions** Working Group A | Working Group B | Working Group C | Working Group D | Working Group E
16.00 - 17.00	**Pro-poor practices of local authorities in water management and the cities' contribution to the MDGs (B3c)** **Panel session** • Moderator: **Bertha Darteh**, Accra, Ghana • Panelists: **Mohan Peck**, Senior Sustainable Development Officer, UNDESA **Magda Vânia Corrêa Carmona**, Municipality of Porto Alegre, Brazil **Senyo Theodore Amengor**, Chief Operations Officer, Aqua Vitens Rand Ltd./Ghana Water Company Ltd. **Evidalia Fernandez**, Small Tanners Association of Villapinzón, Colombia **Emmanuel Chinyamakobvu**, UN Convention to Combat Desertification
18.30 - 20.00	**Change in action: integrated solutions for the cities of the future (B4)** **Open session. Debate series** • Moderator: **Tomás Sancho**, World Council of Civil Engineers. • Panelists: **Alberto Galvis**, Cali, Colombia; **Mónica Sanz**, UNESCO-IHE, Bogotá, Colombia; **Gunter Mertzhal**, IPES Promoción del Desarrollo Sostenible, Lima, Peru. **Manuel Omedas**, Ebro River Basin Authority (CHE)
20.00	**Cocktail by the Municipality of Zaragoza**. Plaza del Pilar, Zaragoza City Centre

Thursday, 16 December. Political engagement	
08.15 - 09.00	Keynote address **Running Out of Water: Prospects for Cities?** By **Peter Rogers**, Professor, Harvard University
09.00 - 09.30	**Welcome and Highlights of the Conference (C1)** • Recap and introduction to the day: **Barbara Anton**, ICLEI – Local Governments for Sustainability. • World Water Day 2011: **Bert Diphoorn**, Director Human Settlements and Financing Division, UN-Habitat.
09.30 - 10.30	**Strong and successful political engagement in implementing Sustainable Water Management in cities (C1)** Interview session • Interviewer: **Carol Howe**, SWITCH Project Manager, UNESCO - IHE. • Interviewees: **Jerónimo Blasco**, Councilor of Culture, Environment, Civil participation and Major Projects., Municipality of Zaragoza **Stephen Kabuye**, Mayor of Entebbe, Uganda **Mónica Sanz**, UNESCO-IHE Bogotá, Colombia **Nadia Abdou**, Alexandria Water Company, Alexandria, Egypt.
10.30 - 11.00	**Coffee break**
11.00 - 12.30	**Parallel sessions. Political opportunities and challenges in implementing Sustainable Water Management in cities.** **Round Table with Mayors and political representatives** of Latin America and the Caribbean, Africa, and Asia **(C2a)** • **Juan Alberto Belloch**, Mayor of Zaragoza. • **Cristobal Punina**, Vice-minister of Water. Ecuador • **Susan Leal**, Harvard University **Stakeholders views** (small groups' discussions). • Coordinated by **Ewen Leborgne**, Programme Manager for Africa, IRC International Water and Sanitation Centre **(C2b)** Working Group A | Working Group B Working Group C | Working Group D | Working Group E
12.30 - 13.30	**Integrating views of political representatives and stakeholders on the Political Challenges in implementing SWM in cities.** Dialogue session • Interviewer: **Colin Green**, University of Middlesex, United Kingdom.

	Interviewees: Chair of Political Representatives Round Table and Facilitators from the Stakeholders' working groups.
	Closing address **Soraya Rodríguez**, Secretary of State of Cooperation, Ministry of Foreign Affairs of Spain. **Eva Almunia**, President's counsellor, Government of Aragon
13.30 - 15.00	**Lunch and informal discussions**
16.00 - 18.00	**Side events**

Water and Development in Asia: Challenges and Good Practices for Urban Water Management in Asian Cities (C4a) Co-organized by "Casa Asia" and UNW-DPAC. • **Soraya Rodríguez**, Secretary of State for International Cooperation, Government of Spain. • **Josefina Maestu**, Director, UNW-DPAC • **Peter Rogers**, Professor, Harvard University. • **Arjun Thapan**, President's Special Senior Advisor for Infrastructure and Water, Asian Development Bank (ADB). • **Roberto Martín-Hurtado**, Economist, Environment Directorate, OECD. • **Dominique Demessence,** Business Development Director, AGBAR. • **Imtiaz Inayat Elahi**, Mayor of Islamabad, Pakistan • **High-level representative**, Tajikistan	**Bringing nature back into cities for water (C4b)** Co-organized by UN-CBD, Secretariat of the Convention on Biological Diversity and the UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC). • **David Coates**, Secretariat of the UN Convention on Biological Diversity, Canada • **Case study**

18.30 - 20.00	**Talk show. Target 2015: Water to fight poverty (C5)** **Open session. Debate series** • Interviewer: **María Dolores Campos**, Counselor, Municipality of Zaragoza • Interviewees: **Alberto Tejada-Guibert**, Director a.i. Division of Water Sciences, IHP - UNESCO. **Antonio Embid**, Professor of Water Law at the University of Zaragoza **Helena Caballero**, Adviser on Water and Environment, UNO-IDfA/UNW-DPAC.

Friday, 17 December. Media engagement	
08.15 - 09.00	**Keynote address** **Managing Water in the City of the Future** By Professor **Kalanithy Vairavamoorthy**, Director of the School of Global Sustainability, University of South Florida, United States.
09.00 - 09.30	**Welcome and Highlights of the Conference (D1)** • Video-Newsletter highlights and overview of the day: **Marcel van den Heuvel**, UN Habitat Consultant. • Messages and statement for World Water Day 201. **Bert Diphoorn**, Director, Human Settlements and Financing Division, UN-Habitat
09.30 - 10.00	**City examples of strong and successful media engagement (D1)** **Interview session** • Interviewer: **Linda M. Whiteford**, Associate Vice-president for Academic Affairs and Strategic Initiatives, University of South Florida, United States. • Interviewees: **Bertha Darteh**, Accra, Ghana **Monika Dziegielewska-Geitz**, University of Lodz, Poland.
10.00 - 10.30	**Coffee break**
10.30 - 12.00	**Parallel sessions. The role of media and communication in the process of change** **Round table of media and communication representatives** of LAC, Africa, and Asia **(D2a)** • **Miguel Iturbe**, Director of the newspaper Heraldo de Aragón. • **Linda M. Whiteford**, University of South Florida. **Stakeholders views** (small groups' discussions) **(D2b)** • Facilitated by **Marcel van den Heuvel** and **Ewen Leborgne** Working Group A | Working Group B | Working Group C | Working Group D | Working Group E
12.00 - 13.00	**Integrating views of political representatives and stakeholders on the Political Challenges in implementing SWM in cities.** **Dialogue session** • Interviewer: **Piers Cross**, UN Habitat Consultant • Interviewees: **Miguel Iturbe**, Director of Heraldo de Aragón; Facilitators of the stakeholders' group discussions.
13.00 - 13.30	**Light Lunch**

13.30 - 15.00	**Insights and feedback to the conference on the messages of World Water Day 2011 (D4)** **Side events** • Moderator: **Josefina Maestu**, Coordinator, UN-Water Decade Programme on Advocacy and Communication. • Panelists: **Bert Diphoorn**, UN-Habitat. **Alberto Tejada-Guibert**, UNESCO-IHP. **Carol Howe**, UNESCO-IHE **Mohan Peck**, United Nations Department of Economic and Social Affairs (UNDESA). **David Coates**, Secretariat of the Convention on Biological Diversity (CBD). **Emmanuel Chinyamakobvu**, Secretariat of UNCCD. **Juan Felipe Hunt**, International Labor Organization **Jens Berggren**, Director of World Water Week, Stockholm International Water Institute (SIWI). **Thomas Van Waeyenberge**, AquaFed. **Timeyin Uwejamomere**, WaterAid.