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Global Change and Ecosystems

D6.1.1 Review of the Theory and Practice of Good Governance

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D6.1.1 Review of the Theory and Practice of Good Governance

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D6.1.1a Synthesis: Understanding and Improving Urban Water Governance

*Alistair Sutherland
Natural Resources Institute
University of Greenwich,
Chatham Maritime,
Kent
UK*

*Drawing extensively on work by Colin Green (Middlesex University) –
with comments from Carmen DaSilva (IRC).*

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SWITCH Deliverable Briefing Note

Deliverable D6.1.1a Synthesis Paper: Understanding and Improving Urban Water Governance

Audience

The document was prepared for an audience both inside and outside the SWITCH consortium. It is mainly for technical researchers within the project interested to reflect on how their research and demonstration activities link to water governance.

Purpose

The purpose of the document is to synthesise literature and summarise project experience on the theory and practice of good water governance. The document aims to provide both a synthesis of the key concepts and issues relating to urban water governance, and point to tools that can be used to progress action-research into improving urban water management and governance.

Background

This document was written after the extensive literature review produced in the early stages of the project by Colin Green (MU), some key points of which were summarised as “Learning Alliance Briefing Notes 14 and 15” written by Carmen de Silva (IRC), Alistair Sutherland (GUEL) and Colin Green. The synthesis was requested by SWITCH project management, responding to an external review which recommended better integration of the project Work Packages. The synthesis expands the ideas introduced in the two briefing notes and draws extensively on subsequent experiences of understanding water governance processes and issues and the engagement of project researchers with governance processes in the SWITCH cities, including the SWITCH city learning alliances as a novel mechanism for research engagement in urban water governance issues and processes.

Issues

The main developmental problem identified at project inception related to delivering integration through a fragmented mosaic of institutions. The context was fragmented decision making on water management issues, limited stakeholder engagement in resolving water governance challenges, conflicting policies, and in some cases, weak engagement by municipal authorities in the planning and regulation of water related services. Tools were needed to understand the water governance context and support key stakeholders involved in innovation and managing the change to engage in constructive dialogue to address the challenges faced relating to integration and sustainability. Various tools were introduced by the SWITCH project to address this issue (see recommendation 3 below).

Recommendations

1. A serious effort to understand water governance should be part of any effort to improve the integration of water management and manage innovation and change in cities.
2. The various tools used and developed in the SWITCH project to understand and progress more integrated urban water governance listed should be used (and freely adapted) by researchers and others to inform their planning and implementation activities. (list and links to other project deliverables in section 1.6 of the paper below).

D6.1.1a Synthesis: Understanding and Improving Urban Water Governance

1.1 Governance – key concepts

A commonly cited and useful definition of **governance** is: *“The exercise of political, economic and administrative authority in the management of a country’s affairs at all levels. Governance comprises the complex mechanisms, processes, and institutions through which citizens and groups articulate their interests, mediate their differences, and exercise their legal rights and obligations”* (UNDP link <http://mirror.undp.org/magnet/policy/summary.htm>).

Governance is done by people interacting with each other. The formal side of governance is the structure of these interactions. The practical side of governance is how successful people are at interacting with each other to agree on and manage the achievement of, a particular objective.

“Governance” is seen as the desired “norm”. In other words it is better to have “governance” than a situation where power is exercised without regard to recognised rules and roles. From this normative perspective, in relation to water governance Green (2007) see the two main tasks of governance as: 1) deciding what to do or “making choices”; and 2) delivering on that decision or “being more successful in implementing those choices”.

Governance is exercised at different **levels**; at each level, an organisation or individual is constrained by the power **over them** through rules exercised from above. They then have **power to** take action to change the physical world, themselves, or other people. For example authority for a particular areas of decision making can be vested in a national, sub-national, more local levels. This is often the case with decision making relating to various aspects of water management and often varies from one country to another. For example in the UK, the Environment Agency is vested with regulatory powers at national level. Regional Water companies operate at sub-national level to provide water supply and waste-water treatment services. Local area authorities have historically had limited responsibility for and influence on water management. In Germany and many other European countries by contrast, each municipality has a major responsibility in the planning and delivery of water services and other aspects of water management (Green, 2007).

Power includes authority but has a wider scope and implies "the ability to **influence** the behaviour of others" so there are multiple forms of power, and one of the issues in governance is which is the most appropriate or effective form of power to use in which circumstances. Power is indicated by the ability to make decisions, and also to exert more subtle forms of influence. Exercising more subtle forms of influence is usually an important part of managing change, including as changes in the way water is managed in cities. Influence may be either enabling or constraining. An example of enabling influence would be a person taking on the role of “champion” for a particular cause, such as the uptake of sustainable urban drainage systems (SUDS) at national level (as a policy and legislation) or within a city. This type of influence, which involves presenting an argument convincingly to sway opinion, might be more

effective when power is more evenly distributed and those involved are accustomed to making decisions through debate or persuasive leadership. On the other hand constraining influence could be passive resistance to an idea or instruction. This type of influence might be more effective and commonplace when there is an imbalance of power. For example a very powerful individual or organisation might simply ignore a policy or rule relating to SUDS, while a less powerful organisation could make a half-hearted response, without a genuine commitment.

Governance relates to how power is exercised in a particular context. **Authority** implies that power is exercised by reference to **rules** (including legal rights and obligations) about who can decide what and under what circumstances. At the centre of governance is the capacity to induce change. Rules set boundaries to power and rules exist to prevent some undesirable forms of change. But the existing rules may also prevent some desirable forms of change occurring. Rules can limit who can use what forms of power in what circumstances for which purposes.

Rules exist in many forms including the formal systems of laws and cultural and social norms. Critically, rules set boundaries to power both spatially and functionally. A particular organisation may not have the power to take some action, or may be specifically prohibited from some action. Furthermore, rules can provide incentives to act in particular ways. For example a Water company might have the power to act (e.g. to promote demand management) but lack the incentive to promote demand management because this would reduce profitability, and therefore undermine a legal requirement to remain financially viable and accountable to its shareholders.

A practical problem is that the system of rules may have gaps (areas where nobody has power), ambiguities (it is unclear who has the power to act), or simply be too complex to be efficient. For example, in the 1840s, one parish council in London had 16 separate boards responsible for maintaining roads and sewers in the parish, acting under 29 different Acts. So, before the trunk sewer system for London could be built, it was necessary to re-write the rules (Green, 2011).

Urban water governance involves a complex of **processes** and **mechanisms**. **Complexity** arises because of the many different organizations and individuals involved over a period of time, and also because each actor has different interests, understandings and amounts of power. When making decisions and exercising choices, for example about what new technology to introduce or how to set prices for water, the process and mechanisms become more complex when more actors and interests are involved. Agreeing such changes may require a process of mediation between key stakeholders, and also a process of drafting legislation and policies to support implementation of the proposed change. For example agreeing legislation and a policy on SUDS will require inputs from a range of public and private agencies involved with water management and infrastructure development. Legislation and written policies are mechanisms to support implementation. Once changes have been formulated in policies and legislation, implementation involves a process of further negotiation, influencing and enforcement, because individuals or organizations may be resistant to change the way they do things. For example implementing an agreed SUDS policy will require further negotiation with property developers and property owners and enforcement in cases of non-compliance.

A further reason for complexity is determinant multi-dimensionality of sustainability. This is linked to different disciplinary perspectives on sustainability and summarised in the acronym “PESTE: Political and institutional; Economic; Social; Technical; and, Environmental (sustainability)” (Lobina 2011, p. 3). Interdisciplinary teams a means for addressing this aspect of complexity as elaborated in section 1.4 below.

1.2 “Good Governance” – for improved outcomes

A key assumption underpinning the emphasis on water governance is that it is no longer feasible, or desirable, for an inspired engineer, or group of expert engineers, to design, implement and evaluate an improved urban water management programme. While engineers will play a leading role in improving water management, other professionals and stakeholders will also be involved. For delivering more sustainable urban water management a broadly equitable process of stakeholder engagement in the design, implementation and evaluation of water management improvements is therefore assumed to be required.

This assumption reflects the current state of urban development. Creating new water management infrastructure, or completely replacing existing infrastructure, will rarely be a possibility. In most cases adjustments, extensions and improvements to existing infrastructure will be considered. There is also greater pressure for increased stakeholder participation in the design and management of cities, including the built environment and the way that services are delivered.

“Improved outcomes” not only refer to the performance of new technologies, but also to the way new and older technologies are combined and managed within a changing social, economic and political context. Improvements may include changes to existing rules and changes in roles and responsibilities for different aspects of urban water management. For example, a city authority playing a more proactive role in designing and managing SUDS interventions, or in designing measures to improve access to water services in poorer parts of the city, could be regarded as an improved outcome.

In this context the literature proposes key features of “good governance”. In relation to both water resources management and water service provision, Rogers and Hall (2003) identify features such as inclusiveness, predictability, accountability, transparency, participation, equity and ethics, coherence, efficiency, responsiveness and sustainability. Green (2007) takes a more pragmatic stance looking not only at a process of stakeholder engagement, but also at the outcomes from a multi-stakeholder process of making and implementing decisions. Green argues that the economic, political and institutional, social and environmental implications need to be considered, and that overall sustainability is the guiding principle informing governance. From this perspective, “good” water governance will deliver urban water management outcomes that are more sustainable – environmentally, economically and socially.

This idea is proposed in Learning Alliance Briefing Note 14 as follows; “By doing things ‘better’, we mean improving the means of deciding what to do and then of implementing those decisions in terms of the better delivery of services. Central to

both the decision and the delivery processes are institutions, particularly those taking the form of an organisation, such as a River Basin Management Council or a water supply limited company. The overall goal of the SWITCH project is to catalyse change towards integrated urban water management with innovations that are applied and sustainable. To achieve this aim SWITCH brings together stakeholders with different roles in urban water management and encourages them to work together towards integrated solutions. This does not mean working with all possible stakeholders at the same time and place, which would be impractical. It does involve understanding which stakeholders are key to achieving a particular change towards better IUWM. “Better” implies factors relating to cost-effectiveness, equity, inclusiveness, environmental quality and sustainability. Deciding and implementing better IUWM requires a clear strategy and framework for multi-stakeholder engagement around a specific problem to be solved or opportunity to be addressed” .

1.3 Understanding and improving Urban Water Governance – challenges

It will be unwise and difficult, in a particular urban context, to propose credible future improvements in urban water governance without firstly gaining an **adequate understanding** of the current water governance mechanisms, processes and institutions. Similarly, having achieved an adequate understanding of water governance, it will be very difficult to **improve** governance without making changes to rules and practices. Both aspects of water governance, understanding it and improving it, present challenges.

Sustainable urban water management involves changes in technology; the functional question is whether there exists the power to adopt those technologies. So, a necessary first step is institutional mapping: identifying which bodies have which powers and where are the boundaries of those powers. In turn, that means mapping the system of rules, including the incentives to act, or not act, in particular ways.

If the aim is to understand urban water governance, one of the first challenges will be deciding who is going to undertake a study of this in a particular context. It is unlikely (but not impossible) that any one main stakeholder in a city will take it upon themselves to undertake an analysis of the current urban water governance situation. If one stakeholder takes on the task it is unlikely that they will share this analysis with all other stakeholders. The SWITCH project provided a mechanism and an impetus for initiating governance mapping in the participating cities. The question remains, where there is no such project or initiative who would undertake this task?

If an individual or organisation agrees to undertake a study of water governance in a particular city, the next challenge is getting access to adequate information. SWITCH experience is that the extent of this challenge will vary from one country and city to another. For example in the UK, where the water sector is centralised and strongly regulated through underpinning legislation and policy guidance that is generally enforced, most of the information for a governance analysis will be available in existing documents and via the internet. This was the case for the mapping of water governance undertaken for Birmingham by a team from Middlesex University which was undertaken largely as a desk study (Green, et al. 2007). By contrast, in Accra, Ghana which has a similar legislation and formal institutional structures to

Birmingham, governance information was not easily accessible on the internet or published documents. Access to the information involved contracting experts living in the city who had undertaken previous research on aspects of water governance (Ref to IM report). Access to urban water governance information is also related to the level of water service development, as well as the formal legal and organisational framework for service delivery. For example, in Accra a large proportion of the population is not connected to mains water supply and waste-water treatment infrastructure and so the understanding of water governance in the “non-formal” sector required access to a different set of information.

When information has been accessed, a further challenge is how this information can be analysed in a strategic and balanced way that will address the overall agenda of improving water governance. Moreover some aspects of governance and authority may be sensitive, responsibilities may overlap, be unclear or be different from how they should officially be. Presenting the results of an analysis will often require sensitivity to the local context.

In most cases quite sophisticated qualitative analysis will be required if the information is to be presented in a way that points to where the opportunities for improving water governance lie. The institutional mapping analysis for Birmingham was undertaken by Colin Green, an international expert in water management and governance issues. The analysis is strategic and clearly points to the constraints to and opportunity for improving the governance of flood water management (Green et al 2007). The reports mapping stakeholders and governance arrangements for other SWITCH cities contained a lot of information relating to the complexity of water governance roles and responsibilities, but were less strategic in terms of identifying the key legal and institutional barriers to improving water governance. A further challenge is achieving an analysis of water governance that is seen to be “balanced”. The balance will be affected by the amount of information gathered. For example if the governance of mains water and sewerage services serving the minority of the population are well documented, while the “informal” water services sector covering the majority of the population is not well documented, there is a risk that the analysis will be unbalanced. Moreover, it is almost inevitable that the analyst will have particular interests and technical experience, and may also have strong views on certain aspects of water governance (e.g. economic governance issues such as privatisation of water supply services or installation of water meters).

Related to this, analysis will require **qualitative analysis** skills and also experience in engaging others to progress the analysis. Water engineers may have an in-depth and first-hand knowledge of governance issues relevant to their role in the water cycle, but are not usually trained in qualitative analysis or participatory action research methods. Achieving an adequate understanding of water governance will often require major inputs from key stakeholders. In a particular city, there may be one or more individuals who have a very good understanding of how water governance works. This understanding will be internalised, and so not accessible to other stakeholders. It will also be deficient in one or more areas. A well balanced and adequate understanding of water governance in a particular city will therefore depend on inputs from both key stakeholders and a skilled analyst.

Assuming that the objective of a strategic and balanced analysis of water governance for a particular city has been achieved, the challenge of agreeing and implementing any changes to water governance remains.

Agreeing what governance changes are needed is the first major challenge to overcome. This will take time and require inputs from a range of key stakeholders, each with their particular interests and ideas. How this is done in any particular city will also depend on the governance structures and processes in place. In the case of Birmingham, addressing this challenge required input at national level. Fortuitously, one of the SWITCH governance mapping team members was appointed as a Specialist Advisor to the UK House of Commons EFRA Select Committee Inquiry into the 2007 floods. Some of the results from the institutional mapping of Birmingham were used by this Committee to identify the problems of integrating surface water drainage and also informed the framing of subsequent UK legislation on Floods. The situation was different in Lodz, where the city authorities have relatively more authority in water governance matters than in Birmingham. In Lodz the challenge was not so much in stakeholders agreeing changes in water governance, but in facilitating a social learning process. The city learning alliance brought key stakeholders around the table, encouraged them to listen to each other and focus on shared problems and opportunities facing the city, and supported them to agree what improvements they could make through the existing governance arrangements (Wagner et al, 2009). In Beijing, a fast changing city with complex governance arrangements, a multi-stakeholder platform was not considered as an effective mechanism for agreeing changes. Instead facilitated bilateral meetings allowed stakeholders to meet informally, advocate and agree changes to practice. A multi-stakeholder meeting with authorities could then subsequently be used to ratify any changes that had been agreed informally.

In all cities agreeing changes to water governance is likely to be constrained by the historical institutional and technology context of a particular city. Previous decisions made, for example about choice of technology for waste-water disposal, will constrain current and future decisions about water governance arrangements and technical options. This challenge, what economists term “**path dependency**” is explored in Colin Green’s review of water governance (D6.1.1b), and also in Emanuelle Lobina’s analytical framework for the comparative analysis of enabling factors of sustainable urban water management (D6.1.5).

Green (2007), in the context of the challenge of “delivering integration through a fragmented mosaic of institutions”, highlights the importance “**cognitive maps**” and the influence they have on behaviour relating to urban water management. Citing the “soft systems” work done in Australia relating to integrated natural resource management through multi-stakeholder engagement Green (2007) explains, “there is a primary role in the interaction between stakeholders for the sort of cognitive maps developed by Checkland: we need to share understandings of the world, particularly because each discipline has only a partial cognitive map of the world. And different things will be important to different stakeholders, possibly have different meanings, and there will be conflicts between the cognitive maps. Giving an example from the UK Green elaborates “This is the case with water management and surface water drainage in particular in England. Here, no one organisation has responsibility for ensuring effective surface water management but different organisations have

responsibilities for bits of it, where the boundaries of those responsibilities are often unclear or undefined”.

The process of stakeholders changing their cognitive maps is inherent to “**social learning**” in the water management process (Ison, et al, 2007). A recent review of positive outcomes from multi-stakeholder engagement and innovation from public-private partnerships in other sectors emphasises the challenge and importance of achieving social learning to achieve changes in governance that will improve service delivery. Le Ber & Branzei (2010) found that achieving a successful partnership with a positive outcome involved key stakeholders changing their perceptions of a problem, understanding the perspectives of others, and agreeing to making changes in their role and responsibilities. SWITCH work with local learning alliances undertaken in Belo-Horizonte and city learning alliances in Lodz (Wagner et al, 2009) also illustrates the value of engaging stakeholders in a social learning process to address the challenges of local flood-water management.

1.4 Researcher’s role in Urban Water Governance and Innovation -

Governance is a task: “. through which citizens and groups articulate their interests, mediate their differences and exercise their legal rights and obligations.” It is undertaken by people through social interaction. Consequently, whilst the formal structures of governance, the rules, make it more or less likely that the objective sustainable urban water management will be delivered, the social skills of the participants are also crucial. Researchers are key participants in the innovation and change process required to deliver this objective.

Since cooperation or collaboration is also increasingly necessary if change is to be delivered, there also have to be reasons for the individual stakeholders to cooperate or collaborate with each other. In the long run, the key individual stakeholders have to agree that there gains to be made from cooperation or collaboration.

Procedural justice, Green (2009) argues, is a necessary means of linking decisions together so that individual stakeholders can make trade-offs between decisions and not just within each individual decision. Justice requires both a guiding set of principles being adopted as the basis for decisions, and consistency of application of these principles. Procedural justice is centrally about who can use what forms of power, in what circumstances, for what purposes. In particular, it specifically excludes the use by any stakeholder of particular forms of power.

Two important sets of social relationships are 1) those between researchers and the other stakeholders, and 2) between the different disciplines. Important lessons were learnt about both in the course of the SWITCH project.

The initial SWITCH project concept, whereby the technical research content would be driven by the demands from the participating cities, the learning alliances clearly required technical researchers to play a different and more active role in the participating cities (Morris,2006; Smits et al, 2007). At a similar time to the formulation of SWITCH, researchers in Australian and Spanish cities not participating in SWITCH were actively engaging with stakeholders and promoting the

concept of stakeholder engagement to work with decision makers and planners to influence the way that urban water is managed (e.g. Salgado et al, 2008; Brown, 2008; Pearson, et al 2010). There are at least three, not mutually exclusive, ways that researchers can consider adjusting their roles:-

- Involve city stakeholders more closely in their research, as “co-learners”, during design, implementation and evaluation (“action-research” see D6.2.),
- Involve other relevant disciplines in their research as above – adopting an “inter-disciplinary” approach as opposed to a “multi-disciplinary” approach,
- Undertake a specific facilitation or “honest broker” role – to broker differences of power and interest between stakeholders and encourage the participation and empowerment of less influential stakeholders.

An assumption of the initial SWITCH project concept was that researchers should to step down from their proverbial “ivory towers” and take the risk of active engagement in a co-learning and knowledge sharing process which informs multi-stakeholder decision making in complex situations. Researchers were thus expected to have more influence on decision making. Figures 1 and 2 illustrate contrasting scenarios of SWITCH researchers involvement with the city learning alliances.

Scenario 1 reflects the dominant view of technical researchers at the start of the SWITCH project. This view implied that researchers could continue very much as usual. The slight difference was that, in learning alliances, researchers had a location specific forum for sharing their research results, with the hope that these results might be translated into decisions about urban water management and investment plans. With some exceptions (e.g. work on Urban Agriculture in WP5.2, work on Strategic Planning in WP1.4,), many of the researchers involved in SWITCH played the role implied by Figure 1.

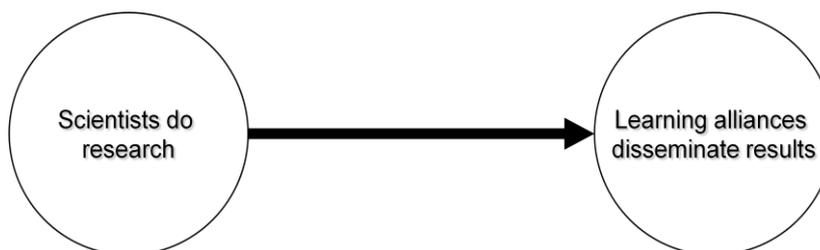


Figure Research Scientist conduct independent research and share results at the end

Figure 2 reflects the initial project idea. This scenario implied that researchers work would be continuously guided by the interests of the city learning alliance and that members of the learning alliance would be involved, as much as practicable, in the research undertaken. Scenario 2 proved difficult to implement as the project design was refined at the final proposal stage to comply with donor requirements and research partner interests.

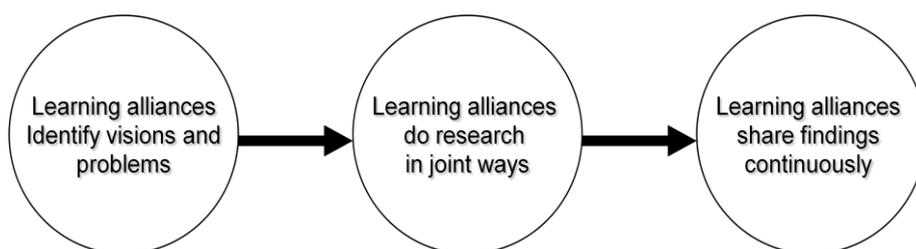


Figure Research Scientists part of learning alliance and working together with other to do research while continuously sharing research.

A third scenario, somewhat intermediate and perhaps more pragmatic also emerged during project implementation. Researchers with entrepreneurial flair identified niches for applying existing research results, knowledge and expertise to address opportunities or challenges in cities. There are a number of examples from the SWITCH project where researchers did this effectively with the involvement of the city learning alliances, particularly in cities with regeneration initiatives or facing acute problems such as water shortage or flooding (Sutherland et al, 2010). Examples include work in Lodz on river restoration and “blue-green” networks, in Birmingham with Green Roofs and utility service design and in Hamburg with Water-sensitive Urban Design, in Zaragossa with Water Demand Management and in Belo-Horizonte and Birmingham with Flood Risk management. The case studies in D6.1.5 provide further material to assist cities (and researchers) in identifying opportunities for innovation and the application of research findings for improving urban water management outcomes.

In spite of the inter-connectedness and complexity of issues addressed by SWITCH, inter-disciplinary research activity was very limited. In addition to involving city stakeholders, researchers will ideally consider working closely with other disciplines to address a particular water management issue or opportunity. However, the research on water governance in WP6 was mainly undertaken by social scientists, while in WP2 engineering researchers worked on storm-water management. When the SWITCH project was reviewed externally, the limited inter-disciplinary integration was noted. Efforts were made at a relatively late stage to improve communications between disciplines and work packages. However, because initial deliverables were mostly retained for reporting purposes, and incentive structure encouraged a largely multi-disciplinary approach, whereby the several disciplines worked in parallel, rather than in inter-disciplinary teams.

Not only might researchers consider working with other disciplines, they may also need to take on a strong facilitation role in bringing stakeholders together and bridging different interests. Steyaert and Jiggins (2007) emphasise, in the context that power relations are often unequal, the need for researchers to play a facilitation role in supporting stakeholders to better understand their own roles in complex natural resource management situations. Hence not only can researchers engage in “social learning” by working with other disciplines and key stakeholders as part of their research enterprise, they can also encourage the process of social learning within a learning alliance. In SWITCH this is exemplified in the work with local learning

alliances in Belo-Horizonte as an effort to include marginalised communities (see Case Study in D6.3).

1.5 Tools for understanding and influencing Urban Water Governance

As part of managing change in urban water management, social interactions can involve changing the self or the other person or organisation in different ways. For example, establishing mutual trust has been found to be crucial in effective stakeholder engagement. Interactions used “symbolic systems”, including language but also maps, diagrams, equations and other means. Becoming better at governance therefore needs the support of skills, techniques and tools which address the changes needed to support the development of mutual trust and understanding.

The implication is that a serious effort to understand current urban water governance arrangements, including how power works and related rules and related social norms, should be a key part of any effort to improve the integration of water management and manage innovation and change in cities (both old and new). This will require proposals for technical and institutional innovation to be considered within specific contexts - legal, institutional, political, economic, geographic, environmental, infrastructure and history.

The various tools used and developed in the SWITCH project to understand and in some cases influence urban water governance issues are useful resources for any researcher or other interested practitioner to use. The tools are not “magic bullets”. They offer a useful range of methods that can be adapted by researchers and other practitioners involved in action-research and change management in the urban water sector. The recommended use of the various tools, and examples of written outputs resulting from their use, are contained in other project publications. The table below summarises the main governance analysis and influencing tools that were promoted (and in some cases developed) through SWITCH.

Table 1: Tools for Understanding and Influencing Urban Water Governance

Tool Descriptor	When, where it might be more useful, ease of use	Links
Stakeholder Analysis	Early stages of a project– useful in all types of city. Relatively easy to do basic analysis – in-depth use requires strong experience	D 6.2.?
Institutional Mapping	Earlier stages of a project– useful in all types of city. Easier in cities where regulations are enforced and legislation and policies are easily accessible. Requires good local knowledge and strong qualitative analysis skills .	D6.1.2
RIDA Analysis	Earlier stages of a project. Potentially useful in all types of city. Easier in cities where stakeholders are empowered to share their knowledge and have time to get involved.	D6.2.?
Case Studies	Any stage of an initiative, in cities planning for	D6.1.5

Tool Descriptor	When, where it might be more useful, ease of use	Links
	change with an openness to learning from other cities. Can be used by a facilitator in helping key decision makers to think through water governance options.	
Action Research	In cities facing major water management problems, when the problem is first recognised. Local researchers want to get involved in addressing problem and city planners and operators are open to getting involved in research to address the problem (as an alternative to calling in a “consultant”).	D6.2.?
Stakeholder Communication Tools	At all stages and in all types of city. Requires adaptation of tool by a person with good local knowledge of communication cultures and protocol and good basic communication skills.	D6.1.3
City Learning Alliance	Needs to start at an early stage. Potentially useful in most types of city. Easier in smaller cities where stakeholders are relatively isolated or set in their views, but there is good scope to empower them through sharing knowledge and joint planning and lesson learning. Requires skilled facilitator and commitment over a period of years.	D 6.2.?

In addition a number of SWITCH publications and deliverables have useful information and ideas which are relevant to understanding and improving various aspects of urban water governance. Some of these are listed below under the relevant Work Package headings:-

Work Package 1 - D1.4 Strategic Planning Implementation and Performance Indicators

Work Package 2 - D2.2 Decision-making processes for effective storm—water management,

Work Package 4 - D4.1.1 Drivers and barriers for scaling up ecological sanitation

Work Package 6:

D6.1.2 Mapping Water Governance; Approaches & Experiences,

D6.1.3 Framework for Stakeholder Entitlements and Obligations

D6.1.4 Stakeholder Communication Tools

D6.1.5 Comparative analysis of enabling factors of sustainable urban water management

D 6.2 Learning alliance briefing notes (1 to 16),

D6.2 City Assessment Reports (1st and 2nd assessments of City Learning Alliances)

D 6.2 SWITCH in the City Book

D 6.3. Social Inclusion Case Studies (Accra, Alexandria, Belo-Horizonte, Hamburg, Indonesia and Middle-east Empowers Project),

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D6.1.1b Mapping the field: the landscapes of governance

Colin Green

Flood Hazard Research Centre

Middlesex University

Queensway

Enfield EN3 4SA

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SWITCH Document
<p>Deliverable D6.1.1b Mapping the Field: the Landscapes of Governance</p>
<p>Audience The document was prepared for an audience both inside and outside the SWITCH consortium, including anyone with a broader interest in the theoretical underpinnings of the concept of governance.</p>
<p>Purpose The purpose of the document is to review literature on the theory and practice of good governance, and specifically governance in the context of the challenges facing urban water management. The document aims to provide both a synthesis of the key concepts and issues relating to urban water governance, and a comprehensive and wide-ranging review of different disciplinary perspectives on governance, as illustrated in academic debates.</p>
<p>Background This document contains an extensive literature review which provides the basis for subsequent deliverables relating to urban water governance. There is an extensive list of references informing the review, and in addition a set of bibliographies listing further reading around the main issues relating to water governance. Some of the key points from this literature review were summarised as “Learning Alliance Briefing Notes 14 and 15”, copies of which follow this document. Power point presentations relating to aspects of urban water governance made by Colin Green and others which develop many of the ideas in this review have been provided to ICLEI, the consortium partner coordinating the production of training materials under D6.1.6.</p>
<p>Issues The main issue addressed is the need to develop a conceptual framework for the analysis of urban water governance that will inform the task of delivering integration through a fragmented mosaic of institutions. Fragmented power and decision making on water management issues, and the need for theoretical basis to inform effective stakeholder engagement in resolving water governance challenges are among the issues addressed.</p>
<p>Recommendations Given the complexity of the issue addressed, and the importance of understanding local context, there is need to adopt a “learning approach” to making improvements in water governance. This will involve testing various methods for understanding power relations and for engaging stakeholders in a “conversation” about how to plan and implement improvements.</p>

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D6.1.1c Governance Briefing Papers 14 & 15

Carmen DaSilva (IRC)
Alistair Sutherland (Natural Resources Institute)
Colin Green (Middlesex University)

Drawing extensively on work by Colin Green.

January 2008



Learning Alliance Briefing Note 14: Water governance for integrated urban water management (draft)

Prepared by Carmen da Silva, Alistair Sutherland and Colin Green

Introduction

Integrated Urban Water Management (IUWM) is challenging because it implicitly requires an improvement in governance, especially at the city level, spanning several traditionally separate sub-sectors or functions of government and civil society. The aim of this briefing note is to outline the concept of water governance and its importance to implementing IUWM.

Governance can be described as the exercise of authority and legitimate influence in the management of a city's water and water-related affairs at all levels of decision-making. This includes the complex mechanisms, processes, and institutions through which stakeholders articulate their interests, mediate their differences, and exercise their legal rights and obligations with respect to water management.

This modification of a generic UNDP definition sees governance as being made up of two elements: mechanisms and processes on the one hand, and structures or institutions on the other. These two elements are closely linked because processes are largely articulated through institutions.

Governance is key to SWITCH (a project promoting integrated urban water management) since it aims to work with and through key stakeholders in the participating cities, encouraging and supporting them to do 'better' than they have in the past. Doing 'better' means several things: 1) making 'better' choices than in the past, 2) being more successful in implementing those choices, and 3) having better options to select from and implement. The first two challenges are central to improved water governance. The latter is mainly the responsibility of innovators (for example the researchers involved in SWITCH).

Governance is not synonymous with government. Rather, it is about how governments, institutions and social organizations interact with citizens when making decisions and implementing them. It is the process of decision making which determines how decisions are taken and who has the power, and in what capacity, to make decisions. It is also about who is held accountable for these decisions.

Doing things 'better'

By doing things 'better', we mean improving the means of deciding what to do and of implementing those decisions in terms of the improved delivery of services. Central to both the decision and the delivery processes are institutions, particularly those taking the form of an organisation such as a municipality or a water supply utility.

Doing "better" implies factors relating to cost-effectiveness, equity, inclusiveness, environmental quality and sustainability. Deciding and implementing better IUWM requires a clear strategy and framework for multi-stakeholder engagement around a specific problem to be solved or opportunity to be addressed. Bringing stakeholder together should not mean working with all possible stakeholders at the same time and place: that is impractical. What is important is to understand which stakeholders are key to achieving a particular change towards better IUWM.

Within a city (and/or catchment) different aspects of water management may be represented by widely different relations between different stakeholder groups. While each stakeholder may have a specific responsibility or interest, cross-cutting issues such as flooding, drought and water resource management for example must be managed in an integrated way. If integration is absent the approach adopted in resolving one problem can simply make another aspect of water management more difficult.

SWITCH (like many other research projects) is proposing new approaches and technologies. To ensure that these are fully tested and put into practice and to find new and better ways of managing water in cities, SWITCH partners in each city need a well founded understanding of the formal and informal rules, the existing power relations and the context in which the proposed change is to be implemented. This requires exploring to what extent policies, legislation, power relations and processes external to the project provide room to implement the proposed

solutions. Institutional mapping focused on specific technical innovations, together with a wider political context or stakeholder analysis, should provide this information.

Institutions and IUWM

Institutions are defined as systems of rules, either formal or informal, and those rules define the boundaries of any institution. For the purposes of water management, institutions are also likely to be organisations that have a recognised role in water management or which are able to clearly articulate their interest in water management. Delivering IUWM is likely to involve either designing new institutions which suit the physical boundaries of the systems to be managed, or improving the cooperation or co-ordination between existing institutions. The former approach implies that it is both possible and acceptable to re-design institutions that will deliver enhanced integration. The latter approach requires existing institutions to learn how to, and commit to, achieving such coordinated outcomes. In this case, it also means that these institutions have to measure their success, in part, in terms of their ability to influence the actions of others, or to make agreed changes in their own actions. The starting point for both approaches has to be the development of a local institutional map which identifies which institutions have the power to deliver, fund or otherwise influence the successful up-take of the different technical measures proposed in order to deliver IUWM. It focuses on the key actors, their interactions, where power is located, who has the ability to influence decisions, and who makes decisions.

How is governance in the water sector linked to processes of social inclusion and exclusion? The answer to this question will vary between cities, largely depending on the extent to which the city residents are content with, concerned about, and able to influence (positively or negatively) water management. In cities where the majority of households are connected to centralised water supply and waste-water management systems which operate effectively and reliably, the extent of citizen engagement with water management issues is likely to be less widespread and intense. The issues may be around service charges, or

water related risks such as flooding or rising/falling water tables posing risks to buildings and property values.

In cities where most households are connected, but the water supply is not reliable and/or waste-water is not well managed there will be much more citizen engagement, and issues of social exclusion will arise strongly if the problems are concentrated more in the poorer parts of the city. In the poorer cities, where most households are not connected to mains water and sanitation networks, issues of social exclusion are likely to be more important. Moreover, citizens are more directly involved in water management (or “mis-management”), and are likely to be negatively labelled (for example as polluters, illegal connectors, water vendors). In addition, in such cities there will be greater diversity in terms of sub-systems, institutional arrangements, and technical options for water management.

How is governance linked to City Learning Alliances (LAs) and multi-stakeholder involvement? The first point is that SWITCH City Learning Alliances (a type of multistakeholder platform also being promoted by SWITCH) are an institutional innovation aiming to enhance integration and innovation in water management. Where the learning alliances are stronger and have a broad-based membership which is actively engaged and committed to the vision of IUWM, then there will be more scope to engage with governance issues and processes. Where alliances have effective representation from marginalised stakeholders, the alliance may give these stakeholders a stronger voice and provide a means for more effective engagement with other more influential and central stakeholders on issues of concern. In a city where the alliance is less active and marginalised stakeholders are not represented, there will be more limited scope for engaging with governance issues. Instead the focus may be more on discussion of technical and policy options or on future aspirations relating to technical integration and environmental sustainability.

Conclusion: addressing governance issues

In short, to deliver innovations that are applied by cities, attention to governance and institutional mapping must be key elements of the approach. Institutional mapping links technologies and issues around IUWM with the processes, structures and outcomes of decision-making known as governance. A local institutional map will identify which institutions can deliver on IUWM.

‘Good governance’ is characterized by principles such as openness, participation, legitimacy, equity, accountability, effectiveness

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For more information please contact: John Butterworth IRC International Water and Sanitation Centre (butterworth@irc.nl) who coordinates the learning alliance work-package within SWITCH, or the authors of this briefing note: Carmen Da Silva (dasilva@irc.nl), Alistair Sutherland at the University of Greenwich (a.j.sutherland@gre.ac.uk) and Colin Green at the University of Middlesex (C.Green@mdx.ac.uk).

SWITCH (Sustainable Water Management Improves Tomorrow's Cities' Health) is a research partnership supported by the European Community (Framework 6 Programme) and its partners
www.switchurbanwater.eu/learningalliances



Learning Alliance Briefing Note 15: Institutional mapping (draft)

Prepared by Carmen da Silva, Alistair Sutherland and Colin Green

Introduction

This briefing note introduces the concept of institutional mapping and outlines its potential contribution to Integrated Urban Water Management (IUWM). It starts by defining institutions, before elaborating the term “institutional mapping” and outlining the methodology. Emerging lessons, the proposed way forward and further sources of information and guidance are provided.

Institutions and IUWM

Institutions are defined as systems of rules, either formal or informal, and those rules define the boundaries of any institution. For the purposes of water management, institutions are also likely to be organisations: the physical embodiment of an institution. Such organisations will have a recognised service or regulatory role in water management (such as a water supply company or a water board), or are able to clearly articulate their interest in water management (such as a water user association). These named entities are recognised to have authority, power and influence in relation to water management.

Who has the power to act, or the power to require their agreement before another can act, depends upon context. Hence, which institutions are involved will depend on which aspect of water management is being considered. Institutions, including their boundaries, are shaped by their historical, geographical and technical contexts. The boundaries for different forms of service delivery relating to water differ spatially as well. The SWITCH (which aims to realise IUWM) is seeking to deliver more integrated water management through a fragmented mosaic of institutions. Delivering integration of water management will therefore involve either designing new institutions to suit the physical boundaries of the systems to be managed, or improving the cooperation or co-ordination of

Governance shapes the way services are planned, managed and regulated within political social and economic systems. Integrated Urban Water Management is challenging because it requires an improvement in governance, involving traditionally separate sub-sectors or functions of government and civil society. Improving IUWM will require engagement with a complex array of administrative, political, institutional, social, economic challenges in cities.

existing institutions. Institutional mapping provides a starting point for either approach.

Why institutional mapping?

Institutional mapping is needed to give insight into institutional and governance structures for urban water management. While more integrated UWM may require new technologies (including planning and management tools and models), it can only be delivered through the relevant institutions who will almost certainly be required to make changes in the way they work, and how they perceive each other. Mapping the existing (formal and informal) power and influence exercised by the relevant institutions, particularly that pertaining to a new technical innovation being considered, is regarded as a key element of the SWITCH approach to facilitating change in the involved cities.

What is institutional mapping?

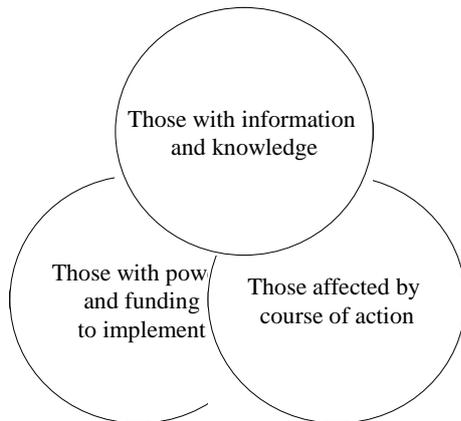
Institutional mapping links technologies and issues around IUWM with processes, structures and outcomes of decision-making known as governance. It identifies stakeholders with different kinds of power and also examines their source of funding.

A local institutional map identifies which institutions have the power to deliver, fund or otherwise influence the successful up-take of technical measures in order to deliver sustainable urban water management. It focuses on the key actors, their interactions, where power is located, who has the ability to influence decisions, and who makes decisions.

Intra-organisational rules partition what an organisation can do into three sets: what it must do, what it may do, and what it must not do. Institutional mapping focuses upon actions. However, intra-organisational rules (or the constitution) may define specifically what an organisation can do, and the procedures it should adopt, and/or the objectives it is to pursue.

From an institutional delivery perspective, there are three different groups of stakeholders (Figure 1).

Figure 1 Stakeholders in service delivery



Key issues to understand in institutional mapping

It is presumed that no individual organisation can deliver a service alone. Therefore, the effectiveness of any organisation lies in its ability both to influence others and to work effectively with others to address a shared problem or opportunity. The powers and funding to deliver integrated water management may be scattered between different institutions. It is therefore necessary to map out the functional and geographical boundaries and know where the powers and funding to deliver different courses of action reside in a specific city. City institutional maps will identify what institution has which duties and powers, and its funding to do what it has to do, or is empowered to do.

A key issue is the integration of land and water management and how this plays out in cities. Each organisation embodies a set of rules, governing what it does and exists in an environment of rules that determine its relationships with other organisations. This can vary substantially between countries. For example, England and Wales are highly centralised countries with only 420 units of local government, plus around 450 Water User Associations (WUAs), for a population of some 55 million. This compares to the more than 36,000 communes and around 1900 WUAs, plus regions and departments in France; or the 17 Regions, 52 Provinces, 8,101 municipalities, and 6,200 WUAs in Spain.

Although the focus of SWITCH is on cities, city level decision-making and operational decision-making at the sub-city level often is fundamentally influenced and affected by decision-making at regional, national and international levels. The analysis of institutional arrangements which leads to the construction of an institutional map therefore needs to consider each of

these levels or layers; the institutional map is multi-layered.

What are the principles of mapping?

Balanced information: Information gathering should use existing studies and official documentation as well as a range of other primary and secondary sources, supplemented and verified by empirical evidence.

Cultural understanding and stakeholder participation: It is a time and labour intensive exercise, which requires proficiency in the local language and an awareness of local cultural and operating practices. A mapping study should involve key local stakeholders, such as those involved in multi-stakeholder bodies (like the local Learning Alliances in SWITCH).

Attention to Informal and Formal Rules: It is much easier to identify the formal systems of rules, expressed in laws and regulations, than the informal systems of rules: those that are expressions of social norms for example. Informal rules are neither noticed explicitly or open to question, but are more important than formal rules.

How can mapping contribute to IUWM?

Institutional Mapping can be a step in exploring space for institutional reform, and organisational change. It should provide insight into the relations between stakeholders including those formally and informally involved in service provision and the users of the services. An institutional map will provide clarity on the articulation of users' needs and on decision making processes, issues related to governance and the opportunities and constraints to achieving integrated urban water management.

By identifying where funding and powers reside, for each proposed intervention strategy and technological solution, institutional mapping can provide the necessary insights for developing realistic plans.

Methodology

Institutional mapping is fundamentally a process of analysis. The methodology for Institutional Mapping has been developed and described in '*Institutional arrangements and mapping for the governance of sustainable urban water management technologies; Mapping protocol*' by Colin Green of Middlesex University. In the form described it has been applied to Birmingham. Adaptations of this methodology are being and have been tested out in other SWITCH cities. In brief, there are four groups of tools for institutional mapping:

- Mapping formal definitions of key terms, such as river, sewer etc (these are found in law and administration)
- Series of questions covering different possible relationships
- Diagrams showing relationships
- Diagrams showing technologies

Having identified the relationships between the organisations, and the organisations who are consequently players, the remaining questions are:

- What are the objectives or interests of those organisations?
- What rules govern their behaviour, including the procedures which they must adopt in making and implementing decisions?

In the following section, we will describe the objective and scope of the mapping exercise and common issues that arise.

The main elements of an institutional map

The elements of the protocol for institutional mapping are:

1. Specification of the institutional map creator(s) and who is/are institutional map user(s), and the technologies concerned.
2. Clear determination of the purpose of the institutional mapping, including what kind of behavioural changes are required.
3. Specification of the primary, secondary and further 'action spaces' likely to be relevant to the purpose determined and a preliminary identification of how they interact.
4. Know the main players at different levels.
5. Selection of sequencing in which institutional layer mapping is to be presented in the institutional map.
6. Decide whether the institutional mapping is likely to be different, and therefore presented differently, for each sustainable urban water management technology.
7. What are the 'rules of the game?' i.e. the legislative and regulatory environment including the international level; regulations, guidance, guidelines, codes, administrative procedures, financial arrangements and administrative procedures.
8. The informal 'rules of the game' – the underlying social norms and conditions
9. Compliance: how far do the formal rules operate in practice?
10. The internal rules of organisations.

11. Definitions to lend clarity and precision to the institutional analysis and mapping. A glossary of terms should be provided.

12. Include relevant data and information in the institutional mapping. (such as population size of city, country, Per capita water consumption, Trends, Agency or organisation ownership etc.)

13. Employ a range of methods of presentation and portrayal.

What are lessons to date from doing institutional mapping?

Experience there has revealed that while there are some tools and a general approach expressed as a protocol, there is no cook book which will guarantee an adequate institutional map. Some emerging lessons are:

- Institutional Mapping is a skilled exercise that requires insight into the local context.
- Policy and practice are constantly in a state of change so it is necessary to see what changes are being contemplated.
- Intra-organisational rules partition what an organisation can do into three sets: what it must do, what it may do, and what it must not do. However, that there are rules does not mean that they actually operate.
- Institutional mapping is dependent upon the availability of and access to documents.
- History is important. Prevailing concerns and technologies from the past are reflected in definitions of terms, in laws, regulations and institutions.

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The SWITCH project aims to achieve more sustainable urban water management in the “City of the Future”. A consortium of 33 partner organizations from 15 countries is working on innovative scientific, technological and socio-economic solutions, which can then be more speedily replicated around the world.

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