

**Seminar: Governance of water and waste:
a key to sustainable development?**



ABSTRACT VOLUME

World Water Week in Stockholm
27 August – 1 September, 2017

Water and waste: reduce and reuse

Seminar: Governance of water and waste: a key to sustainable development?

Contents

- Addressing integrity risks in wastewater management: good and bad practices 3
- Community-based integrated water resources management in Meghalaya 5
- Embedding integrity in water and waste management through social accountability..... 7
- Governance of sanitation: incentives for turning political will into action 9
- Incorporating water governance in the annual monitoring and reporting framework 11
- Stakeholder engagement to improve community-scale wastewater system governance in Indonesia.....13
- Sustainable water governance in industrial symbiosis: the case of Kalundborg15
- Poster: Local leadership development: An example for locally-driven, sustainable waste management17
- Poster: Non-existent water supply regulators - Implications for sector governance.....19
- Poster: Performance measurement for effective regulation - Case of Indian urban water supplies21
- Poster: Public-civil society incremental involvement in water governance in Latin America..... 23
- Poster: Tensions in rural water governance in the digital era 25

Addressing integrity risks in wastewater management: good and bad practices



Presenting Author: Mr. Frank van der Valk, Germany, Water Integrity Network

Co-Authors: Ms. Elske Koelman, Germany

Highlights

- Integrity risks in the wastewater sector received little explicit attention till now.
- Integrity concerns related to urban, industrial and agricultural water pollution, and wastewater infrastructure are reviewed.
- Good and bad practices show the need and possibilities for more transparency, accountability, participation and anti-corruption action in wastewater management.

Introduction and objectives

Untreated wastewater is often discharged in rivers, lakes, drains or into the groundwater. Such illicit practices harm public health, crops and the environment, violate national and international rules and often occur in conjunction with corruption.

This study provides a review of integrity issues in the wastewater sector, which thus far has received little systematic attention. A lack of data exists on the amount of treated and reused water, number of Integrity risks in relation to wastewater and treatment plants, including data on these, and good and bad practices in their management are documented.

Methodology approach

What are the key integrity concerns that need to be addressed when managing wastewater? How can these risks be mitigated?

In light of the lack of information available on integrity risks in the wastewater sector, this study addresses the above stated research questions. Good and bad practices of wastewater management exist, but the integrity concerns associated with these cases have often not been studied. Desk research and case studies highlight the importance of tackling integrity concerns in the wastewater sector and demonstrate the need for more integrity when planning, implementing and monitoring urban, industrial and agricultural wastewater developments.

Analysis and results

The overview of integrity risks and case studies from the wastewater sector highlights hotspots in relation to urban, industrial and agricultural water pollution and wastewater infrastructure. When looking at wastewater governance, treatment and infrastructure development, integrity risks arise with the mismanagement of large investments. Corruption related to wastewater treatment projects can not only lead to large scale pollution but also to major delays in construction or abandonment of unfinished projects. Increasingly, wastewater reuse for agriculture is being institutionalized, yet the lack of trust in wastewater providers often inhibits such initiatives. The management of industrial waste also poses integrity concerns: industrial development is considered beneficial for local economies, leading to local government officials illegally tolerating the discharge of untreated wastewater or discharge of toxic chemicals. Enforcement of environmental protection laws can be increased when citizens are better informed about water quality levels. Ongoing initiatives promote transparency and participation in the sector. In Peru, INFObras combines information from implementing agencies about their physical progress on public works. Similarly, a UN-Water

initiative proposes indicators to monitor progress regarding wastewater, water quality and water efficiency, providing a reference point for watchdogs and citizens to flag shortfall with regard to governmental commitments.

Conclusions and recommendation

Based on a range of good and bad practices, an overview is presented of integrity risks in wastewater management, and what can be done about these. It demonstrates that the lack of attention for integrity risks is a major impediment to progress.

Different actors have to act responsibly to ensure wastewater management with integrity. Policy and practice coherence needs to be enhanced in governments, transparency and accountability is required from businesses demonstrating that they operating sustainably and are compliant with rules and regulations, and active citizens need to demand this account-ability and transparency from both government and private sector.

Community-based integrated water resources management in Meghalaya



Presenting Author: Dr. Arvind Kumar, India, India Water Foundation

Co-Authors:

Highlights

Community-based integrated water resources management coupled with the water-energy-food nexus approach and ecosystem-based adaptation (EbA) to climate change have helped Meghalaya tide over its water crisis by harnessing storm water runoff and incur gainful tradeoffs via inward and outward linkages.

Introduction and objectives

Meghalaya, located in India's Northeast region, enjoys a unique constitutional status where the ownership, control and management of water resources are driven by local customs and traditions of local communities. Water related laws and institutions have to be compatible with local communities. This research examines as to how participation of local communities have enabled the government institutional mechanism to implement various water related laws in managing storm water runoff and tackle the problem of water pollution for reuse, ensuring water and energy security.

Methodology approach

The research has adopted comparative and analytical tools of methodology and used mixed qualitative and quantitative methods including: a random rural household survey; focus group discussions with members of tribal communities, and interviews with water governance stakeholders at community, village and official institutional levels. The focus is on to analyse the outcome of IWRM, Nexus and ecosystem-based adaptation (EbA) approaches for sustainable development with water being at the core.

Analysis and results

Our findings based on field research and open source material reveal that community members in Meghalaya have played vital role in helping implementation of water related legislations through various types of institutional mechanism under the integrated water resource management under the flagship programme of Integrated Basin Development and Livelihood Programme (IBDLP). Storm water runoff is preserved in Jalkunds and multi-purpose reservoirs. Application of water-energy-food nexus approach has helped in ensuring security in water, energy and food sectors. Deployment of EbA has enabled the stakeholders to become resilient to climate change and water-induced calamities to some extent. Communities' participation in managing water resources through IWRM, Nexus and EbA approaches have seemingly yielded fruitful outcomes in terms of conserving runoff storm water, preservation of soil from erosion, recycling polluted water for reuse, energy generation through small hydro projects, improvements in livelihoods and augmentation in irrigated area for cultivation etc. Increasing resilience to climate change and improved agricultural productivity has enhanced Meghalaya's potentials in trans-boundary cooperation in the neighbourhood and Southeast Asia in managing natural resources and speedy realization of SDGs, especially SDG-1, 2, 3, 5, 6, 7,8,13, 16 & 17.

Conclusions and recommendation

IWRM alone is not enough and it is to be applied in tandem with Nexus and EbA approaches. Keeping in view the unique constitutional status of Meghalaya, increasing role of communities along with their capacity building is required. Compatibility between legislation and local tribal customs and traditions is essential in managing water and other natural resources is the need of the hour. Undoubtedly, UN agencies and other international organizations are supporting Meghalaya; nevertheless, increased support is required to achieve the SDGs.

Embedding integrity in water and waste management through social accountability



Presenting Author: Ms. Monica Chundama, Zambia, Action for Water

Co-Authors: Dr. Nick Hepworth, United Kingdom
Mr. Tyler Farrow, Canada
Mr. Gershom Pule, Zambia, Action for Water

Highlights

Social accountability for water security emphasises citizen engagement to activate IWRM institutions, hold duty bearers to account and advocate for change. Results demonstrate potential to improve services and promote integrity in the water and waste sectors. Zambian practitioners share impact, sustainability and scalability of the approach.

Introduction and objectives

Globally, water resource management institutions have been subject to waves of reform and capacity building in the wake of IWRM, yet the outcomes of these traditional approaches for equitable and sustainable resource use have been underwhelming. In response, social accountability interventions have emerged as a ‘demand side’ approach towards improving water governance. This paper reports on the methodology and outcomes of this approach in Zambia. Results suggest that civil-society oversight and evidence based advocacy hold significant potential as mechanisms to improve the accountability of water management institutions and embed integrity in waste and water management.

Methodology approach

Social accountability monitoring for improved water security is being piloted in Zambia by Water Witness International and Action for Water through the Fair Water Futures initiative. The methodology involves a participatory approach to identify and work with vulnerable water users, helping them to understand their rights and the statutory duties of WRM institutions, and to ‘activate’ law and policy to ensure protection of the water they depend upon. By tracking responses to community activation and analysing how financial and human resources are used in the sector, the project provides compelling evidence to advocate for improved sector performance.

Analysis and results

The learning centred methodology ensures that changes driven by social accountability monitoring at the local and national level are traced from intervention baseline. This approach generates triangulated evidence on the efficacy of the approach, and how it can be adapted to drive maximum benefits for sustainable and equitable waste and water management. The team, with support through multi-stakeholder validation have generated the following results and lessons:

- Fair Water Futures in Zambia has empowered vulnerable people to improve their water security status, by helping them demand better services from government duty bearers.
- Activation of water law and policy has generated focused government action to address problems identified, ranging from urban groundwater pollution, water quality problems associated with mining, severe drought and conflict over water resources.
- Root cause analysis of water security challenges has diagnosed the most severe bottlenecks facing effective institutional action on waste and water management.

- The dearth of funding and human resources facing institutions such as the Water Resource Management Authority and the Zambia Environmental Management Agency stand as key barriers to effective waste and water management in Zambia.
- The work generated an evidence base upon which to advocate for system change to improve waste and water management.

Conclusions and recommendation

In conclusion, social accountability monitoring coupled with budget analysis and evidence-based advocacy offers a powerful approach for improving accountability, integrity and delivery in the water and waste sub-sectors. The approach holds considerable potential as means for civil society and communities to support government in the implementation of SDG 6. Further analysis of the transferability of such 'demand-side' approaches is recommended to explore the scalability to other contexts for improved governance and implementation of integrated water resources management.

Governance of sanitation: incentives for turning political will into action



Presenting Author: Dr. Andrés Hueso, Spain, WaterAid

Co-Authors: Mr. Nathaniel Mason, United Kingdom, ODI

Highlights

- To turn political will into action and accelerated sanitation progress, governments need to cascade political prioritisation and invest in timely course correction to address bottlenecks.
- Linking sanitation with values of modernity and cultural heritage and political and professional return are critical incentives shaping these processes

Introduction and objectives

In a change from historical trends, more and more governments are voicing their commitment to achievement of universal access to sanitation. However, to achieve these ambitions and achieve the sanitation target of the Sustainable Development Goals, governments need to move beyond rhetorical political will. To do so, one essential step is to translate this high-level political commitment into prioritisation of sanitation across government levels and departments, and into course correction processes that enable identification of and adaptation to implementation challenges. In this presentation, we analyse the incentives that shape these processes and suggest ways to turn political will into action.

Methodology approach

The research presented tried to explore how countries tried to translate high-level political commitment into prioritisation and course correction happens. We visited three countries and focused on the role of incentives in shaping this process as a way to understand the political economy behind it. We looked at three subsectors where there is evidence of a certain degree of high-level political commitment: urban sanitation in Indonesia, and rural sanitation in Ethiopia and India. We spent a week in each country, doing key informant interviews and field visits.

Analysis and results

Two main types of incentives shape the translation of high-level political commitment into prioritisation.

First, there are incentives that work by aligning sanitation with the world views of elected leaders, officials and implementers through an appealing narrative. They are encouraged to ask themselves “Do I believe in this cause?” and to play their part.

Second, there are incentives that created political buy-in through the prospect of personal and professional advantage – “What is in it for me?” – tapping into desires for political gains, career advancement, and personal renown.

Other incentives were hindering prioritisation, such as imbalances in the decentralisation process, and differences of power and status between different departments involved in sanitation.

Turning to course correction, although incentives linked to world views have a positive influence, professional and political advantage represent a double-edged sword. They can increase the likelihood of stakeholders at lower levels sharing information from the ground for policy review.

Sector reviews and other formal and informal learning mechanisms then play an important role in ensuring the information shared actually results in corrective action. However, interviewees reported that the excessive numbers of workshops and meetings disperse “attention and focus, with most stakeholders limiting their level of participation”.

Conclusions and recommendation

Two key recommendations emerge:

To cascade political prioritisation. How?

Foster buy-in by aligning with the world views of key stakeholders, linking sanitation with notions of nation-building.

Tap into personal aspirations, ensuring sanitation efforts result in recognition and career progression.

Enlist influential figures to drive prioritisation.

Work with the financial, legal and political realities of decentralisation.

To invest in timely course correction to address bottlenecks. How?

Invest in reliable verification systems.

Nurture a culture of learning.

Use informal sharing and reporting mechanisms that cut across hierarchies and enable a rapid information flow.

Set up review mechanisms, ensuring quality over quantity.

Incorporating water governance in the annual monitoring and reporting framework



Presenting Author: Ms. Rosemary Nakaggwa , Uganda, GIZ

Co-Authors: Mr. Gilbert Kimanzi, Uganda, Ministry of Water and Environment, Uganda
Ms. Lotte Feuerstein, Germany, Water Integrity Network

Highlights

Developing dedicated indicators to measure, analyse and report on the quality of processes used in the sector to deliver services was our challenge. We did this through identification of critical areas of concern, raising awareness on governance processes that promote service delivery and aligning these with the Sustainable Development Goals.

Introduction and objectives

The Ministry of Water and Environment assigned the Good Governance Working Group to develop dedicated governance indicators. GIZ and WIN supported the process. The recognition that the sector needs to engage in monitoring the quality of governance propelled the Joint Sector Review of October 2015 and recommended the incorporation of governance in the sector's performance monitoring framework. It specifically asked for an indicator to; (i) guide the analysis of the efficiency and effectiveness of existing processes, (ii) guide the prioritization and targeting of resources by sector players, (iii) identify and make informed decisions that promote good governance.

Methodology approach

Our study focused on governance processes and aspects that have significant impact on water service delivery. The indicators were developed in a step-wise approach starting with the consultation and development of the project approach with the Good Governance Working Group. Establishment of a tentative set of indicators and identification of data sources and gaps was done. The final set of indicators was prioritised from a larger range of potential indicators in a participatory process. Criteria were established of relevancy, ease to identify, collect and monitor, regular availability of information/data, ease to compile, analyse and monitor through existing reporting structures.

Analysis and results

Our study resulted in indicators for measuring, monitoring and reporting of governance processes. The trend of governance performance can now be monitored and reviewed annually at the Sector Performance Review. Reference for capacity development and awareness raising is equally possible. The discussion of governance indicators has led to wide dissemination of information on audits, procurements and other indicators, as the sector gets more concerned with its spending priorities. Sector and Sub-Sector indicators informing on governance aspects are the following:

1. Percentage implementation of the previous year's audit recommendations of financial statements
2. Average weighed procurement performance
3. Percentage of Districts' budgets that reflect Civil Society Organizations' contributions
4. Percentage of annual budget allocations, budget releases and actual expenditures in relation to sector funding needs' priorities
5. Percentage of Water User Committees/Water Boards/ Environmental management/ Water catchment management committees with women holding key positions

6. Percentage of pro-poor facilities that provide water at a price less than or equal to the household tariff of the service area.
7. National Water and Sewerage Corporation's customer satisfaction index
8. Percentage of gazetted water schemes and districts whose performance is published annually by the Regulation body
9. Percentage of water for production facilities with actively functioning Water User Committees
10. Percentage of permit holders complying with permit conditions

Conclusions and recommendation

Introducing good governance as one of the topics for discussion in the water sector has greatly promoted awareness and concern. Ministry Departments and sector partners are more concerned about their reports from the respective entities (Office of the Auditor General, Public Procurement and Disposal Authority) since the findings of these reports are further discussed by the sector under the governance indicators. Recommendations: Incorporation of governance indicators in the existing monitoring and reporting framework gives an added advantage other than creating parallel reporting structures. Similarly, the involvement of final custodians and data providers in the development of the indicator enabled streamlining for quality, relevant and easy to monitor indicators.

Stakeholder engagement to improve community-scale wastewater system governance in Indonesia



Presenting Author: Prof. Cynthia Mitchell, Australia, Institute for Sustainable Futures, UTS

Co-Authors: Ms. Katie Ross, Australia
Ms. Prasetyastuti Puspowardoyo, Indonesia, AKSANSI
Ms. Maren Heuvels, Germany

Highlights

Highly collaborative research on community-scale wastewater governance in Indonesia built strong stakeholder participation at both national and local levels. This cooperation enabled practical insights that shaped the research outcomes. Communities, local and national governments, and NGOs are already using these insights to extend the success of decentralised wastewater systems.

Introduction and objectives

Urban wastewater management in densely populated, low income areas is challenging. Community scale wastewater systems serving 50-100 households offer an affordable way to manage public health and environmental hazards of untreated urban wastewater, and are a significant element in the Indonesian government's agenda, with about 80,000 systems planned, and more than 15,000 installed over the last decade. Historically, the systems have been 'handed over' to communities to manage. It is increasingly clear that communities struggle to do this and services do not always last. This research sought to assess how best to govern these systems in the future.

Methodology approach

This study had three phases. Firstly, we asked what constitutes effective governance of community scale wastewater systems? Secondly, we undertook a mixed method, systemic inquiry into practice, examining performance, costs, legal arrangements, and management approaches. Thirdly, we developed, tested, and widely disseminated innovative capacity building materials targeting local governments and community-based organisations (CBOs) charged with managing these systems. The study took a transdisciplinary action research approach, building in deep stakeholder engagement across the sector. Site visits were conducted with 30 communities. Our national Project Advisory Group, involving six Ministries, five donors/programs, and national NGO supporting CBOs, validated our findings.

Analysis and results

Our global scan revealed four interlocking elements necessary for effective wastewater governance that proved useful in field work and practice:

- Functioning technology,
- Sufficient revenue to cover short and long-term costs,
- Accountable and equitable administration/decision making systems,
- Sustained user demand.

There are diverse funding mechanisms: program design was shown to significantly impact community preparedness, performance monitoring and asset ownership, sometimes inadvertently preventing good health outcomes.

Our performance analysis revealed very little is known about the systems: 2% of systems have had one effluent quality test. Our cost analysis revealed significant challenges in fee collection and the need for volunteer labour/funds to keep systems operating, as well as very limited capacity to meet larger one-of costs (e.g., desludging, fixing/replacing hardware).

Our national legal review and political economy analysis revealed important practical gaps and misconceptions: local government is legally responsible for providing sanitation, but is not yet held accountable. CBOs are typically not legal entities, meaning they can neither own assets like wastewater systems, nor easily receive financial support from local government. For local government, there are few avenues for allowable actions to support assets they do not own, and existing national guidelines on the handover process are ambiguous.

Conclusions and recommendation

Ultimately, the scale of wastewater technology should not determine the scale of management. There are both practical and human rights reasons for ensuring communities are supported by government to deliver ongoing wastewater services. Indonesia has invested more than any other country in community-scale wastewater systems, and so represents an important case study globally. National governments should set basic principles, such as clear expenditure policies and minimum requirements for local government. Beyond that, our research showed there are diverse models for distributing roles and responsibilities, spanning community-led, collaborative, and local government-led, all of which include opportunities for private sector activities.

Sustainable water governance in industrial symbiosis: the case of Kalundborg



Presenting Author: Mr. Hans-Martin Friis Møller, Denmark, Kalundborg Utility

Co-Authors: Ms. Pernille Ingildsen, Denmark, Kalundborg Utility
Ms. Louise Brunsgård Michelsen, Denmark, Kalundborg Utility

Highlights

Kalundborg Utility uses innovation as a tool to obtain a sustainable relationship between society and the natural water environment, including participation in the Kalundborg Industrial Symbiosis which has conducted circular economy for decades. Recently, a heat-pump has been developed to exploit the heat from warm industrial wastewater to district heating.

Introduction and objectives

Wastewater management is often an overlooked subject within the field of sustainability. But in Kalundborg, the City facilitates an industrial symbiosis of private and public partners, which uses and re-uses resources, including energy and water. For Kalundborg Utility it is crucial to act proactively within the process of water usage and wastewater treatment as freshwater resources become increasingly scarce and vulnerable due to climate changes and pollution. Innovation and sustainability are key drivers for the company, and involvement of stakeholders is a natural part of the business operations.

Methodology approach

First, we consider the water flows in the Kalundborg Symbiosis and how they can be considered sustainable. The flows are divided into two categories: 1) supply streams that are necessary for the industrial production and 2) wastewater streams that can be considered resource streams. Second, we analyze the foundation of the collaboration of the symbiosis in order to map out the outcomes of the symbiosis.

Analysis and results

The utility supplies surface water in two qualities to Novo Nordisk and Novozymes. By using surface water, the scarce groundwater resource is preserved. The utility receives wastewater, which is cleaned at one of Europe's most advanced wastewater treatment plants in Kalundborg. Until now, the only by-product from the wastewater treatment has been sand and sludge, but as of 2017, the utility will construct a large-scale heat-pump, which will transfer heat from the warm industrial wastewater to the local district heating network in Kalundborg. Thereby, Kalundborg Utility will supply district heating with a minimum of environmental externalities.

The utility has been engaged in developing microalgae production, as a vehicle to create a new development in industrial symbiosis and increased resource reuse, based on the groundbreaking EU FP7 funded E4Water project. Presently, the utility operates a state-of-the-art algae house as test- and research laboratory open for international customers working in the blue bio-economy. This is a platform to further development of a water-based bio-economy and a possible new branch of the Kalundborg Industrial Symbiosis. The Kalundborg Industrial Symbiosis has proven to be durable. The outcomes of the symbiosis include strong collaborative ties among the involved partners leading to continuous optimization of processes and sizable reductions in water and energy use.

Conclusions and recommendation

The symbiosis has proven to be of benefit, both in the economic terms and to the environment. It has contributed to the branding of Kalundborg City as a place where 'green' industry thrives. Through a culture focused on sustainability and innovation in the utility as well as in the surrounding political and societal environment, it has been possible to create sustainable water governance, which harnesses the possibilities that lie within the water to waste cycle, resulting in competitive advantages and substantial environmental improvements. Facilitated by the City, this stakeholder collaboration creates value and responsible environmental solutions.

Poster: Local leadership development: An example for locally-driven, sustainable waste management



Presenting Author: Ms. Janita Bartell, Cambodia, WaterSHED

Co-Authors: Mr. Geoff Revell, Cambodia, WaterSHED

Highlights

WaterSHED designed, piloted and scaled up a model to engage local government in the management of human waste through local leadership development. The project demonstrated that leadership development can be a powerful, cost-effective, and sustainable way to support sub-national government to fulfill their mandate to lead effective management of human waste and to reach SDG6.

Introduction and objectives

Integrity, engagement and strong leadership by local authorities, especially by subnational government, is often seen as exogenous to program activities despite their importance for efficiency, effectiveness and sustainability. This presentation describes how WaterSHED designed, piloted and scaled up a model to engage local government in the management of human waste in their communities. The project is embedded in a larger system of activities aimed to build a dynamic, sustainable market for improved sanitation products and services in rural Cambodia by facilitating the supply chain and demand generating activities.

Methodology approach

The Civic Champions leadership development project for elected commune councilors uses an iterative model of “discovering” new, not WASH-specific leadership skills, “developing” these skills through practice and coaching, and “delivering” tangible results on their skills. This cycle repeats every three months over a 9-month period. Participants apply and pay a participation fee.

The project evaluation undertaken in 2016 employs a mixed methods approach, including project data, qualitative interviews with stakeholders, observational data and latrine coverage data to document the project implementation and lessons learnt for replication as well as to evaluate the project’s performance along four dimensions: development impact, scalability, sustainability and cost-effectiveness.

Analysis and results

205 (19% of all eligible) councilors from 105 communes across 16 districts in rural Cambodia participated in the Civic Champions leadership development project. During the nine months of implementation the participants facilitated 15,320 households to install improved toilets equivalent to a 6.9 percentage point increase in sanitation coverage in participating areas at a cost to the project of USD 14.60 per toilet. Six months after the end of the project, latrine uptake in the target areas remains 104% higher than in non-target areas.

The project succeeded in establishing a reward and peer-learning mechanism that fostered innovation and motivated participants to excel as leaders. The cascade training model employed to reach greater scale meaningfully engaged all levels of subnational government contributed significantly to the project’s impact and scalability. Participants apply the generic leadership skills acquired during the project to other areas of community development, such as water supply management and planning for fecal sludge management.

The project provides commune councilors with the necessary tools and skills to lead community engagement and find new, locally adapted strategies to promoting improved sanitation and waste management.

Conclusions and recommendation

Leadership development at local levels is a powerful, cost-effective and sustainable way to support sub-national governments to fulfill their mandate to lead effective management of human waste and to reach SDG 6 by 2030. Participants found innovative, locally adapted solution to addressing the sanitation problem in rural Cambodia. Key elements of the project design contributing to its success are the involvement and active contribution of all levels of government; the project's reward and peer-learning mechanism; the focus on generic, transferable leadership skills instead of project or WASH-specific skills; and the project's 9-months cyclical approach which facilitates learning, feedback, and development.

Poster: Non-existent water supply regulators - Implications for sector governance



Presenting Author: Ms. Shaivi Kulshrestha, India, Shiv Nadar University

Co-Authors: Dr. Gopal Das Singhal, India, Shiv Nadar University
Dr. Tripta Thakur, India, MANIT-Bhopal

Highlights

1. This Paper presents a study that details governance issues arising out of non-existing Regulators in water-supply operations in most developing-countries.
2. Study analyses data from 199 Indian municipalities to explore linkages between non-existent regulation and issues like political-interference in tariff-determination, inconsistent data-collection, lack of sector-planning, poor-services, consumer-dissatisfaction, and derailment of sound-governance.

Introduction and objectives

Unlike developed nations where water-supplies are governed by an independent sector Regulator, most developing countries have unregulated water-supplies. This paper focuses on unwarranted consequences of missing regulation by posing the following questions:

1. Does absence of a Regulator imply political interference in governance by way of tinkering with tariffs leading to loss-making services reflected in large subsidies?
2. Does absence of Regulator imply lack-of-competition and under-performance due to non-measurement of relative-performances?
3. Does linkage between missing Regulation and failure to collect municipal operational-data prevent scientific-analysis of sector-issues?
4. Does absence of a Regulator imply water-sector planning/services are run in adhoc manner leading to mis-governance?

Methodology approach

1. Water-supply data from 147 municipalities in India with populations more than 0.1 million was collected and analyzed
2. Major water-supply parameters comprised performance indicators such as Water losses (Non-revenue water), Operating Expenditures, Length of Distribution network, Water Produced, Av. hrs of supply per day, and Population covered by water supply.
3. These water-supply indicators were integrated to evolve comprehensive relative performance measures using data envelopment analysis
4. Inferences from the analysis were used to evolve reasons for poor municipal performances in view of the fact that sector Regulator is non-existent.

Analysis and results

1. Absence of Regulator implies political interference in governance. Majority of municipalities depend on subsidies due to mounting financial losses attributed to political interference wherein elected-representatives decide to keep tariffs unreasonably low to garner political advantage/votes. A dedicated, independent regulator would have otherwise ensured tariffs based on cost-pricing/scientific-data/municipal-performances/people's capacity-to-pay.

1. Mathematical-model indicated poor municipal-performances with a third of municipalities showing efficiencies below 50%. Non-existent regulatory-mechanisms ensure that inefficiencies remain unmeasured/unknown, while sector remains intrinsically poorly-performing/mismanaged.
2. Absence of Regulator implies absence of relative-competition amongst municipalities who remain unconnected and unconcerned of sector best-practices
3. Impact of non-existent sector-regulator spells inconsistencies in data-collection, endemic across developing countries. This study revealed that if data was collected on increasing numbers of indicators for greater accuracy, data availability decreases drastically. For the 6 indicators employed in this study, data was available for only 71 out of 199 municipalities.
4. Absence of regulator implies water-sector planning and services run in adhoc manner as there remains little basis for sector-planning in absence of consistent/regular data-collection. Lack of data hinders scientific-analysis of problems that remain unresolved fuelling public discontent.
5. Results confirmed that absence of water-supply Regulator leads to sector mis-governance, and that there needs to be an independent mechanism to regulate water-supplies.

Conclusions and recommendation

The study indicates that water-supply operations in developing-economies like India need to incorporate provisioning of an independent sector-Regulator for sound governance.

This will ensure that water-supply operations become efficient, consumers get benefitted, and municipalities become self-reliant to shun subsidies. This will also ensure that water-supply operations become transparent, and collect operational data regularly in terms of predefined indicators forming a basis for sound planning and policy. This will lead to good governance and wide consumer satisfaction resulting in municipalities that make profits which can be passed on for connecting the poor to water-supplies for common social good of the society.

Poster: Performance measurement for effective regulation - Case of Indian urban water supplies



Presenting Author: Dr. Mukul Kulshrestha, India, MANIT-BHOPAL

Co-Authors: Ms. Sai Amulya Nyathikala, India, MANIT-Bhopal

Highlights

- Paper details potential use of performance measures in price-cap regulation of water-supply services.
- The case study evaluates scope for setting tariffs under incentive-regulation for 20 urban centers where hitherto operations remain unregulated and monopolized by government
- DEA is used to assess performances and productivity growth of municipalities

Introduction and objectives

Water-supply services have emerged as profitable industries across developed nations wherein water-tariffs are regulated and set scientifically by a Regulator. Unfortunately, across several developing economies Regulators remain non-existent, with monopoly operations of government whose policies are focused on drinking water provisioning for growing populations, with neglect towards making operations efficient and profitable.

The scope of work comprises:

- Reviewing existing water-supply scenario and sectoral reforms for providing valuable lessons to other countries of developing world.
- Investigating importance of performance-assessment in regulatory framework
- Developing a quantitative framework for tariff determination to evaluate possible cost-recoveries in municipal water-supply operations

Methodology approach

The Methodology focuses on answering the following :

- Using DEA analyse the extent of inefficiencies in water supply operations existing in the urban areas of Andhra Pradesh State
- Using Productivity Analysis to explore if water-supply operations are improving over time, and if not, then what could be the possible causes?
- Using X-factor calculations, evolve a scientific basis of determining water-tariffs in order to overcome financial losses in the sector and bypass local politics
- Drawing conclusions and policy outcomes in the context of a possible sector regulation and above findings

Analysis and results

The sample mean efficiency was found to be 80%, with individual municipalities performing as low as 32.4%. This indicated prevalence of large-scale inefficiencies in the water-supply operations.

The TFP growth model indicated that over the time period 2005 to 2010 inefficiencies were found to be actually increasing over time implying further deterioration in services over time, thereby reflecting an urgent need for regulation which may enable the municipalities to gain efficiencies.

Further, X-factors calculated based on weighted mean annual productivity growth of 1.93% obtained from TFP model, revealed a maximum X-factor of 3.28% for the most inefficient municipality indicating that municipalities may end up increasing tariffs to a maximum of 3.28% per year over 5 year period. This tolerable tariff increase can lead to tremendous increase in efficiencies of water-supply operations.

DEA analysis also indicated a possibility of saving 22.6% of operating expenditure if the municipalities were to adopt appropriate policies and management tools of best practices. This is indicative of the fact that large savings are possible in water-supply operations that may result in strengthening of the services and benefits for the consumers including the poor

Conclusions and recommendation

The illustrated framework comprises a basic step for ushering regulatory-reforms. It further has implications for future privatization as private companies would not be forthcoming to sink investments in utilities that are highly inefficient.

X-factors for scientifically increasing tariffs demonstrate how tariffs can be kept out of purview of politics in a fair/upright regulatory regime.

The X-factor calculations may help inefficient municipalities to bridge gap with best-practices, thereby effecting savings for financial sustainability and reduction of subsidies.

Internal cost-savings may be used to expand and improve services in rapidly expanding urban areas and to make water-supplies accessible to the poor.

Poster: Public-civil society incremental involvement in water governance in Latin America



Presenting Author: Mr. Vladimir Arana, Canada, The International Secretariat for Water

Co-Authors:

Highlights

- A validated methodology to put governments and civil society organizations work together
- An example to governments and civil society organizations in developing countries to create synergic water policies decision-making and implementation
- A process to make public budgets planning and goals compliance monitoring accessible to civil society organizations

Introduction and objectives

This paper describes the validated water policy advocacy strategy implemented from 2014 to 2016 in Peru. So far, Latin American and developing countries in general have a disintegrated decision-making about water. Three main constrains were identified: i) disperse and uncoordinated decision-making on water, ii) generalized population abandonment of headwater territories, and iii) wide disregard of civil-society organizations and local cultures. So, a new specific advocacy strategy and methodology were needed. The goal of this validation experience was to identify an advocacy methodology that could be scaled up in Latin America. No similar experience on synergic-advocacy was found in the Region.

Methodology approach

The main question that gave origin to this validation was: what is the best way to facilitate water policy advocacy in Latin America? To validate the working hypothesis, a wide literature review and key interviews were made. To validate the way to involve several sectors of the government it was used the “Blue Book” methodology developed by the International Secretariat for Water with the “synergy benefits analysis”. To validate priority water policies and policy reforms, several joint public and civil-society workshops and a basin public consultation were developed. To validate the intervention on headwaters territories a management plan was elaborated.

Analysis and results

It was first important to put civil society together, before inviting the government in, so the two main national water NGO’s networks and other international organizations were invited to participate. The main message for the government was that the goal of the process was to create synergy more than to put pressure on national policy reforms, and this was seen as a good sign from authorities. A “Synergy opportunities evaluation” was made and they were measured in the “synergy benefits analysis” that identified the substantial benefit that several sectors of the government could obtain. A process to carry on shared analysis, proposals and indicators was implemented by government and civil society representatives, and that had an important milestone with the presentation of a shared document called the «Blue Book second generation». At the same time, a headwater management plan and the first water consultation at the basin level were developed with an Andean community located at 5.000 of altitude to incorporate this learning and policy gaps in the Blue Book process. Too, a validation and monitoring committee formed by governmental authorities and civil society organizations (universities, associations, donors, NGO’s, etc) called the Blue Book National Committee was created.

Conclusions and recommendation

The best way to facilitate water policy advocacy was made through a win-win strategy. Boosting the cooperation between public and civil-society actors that normally work separately begun with a «synergy benefits analysis» to develop a joint-synergic water agenda to strengthen the complementarity among the actors, instead of just overseeing the role of the State. It also incorporated the new launched SDG's and the citizen's monitoring issues. The validation process was limited since the consultation processes were just carried on in the capital city, in an Andean city and in one indigenous rural community located in a headwater territory.

Poster: Tensions in rural water governance in the digital era



Presenting Author: Prof. Yola Georgiadou, Netherlands, University Twente

Co-Authors: Dr. Juma Lungo, Tanzania, University Dar es Salaam

Highlights

Persistent rural water problems can be addressed with donor-funded development interventions. Information systems and mobile phone-based platforms can help if they are adaptive and "work with the grain" of local water governance.

Introduction and objectives

This paper describes persistent governance problems in the rural water sector in Tanzania and their relation to projects funded by development partners. It focuses on how tensions revealed during the implementation of development projects are related to the inevitable silencing of the social and cultural heterogeneity between development partners and their government counterparts during project design. The empirical focus is on the Water Point Mapping System (WPMS), a development project of great ambition and potential for improving chronic rural water problems in Tanzania. Policy recommendations suggest how some of the manifested tensions may be adaptively resolved.

Methodology approach

Tanzania's rural water woes are chronic and persist despite substantial policy reforms and significant donor funding, ever since the first rural water policy in 1971. The paper asks how development projects reveal tensions when implemented in the field and suggests how they may be adaptively resolved with information technology. In-depth interviews conducted in the course of a five-year action research program in rural water supply in Tanzania are the data source. Empirically, the focus is on Water Point Mapping System (WPMS), a development project funded by the World Bank and implemented by Tanzania's Ministry of Water from 2010 to 2013.

Analysis and results

The Water Point Mapping System (WPMS) development project could be agreed upon because the cultural and social heterogeneity between the development partner and the recipient ministry had to be bracketed out during project design, else the project could not start at all. But, tensions silenced and bracketed-out during project design reappeared forcefully in various forms in the field during field data collection. The first type of tensions can be seen as rational tactics of villagers to evade a state that has chronically by-passed them in the shaping of rural water schemes; the second type of tensions originates from data collected in the field that were discretionary, ambiguous and subject to multiple contradictory interpretations.

Conclusions and recommendation

The study shows that it is rational for development partners and their government counterparts to bracket out their cultural heterogeneity and maximize top-down control, when designing a development project. This inevitable practice generates tensions between implementers and beneficiaries in the field. Some of these tensions may be eased with aid addressing governance constraints. Others may be resolved incrementally with carefully designed digital platforms, or by some combination. The key is an adaptive approach that leaves room for ways of working with or around the interest conflicts and other unpredictable eventualities that development projects typically entail.