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# Water Governance in Latin America and the Caribbean

A MULTI-LEVEL APPROACH

Aziza Akhmouch

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## **WATER GOVERNANCE IN LATIN AMERICA AND THE CARIBBEAN: A MULTI-LEVEL APPROACH<sup>1</sup>**

The water debate in relation to poverty alleviation has one dimension that is often sidelined: its relationship with public governance. This report attempts to shed some light on the governance of water policy in Latin American and Caribbean (LAC) countries. It argues that public governance of water in most LAC countries is fragmented, as it is in the OECD area as well, and that greater efforts to co-ordinate water with other policy areas are crucial to maximise the impact on poverty reduction. It emphasises the need to design water policies in a more integrated manner and implement effective water governance tools and mechanisms that are context-specific, flexible and beneficial to the poor.

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## Executive Summary

1. **The water debate in relation to poverty alleviation has one dimension that is often sidelined: its relationship with public governance.** This report attempts to shed some light on the governance of water policy in Latin American and Caribbean (LAC) countries. It argues that public governance of water in most LAC countries is fragmented, as it is in the OECD area as well, and that greater efforts to co-ordinate water with other policy areas are crucial to maximise the impact on poverty reduction. It emphasises the need to design water policies in a more integrated manner and implement effective water governance tools and mechanisms that are context-specific, flexible and beneficial to the poor. Its main findings may be summarized as follows.

2. **Mapping water governance in LAC.** There is great diversity in the assignment of competences across ministries and levels of government in the water sector, but common trends across LAC countries can be observed. **In all cases there is a significant decentralization of some functions.** Service delivery (water and wastewater) is most often devolved to the local level, while higher-tier local governments (e.g. regions, provinces) are responsible for competences associated with resources management. Strikingly, **there is no systematic relationship between a country's constitutional structure and the institutional mapping of water policy.** A diversity of situations can be observed across both federal and unitary states in terms of the institutional organisation of water policy. However, central governments in LAC federal countries tend to play a larger role than is typical of OECD federal systems. **River basin organisations have been set up in half of LAC countries surveyed,** federal and unitary countries alike, depending on institutional factors, hydrological considerations and international incentives or regulations. However, the maturity of these systems varies widely; some have been created relatively recently. While **three broad models of water governance** can be identified in LAC countries, reflecting the constellations of central and sub-national actors involved, all face governance challenges and none can be held up as an ideal model.

3. **Diagnosing governance gaps.** The degree to which effective co-ordination and implementation of integrated water policy may be hindered by multi-level governance gaps varies widely across and within LAC countries, but **common challenges have been identified.** The primary obstacle pointed out by almost all LAC countries surveyed is the *policy gap*, followed by the accountability gap and the *funding gap*. Information and capacity gaps are also crucial in two-thirds of LAC countries surveyed. However, when interpreting these results it is important to recognize that **multi-level governance challenges in water policy requires a holistic approach to co-ordination, because they are so often interrelated and can exacerbate each other.** For instance, any country facing a sectoral fragmentation of water roles and responsibilities across ministries and public agencies (*policy gap*) may also suffer from the conflicting goals of these public actors (*objective gap*). Because of silo approaches, policy makers may not willingly share information (*information gap*). This in turn undermines capacity-building at the sub-national level (*capacity gap*) because local actors, users and private actors have to multiply their efforts to identify the right interlocutor in the central administration.

4. **Identifying instruments to bridge the gaps.** The foregoing highlights the need to identify the interdependencies between institutions and to diagnose impediments to effective co-ordination of public actors across the full range of policy functions (administrative, funding, informational, infrastructural, etc) to promote shared strategies for more effective water policies. **A wide variety of mechanisms and instruments – hard and soft, formal and informal – are in place across and within LAC countries to address this challenge.** All countries surveyed have put in place co-ordination mechanisms at central government level and most have engaged in efforts to co-ordinate water with other policy areas such as spatial planning, regional development, agriculture and energy. Most countries have also set up vertical co-

ordination instruments, the exceptions being countries where sub-national levels are only involved in the implementation stage of water policy.

5. While national and sub-national capacity is of primary importance in multi-level governance relations, the line between co-ordination and capacity is not always clearly demarcated. Co-ordination can help in disseminating good practices and spreading the benefits of diversification of water policy, thereby also building capacity. Thus, co-ordination and capacity-building go hand in hand: they are synergistic processes that can be mutually reinforcing, provided there is a territorial approach to water policies.

6. Despite the efforts to foster integrated water policies, **LAC countries still report significant challenges in co-ordinating water policy action across ministries and between levels of government.** The adoption of all possible co-ordination instruments does not necessarily guarantee “effective” water governance, as such tools may overlap and ultimately neutralise each other. To respond to changing circumstances and to enable incremental evolution rather than occasional major overhauls, **administrative flexibility should be promoted**, e.g. through the use of task forces or commissions with specific mandates. No governance tool can offer a panacea for integrated water policy, and no systematic one-to-one correlation exists between tools and gaps. A given tool can solve several gaps, and solving a specific gap may require the combination of several tools.



## Scope and objectives

7. **Water governance in LAC countries is not really a new subject of study and several governance challenges have already been pointed out in the water sector. But the multi-level perspective to understand the major bottlenecks to water policy design and implementation in Latin America is an innovative approach.** The first research on the topic dates back to ten years ago (CEPAL 2002, Rogers 2002) and pointed out the lack of governance strategy the LAC water sector and the resulting management and policy crisis. Some of the governance “gaps” pointed out since then include: the absence of integrated planning of water use; dispersed and uncoordinated multilateral, bilateral and international donor agencies; the lack of transparent and effective institutions for arbitrating conflicts over water use; and a lack of vision of what is actually necessary to effectively govern water. A quick literature review on water governance in LAC region further reveals the reasons why most LAC countries lag behind in terms of sustainable water management. In the first place, the lack of political leadership, followed by the inadequate legal frameworks and poor management structures in both utilities and regulatory functions; inappropriate stakeholders’ involvement; apparent shortage of financial resources to meet responsibilities; and inadequate provision for resolving conflicts between water supply and sanitation needs and interests. Last but not least, there is the challenge of social cohesion and much remains to be done in order to overcome the social inequalities.

8. **While many of the potential “solutions” to meeting the water challenge do exist and are relatively well-known, the rate of take-up of these solutions by governments in LAC countries has been uneven.** Some countries have undertaken very innovative and sophisticated reforms (Chile, Mexico) while others seem to be hamstringing by significant obstacles. A major challenge lies in the implementation of these solutions (such as water pricing, water markets, financial planning), tailoring them to local contexts, overcoming obstacles to reform, and bringing together the main actors from different sectors to join forces and share the risks and tasks.

9. **This report seeks to highlight the key governance challenges confronting water policy reform in Latin America and the Caribbean, focusing on the issues arising from the multi-level governance structure that generally characterizes water resources and services management.** While identifying effective policies that contribute to poverty alleviation through better access to water, this paper puts particular emphasis on the range of governance issues that are critical to strengthen institutional coherence, foster capacity development, particularly at local level, enhance collective action, and encourage innovative approaches in water resources management and service delivery (Box 1).

### Box 1. Definitions of multi-level water governance

The Global Water Partnership (GWP) defines water governance as “*the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society*”. Many other agencies have subsequently adopted the same definition, including the World Bank.

GWP proposes two broad sets of principles that underpin effective water governance:

- *First*, that approaches be transparent, inclusive, equitable, coherent and integrative.
- And *second*, that performance/operations be accountable, efficient, responsive, and sustainable (Rogers and Hall, 2003).

For UNDP, water governance addresses:

- *Principles* such as equity and efficiency in water resource and services allocation and distribution, water administration based on catchments, the need for integrated water management approaches and the need to balance water use between socio-economic activities and ecosystems.
- The formulation, establishment and implementation of water policies, legislation and institutions.
- Clarification of the roles of government, civil society and the private sector and their responsibilities regarding ownership, management and administration of water resources and services.

Water governance is therefore the set of systems that control decision-making with regard to water resources development and management. It is therefore more about the *way* in which decisions are made (*i.e.* how, by whom and under what conditions) than about the decisions themselves (Moench *et al.*, 2003). It covers the manner in which roles and responsibilities (design, regulation and implementation) are exercised in the management of water and broadly encompasses the formal and informal institutions by which authority is exercised.

The emphasis on the *politics* of water is reinforced by Stockholm International Water Institute (SIWI) which states that water governance “*determines who gets what water, when and how*” (Tropp, 2005).

OECD (2011a) defines multi-level governance as the explicit or implicit sharing of policymaking authority, responsibility, development and implementation at different administrative and territorial levels, *i.e.*: *i)* across different ministries and/or public agencies at central government level (upper horizontally); *ii)* between different layers of government at local, regional, provincial/state, national and supranational levels (vertically); and *iii)* across different actors at the sub-national level (lower horizontally).

10. **The paper reviews water governance arrangements in 13 LAC countries<sup>2</sup>** (see list country profiles in annex) **and provides guidance on how to overcome critical co-ordination and capacity “gaps” in water policy.** As it was previously done for OECD countries in the 2011 report “*Water Governance in OECD Countries: a Multi-level Approach*”, the purpose of this paper is to provide, for the LAC region, a platform of comparisons, while investigating the black-box of water policy making to identify the main multi-level governance challenges hindering sustainable water policy for poverty alleviation, as well as governance instruments adopted in response. In the absence of optimality in water governance, this report is above all a means for countries to *i)* carry out a self-assessment to determine where improvements are possible and desirable, and *ii)* identify other countries dealing with similar issues. Its conclusions should be linked to the wider background of water policy making, including environmental, cultural, economic and social factors, all of which are decisive in the way water is managed. This is a preliminary step towards further in-depth research into water governance in different LAC countries, to measure the quality of outcomes of the various structures in place and provide practical and place-based guidance to local and national governments on how to improve their governance systems. This will take place within the framework of policy dialogues with LAC OECD and non-OECD member countries at different territorial levels.

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2. The 39 LAC countries are: Antigua and Barbuda, Aruba, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat, Nicaragua, Panama, Paraguay, Peru, Saint Knits and Navies, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, UK Virgin Islands, Uruguay, US Virgin Islands, and Venezuela.

## 1. Background and rationale: improving water governance in support to poverty alleviation

### 1.1. Water as a cornerstone for development

11. **Access to water is a cornerstone for development and a strong engine for reducing inequalities.** It is a key determinant to economic growth, environmental health, and social well-being. Access to water is directly relevant to such basic aspects of human well being as health, sanitation, nutrition and housing. As 70% of the world's water use is devoted to agriculture, actions to promote global food security and reduce poverty worldwide require successful water policy. Securing water for all is thus a matter of human security and a leading indicator of a government's determination to deliver other vital services.

12. **The water debate in relation to poverty alleviation has one dimension that is often sidelined: its relationship with public governance.** This report attempts to shed some light on this aspect that tends to be overlooked when water and poverty alleviation policies are being – often separately - formulated. Actually, the water and poverty “crises” that the world community faces are largely a governance crisis. Securing water for all, especially for the most vulnerable populations, is often not only a question of hydrology and financing, but equally a matter of good governance. It is also widely acknowledged that reducing poverty is not only a question of financial resources and ODA flows, but also a matter of building and maintaining resilient institutions, encouraging collaborative efforts and strengthening capacity at all levels.

13. **The scope of environmental sustainability in Latin America and the Caribbean presents a great challenge.** With a population of 596 million (*Population Reference Bureau - World Population Data Sheet (2011)*) that is growing faster than the world average, the region is experiencing increasing pressure on its natural resources due to population growth, intensification of land use, increasing urbanisation, climate change and natural disasters. Trend indicators point to a very serious deterioration of the environment and depreciation of natural capital such as water resources, which has significant impacts on health, productivity and income, physical vulnerability and the quality of life. The main demands that the region is facing in terms of the environment have been amply documented in various regional sources (IDB, 2005; CEPAL 2007; UN, 2009). They point out that while the region has indeed devoted considerable efforts to reducing environmental pressures, governments, the private sector, and civil society must intensify their actions to attenuate the negative effects of development and reverse the depletion of water resources.

14. **Water is part of the international Millennium Development Goals (MDGs) to be achieved by 2015.** As agreed by 23 international organisations and 192 countries in 2000, MDGs include eight goals and 18 concrete targets for development. In particular, Target C of Goal 7 helps tackling most development issues by aiming at halving, by 2015, the proportion of people without sustainable access to drinking water (1.2 billion people) and basic sanitation (2.6 billion people) worldwide (UN, 2009). Given its externalities on multiple policy areas, access to water has indeed many cumulative impacts as a vehicle to eradicating poverty and hunger, addressing gender equality - women's empowerment and girls' education - as well as reducing child mortality and major water-related diseases. Access to water is thus an initial condition for economic and social development across individuals or households, but also across the places where these individuals or households live and develop.

**Figure 1. Millennium Development Goals: 2010 Progress Chart**

**Goal 7: Ensure Environmental Sustainability**

Goals and Targets	Africa		Asia				Oceania	Latin America & Caribbean	Commonwealth of Independent States	
	Northern	Sub-Saharan	Eastern	South-Eastern	Southern	Western			Europe	Asia
Halve proportion without improved drinking water	high coverage	low coverage	moderate coverage	moderate coverage	moderate coverage	high coverage	low coverage	high coverage	high coverage	moderate coverage
Halve proportion without sanitation	moderate coverage	very low coverage	low coverage	low coverage	very low coverage	moderate coverage	low coverage	moderate coverage	moderate coverage	high coverage

The progress chart operates on two levels. The words in each box indicate the present degree of compliance with the target. The colours show progress towards the target according to the legend below.

- Already met the target or very close to meeting the target.
- Progress sufficient to reach the target if prevailing trends persist.
- Progress insufficient to reach the target if prevailing trends persist.
- No progress or deterioration.
- Missing or insufficient data.

\* The available data for maternal mortality do not allow a trend analysis. Progress in the chart has been assessed by the responsible agencies on the basis of proxy indicators.

15. **Meeting water and sanitation MDGs in LAC countries could lift 118 million people out of poverty, including 53 million out of extreme poverty, but specific attention needs to be devoted to rural areas.** In this regards, significant progress has been made since 2000 in comparison with other regions (Figure 1) and many guidelines and programmes have been developed to that effect (box 2). The continent is close to meeting the target on access to water, and progress is deemed sufficient to reach the target on sanitation by 2015 if prevailing trends persist. However it seems that even though some LAC countries have relatively high national rates of access, an estimated 36.8 million people must gain access to safe sources of drinking water and 68.6 million people to improved sanitation by 2015. At the regional level, there is still a gap of 17% points in urban versus rural access to improved sources of drinking water, and of 31% points in improved sanitation (IDB, 2010). Besides, 60% of urban and rural dwellings with access to water do not have continuous water service and some 116 million people do not have access to sanitation services, which represents 13% of the urban and 52% of the rural population. Water and sanitation services provision in rural areas is different from urban areas and requires the design and implementation of specific public policies, to extend coverage and consolidate the role played by cooperatives and other non-profit institutions in reaching rural and peri-urban areas. It also implies the emergence of new forms of organization and provision where aid and development agencies have been promoting the self-organization of water systems by local communities.

16. **Many Latin American countries have undergone major water reforms over the past three decades to increase water management efficiency, but water governance has not been extensively tackled.** Such reforms mainly consisted in the decentralisation of water responsibilities to lower levels of government (regions and provinces, mainly) in a context of economic recession (the *década perdida* in the 1980s), followed by the privatisation of utilities in the framework of the Washington Consensus (1990s). For example, Chile has longed been a pioneer in privatization (power, telecommunication etc.). In the early 1980s, a law was enacted in Chile to allow water rights to be separated from land ownership and freely traded. Water rights became highly mobile and changed hands swiftly with local markets that emerged along water courses. Water companies became some of the biggest buyers of water rights which they needed in increasing amounts to meet the growing demand in their service areas. In 1988 Chile put in place a new regulatory regime for water and sanitation, allowing rates to reflect the actual cost of providing services. The government then reorganized the sector under 13 state-owned regional water companies and, in 1998, started to partially privatize some of them. Although only 5 of the 13 regional companies were privatized, they included those serving the three largest urban centers: Santiago, Valparaíso, and Concepción. Privatization was carried out through concessions and full divestitures of assets. Concessions

agreements were signed while the ownership of assets remained in public hands. In 1990, the Superintendency of Sanitary Services was created to periodically set rates and to define and enforce services standards for concession companies (UNRISD, 2004).

However, as stated in the 2007 IDB report on the withdrawal of water private operators from Latin America, public-private partnerships did not appear as the panacea to improve the overall efficiency of water policy and reduce poverty and inequality. LAC countries have carried out several water legislation changes without setting the proper frameworks and the necessary tools to implement these reforms and monitor their outcomes. The focus was primarily on standard elements such as decentralization, the establishment of regulating entities and setting-up water resources authorities but avoided strengthening capacity at all levels and developing mechanisms for integrated planning. As a consequence and despite these efforts, water resources and services management still need further improvement to meet MDGs (SWITCH Project, 2009). In addition, lessons learnt from 20 years of PPP experience in Latin America (Philippe Marin, 2009) revealed the fundamental importance of institutional and regulatory frameworks for efficient, equitable and sustainable water management, with special attention to *public* governance.

#### **Box 2. Guidelines and Programmes to achieve Water and Sanitation MDGs in LAC**

International and regional organizations such as UN-Habitat, the *Interamerican Development Bank* (IDB) and the *Economic Commission for Latin America and the Caribbean* (CEPAL) have launched programmes and projects to promote frameworks enabling water and sanitation public services provision, as well as technical and operational regulations for improvement of the water sector. They have provided guidelines and recommendations to enhance better governance in LAC water sector as a crucial factor to meet the MDGs challenge.

These guidelines (IDB/UN-Habitat, 2011) advocate for:

- Clear long term policies, plans and roadmaps in response to political discontinuity;
- Strengthened sector reforms with well-identified roles and responsibilities;
- Improved sector information systems and databases;
- Policies, programs and plans oriented towards better education and enhanced enrolment and participation of the community in the decision and management processes;
- New financial approaches for the sector, combining the efforts and capabilities of states, service providers and the communities;
- Clear and feasible road-maps.

The World Bank and IDB have also implemented several types of activities of on-the-ground technical assistance to support such recommendations through specific guidance on institutional arrangements, political consensus-building, country dialogue, capacity building programmes, monitoring support, etc.

17. **Improving water governance can support the achievement of water and sanitation MDGs.** The global economic crisis and recession, climate change, and the rarefaction of water resources, are expected to reinforce inequalities and increase poverty, particularly in developing countries. The limited public funds are likely to undermine the MDG commitments by limiting public spending and investment targeting poverty alleviation. In parallel, the increasing water scarcity may threaten access to water in specific areas and for specific categories of population. For examples, in recent years, various national studies conducted in Chile have allowed for the preliminary quantification of the impacts of climate change

on water resources for different productive sectors. Given these two trends, it is all the more essential to make the best possible use of the more and more limited resources and move from traditional conditional cash transfers programmes (Box 3) to access to in-kind services such as water. In this regard, the role of institutions and their co-ordination is essential when it comes to designing and implementing integrated water policies to meet efficiency, equity and environmental concerns.

### Box 3. Conditional Cash Transfers Programmes in LAC countries

Several Latin American public welfare agencies are turning to cash assistance to mitigate poverty. Conditional cash transfers programs cannot only aim to reduce poverty in short time but to invest in long-term human capital. They represent social contract whereby governments provide financial assistance on a provisional basis. Families must meet conditions established by the government to receive the funds.

In Mexico, “*Oportunidades*” is a public welfare program representing 46.5% of the country’s anti-poverty budget. It uses households’ surveys from rural and urban poor communities to determine eligibility. The Mexican government has therefore set 3 conditions upon which families can receive financial aid: education stipends, health care and nutrition.

The Brazilian “*Bolsa Familia*” is the target cash transfer programme in the developing world. These Federal District monetary transfers covered 26.4 million people in 2005. Eligible recipients fall into 2 categories: “extremely” or “moderately” poor. A debit card is issued to the female head of household and money is used to enroll children in school and provide them with the routine medical care.

Source: “Cash transfer programs in Mexico and Brazil: A qualitative analysis of *Oportunidades* and *Bolsa Familia*”, J.V. Garza, University of Texas- “To beat back poverty, pay the poor”, T. Rosenberg, The New York Times, 3 January 2011.

18. **Because of their territorial dimension, water policy design and implementation need to take into account local concerns and actors.** Achieving water MDGs thus requires (i) the adoption of a customized and territorialized approach including local specificities in local planning and decision-making processes as the outcomes of public policies heavily rely on them; (ii) the improvement of the coherence and synergies between water and development policies in all areas of government, (iii) the evaluation of how collective actions can be used by groups to reduce exposure to risk in the short term and break down the vicious circle of poverty in the long term; (iv) the understanding of how institutions and organizations evolve and function, what determines inclusive and place-based policies and the extent to which they contribute to poverty reduction.

19. **Sustainable public action** in the water sector raises cross-sectoral and multi-level co-ordination and capacity challenges. The question addressed in this report is *how to foster public action to design place-based water policies in order to reduce poverty and territorial disparities*. So as to deliver tangible and measurable results, water policies need a comprehensive approach to look at challenges holistically. Achieving the MDGs in the water sector is a shared responsibility involving multiple and mutually dependent stakeholders from various sectoral and institutional backgrounds, such as ministries, public agencies, sub-national authorities and private actors including citizens and not-for-profit organizations. But such actors sometimes have conflicting priorities and interests, which may create obstacles for adopting convergent targets. Identifying incentives and bottlenecks for sustainable water policies therefore implies listening to this wide variety of stakeholders, increasing respect for local community input, and working across governmental sectors and levels of government. Multi-level governance precisely addresses issues of interdependencies of policy-making at multiple government levels (local, regional, provincial/state, national, international, etc.) and across government sectors.

## 1.2. Water and poverty alleviation

20. **Good water governance plays a crucial role in meeting the critical challenges underlying the Millennium Development Goals for water and sanitation.** Indeed, poor people are less able to avoid the adverse consequences of poor governance and therefore bear a disproportionate share of the costs (Review of existing concepts of water governance and an analysis of pro-poor approaches in UN-Habitat intervention, UN-Habitat, 2008). Marginalisation, exclusion from decision-making and policy processes, informal institutional arrangements (customs, norms, and religious beliefs) and inadequate service provision further contribute to the vulnerability of the poor. These issues were discussed in a workshop organized by OECD on “*Fighting poverty through better quality public services: sharing experiences between LAC and OECD countries*” (Mexico City, 2-3 June 2009).

21. **It is important to understand why countries lag in the first place, and efforts towards better governance in the water sector must start with a critical review of the following issues:** (i) lack of political commitment at all levels of government (from national to local); (ii) the limited scope of governance approaches for implementing the MDGs goal, including inadequate legal frameworks and poor regulatory structures; (iii) inappropriate stakeholder engagement; (iv) chronic under-financing of water infrastructures; and (v) significant gaps between the financial resources needed to meet the MDGs and what is currently provided by the public and private sectors, and development aid.

22. **In rural areas, irrigated agriculture is often considered a promising mechanism for poverty alleviation.** Irrigated farming expanded from 40 million hectares to almost 300 hectares but the world’s population continues to grow, along with concerns about food security and especially about the availability of water to grow crops. In these situations, too, good governance can provide for enhanced capacity-building to develop innovative water management technologies and infrastructure and well as negotiation mechanisms for the resolution water use conflicts.

23. **The key to improving water supply and sanitation services to the poor and further work towards poverty alleviation may lay first in mapping the specific needs of the poor in different contexts, then identifying real sectoral constraints** (capacity constraints, budgetary constraints, regulatory constraints, monitoring constraints) and developing appropriate programme support or interventions which help to address them (Review of existing concepts of water governance and an analysis of pro-poor approaches in UN-Habitat intervention, UN-Habitat, 2008). Therefore, pro-poor water governance can (i) prioritize needs, develop customized legislation and policies; (ii) expand water and sanitation services; (iii) promote integrated water resources management; (iv) develop innovative financing and investments mechanisms; and (v) build capacity and knowledge at all levels, thereby advancing efforts for poverty alleviation and MDGs goals’ achievement.

**Box 4. OECD/LAC Initiative workshop**  
**“Fighting poverty through better quality public services: sharing experiences**  
**between LAC and OECD countries”**  
**Mexico, 2-4 June 2010**

This workshop aimed at creating a network of policy-makers in LAC and OECD countries involved in and committed to public services improvement as part of their country development strategies. Several case studies highlighted the key role of the water service provision in poverty alleviation.

The “*Estrategia 100x100*” programme was developed in Mexico to promote public service improvement on the 3 areas identified in the Human Development Index (HDI): education, health and income. Along those areas, it has promoted infrastructures services. The programme was also developed at Federal level to enhance human capabilities in the lowest 125 municipalities in terms of HDI. One of the most successful policies in improving health aspects has been the provision of water. It has an enormous effect in mitigating gastrointestinal illnesses.

The UN has developed a framework towards effective public service delivery through decentralization, implicitly oriented towards LAC countries. It suggests the public provision of 8 services labeled as “basic” for their contribution to human dignity while enhancing quality of life and promote sustainable economic growth. The eight basic services are water and sanitation, waste management, energy, transports, communications, education, health and public safety. The public provision of such services has to consider the long period needed to realize the investment in the case of water and sanitation services, waste disposal, energy and transport and communications.

The closing comments for the workshop confirmed the need for a cash-in kind approach in order to alleviate poverty. In order to best do so, there is the need to have a territorial approach as it was seen through the workshop that rural and urban areas differ in terms of problems faced and solutions that work best. Moreover, it is necessary to face the co-ordination problems that arise from the interaction of different levels of government, which requires a systemic approach towards poverty alleviation and effective decentralisation.

## 2. A multi-level governance approach for addressing complexity in the water sector

### 2.1. Better public governance for sustainable water policies: rationale for a multi-level approach

24. **Due to intrinsic characteristics, the water sector usually combines several “governance gaps” as compared to other natural resources or infrastructure sectors.** Indeed, water is a local and global issue at the same time; it is both a human right and an economic good; it is impacted by and generates impacts on property rights; it requires large sunk investment costs to build, operate and maintain infrastructure and is a key driver of sustainable development; last but not least; it generates multiple externalities on other policy areas (agriculture, health, education, economy and finance, gender, poverty alleviation, etc.).

25. **Water involves a plethora of stakeholders at (sub-)basin, municipal, regional, national and international levels.** In the absence of effective public governance to manage interdependencies across policy areas and between levels of government, policymakers inevitably face obstacles to effectively designing and implementing water reforms. Key challenges are institutional and territorial fragmentation and badly managed multi-level governance, as well as limited capacity at the local level, unclear allocation of roles and responsibilities and questionable resource allocation. Insufficient means for measuring performance have also contributed to weak accountability and transparency. These obstacles are often rooted in misaligned objectives and poor management of interactions between stakeholders.

26. **The trend towards the decentralisation of water policies in LAC countries over the past decades has resulted in a dynamic and complex relationship between public actors at all levels of government.** To varying degrees, LAC countries have allocated increasingly complex and resource-intensive functions to lower levels of government, often in a context of economic crisis and fiscal consolidation. Despite these greater responsibilities, sub-national actors were often not transferred the authority over the financial allocation required to meet these needs, or the capacity to generate local public revenues. Co-ordination failures between sub-national and national governments and of sub-national budgetary constraints have led to policy obstruction in Latin America. The unitary character of public finance in many countries in the region hampers sub-national infrastructure spending, as it often depends on the transfers of resources from the central government<sup>3</sup>. The water sector has been an emblematic laboratory for decentralisation processes and PPPs in the 1990s. The issue became more and more important and the sector gained the interest of political leadership.

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3. Latin American Economic Outlook 2012 “*Transforming the State for Development*”, OECD/ECLAC, OECD publishing, Paris



27. **Improving water governance has become a key topic in the political agenda and a prerequisite for sustainable and innovative water policies that can “do better with less”.** Effective public governance is critical for the mix of economic instruments (including pricing, subsidies, or compensation mechanisms) that offer incentives to different groups of users to engage in water-sustainable practices and to agree on water reforms. It is also crucial to reconcile the long-term financial needs of the sector with the revenue streams available (3Ts – taxes, transfers and tariffs – and their appropriate combination), taking into account the need for efficiency of fund use and the importance of strategic financial planning. Finally, integrated public governance is also necessary to overcome the typical disjuncture between water policies and planning on the one hand, and engineering and infrastructure investments on the other hand, both of which affect water quantity and quality.

28. **There is no one-size-fits-all answer, magic blueprint or panacea to respond to governance challenges in the water sector, but rather a plea for home-grown and place-based policies integrating territorial specificities and concerns.** The institutions in charge of water management are at different developmental stages in different LAC countries, but common challenges – including in the most advanced countries - can be diagnosed *ex ante* to provide adequate policy responses. Although common problems can be identified, there is no unique universal solution. Institutional architecture, prerogatives and local conditions must be taken into account in the public policy design. To do so, there is a pressing need to take stock of recent experiences, identify good practices and develop pragmatic tools across different levels of government and other stakeholders in engaging shared, effective, fair and sustainable water policies.

29. **The multi-level approach developed in this paper takes a close look at the processes through which public actors articulate their concerns, decisions are taken and policy makers are held accountable.** It conceives water governance as the political, institutional and administrative framework for water resources management. Both high-level decision making and actions taken at local and regional levels are studied, including the ability: i) to *design* public policies whose goal is the sustainable development and use of water resources, and to mobilise the resources to support them; and ii) to ensure that the different actors involved in the process *implement* them successfully<sup>4</sup>.

## 2.2. OECD Multi-level Governance Framework: a Tool to diagnose water governance challenges

30. **The OECD Multi-level Governance Framework provides a reading template for diagnosing 7 Key co-ordination “gaps” in the water sector, regardless of countries’ institutional setting.** It was originally developed for addressing the interdependencies across levels of government in decentralized public services contexts (Charbit, 2011). It has already been tested to appraise water governance challenges in 17 OECD countries (OECD, 2011) as well as in other public policy areas of OECD interest, such as regional development in the framework of territorial, metropolitan and rural reviews, innovation, and public investment. The multi-level analytical framework argues that in both federal and unitary countries, water-scarce and water-rich regions, and regardless of the institutional organization of the water sector, common co-ordination gaps occur across ministries, between levels of government, and across sub-national players. However, solutions can vary in degree and type.

31. **The policy gap refers to the sectoral fragmentation of water-related tasks across ministries and public agencies.** Silo approaches in water policy result in incoherence between sub-national policy needs and national policy initiatives and reduce the possibility of success for implementation of cross-sectoral policy at the sub-national level. If individual ministries or public agencies operate independently, rather than undertaking cross-sectoral initiatives, the opportunity for “whole government” approaches is minimised. At the same time, possibilities for maximising efficiency and effectiveness in cross-sectoral

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4. For an overview of water governance definitions, concepts and initiatives see Chapter 1 of OECD (2011): *Water Governance in OECD countries: a Multi-level Approach*, OECD Publishing, Paris.

public services may be lost, and sub-national development adversely impacted. In the past few decades, this trend has been exacerbated by the increasing involvement of local actors (for whom water is a local concern) and supranational ones (for whom water is a global concern). Policy initiatives designed at the central level and implemented at the sub-national level are symbolic of the co-ordination needed between ministries to reduce the impact of sectoral fragmentation on sub-national actors. The policy gap therefore refers to a lack of policy coherence at central government level, which is a condition for better cross-sector co-ordination at the sub-national level.

**Table 1. OECD Multi-level Governance Framework: 7 Key Co-ordination Gaps**

<b>Administrative gap</b>	Geographical “mismatch” between hydrological and administrative boundaries. This can be at the origin of resource and supply gaps. => <b>Need for instruments to reach effective size and appropriate scale.</b>
<b>Information gap</b>	Asymmetries of information (quantity, quality, type) between different stakeholders involved in water policy, either voluntary or not. => <b>Need for instruments for revealing and sharing information.</b>
<b>Policy gap</b>	Sectoral fragmentation of water-related tasks across ministries and agencies. => <b>Need for mechanisms to create multidimensional/systemic approaches, and to exercise political leadership and commitment.</b>
<b>Capacity gap</b>	Insufficient scientific, technical, infrastructural capacity of local actors to design and implement water policies (size and quality of infrastructure, etc.) as well as relevant strategies. => <b>Need for instruments to build local capacity.</b>
<b>Funding gap</b>	Unstable or insufficient revenues undermining effective implementation of water responsibilities at subnational level, cross-sectoral policies, and investments requested. => <b>Need for shared financing mechanisms.</b>
<b>Objective gap</b>	Different rationales creating obstacles for adopting convergent targets, especially in case of motivational gap (referring to the problems reducing the political will to engage substantially in organising the water sector). => <b>Need for instruments to align objectives.</b>
<b>Accountability gap</b>	Difficulty ensuring the transparency of practices across the different constituencies, mainly due to insufficient users’ commitment’ lack of concern, awareness and participation. => <b>Need for institutional quality instruments.</b> => <b>Need for instruments to strengthen the integrity framework at the local level.</b> => <b>Need for instruments to enhance citizen involvement.</b>

Source: Adapted from OECD methodology presented in Charbit (2011) and Charbit and Michalun (2009).

32. **An information gap occurs when there is an asymmetry of information - across ministries, between levels of government and across local actors involved in water policy – undermining the decision-making process.** An asymmetry of information may occur when national and sub-national authorities do not actively share their knowledge of what is happening on the ground and can create win-lose situations by specific use of information not in the possession of the other party.<sup>4</sup> In practice, sub-national governments will tend to have more information about local needs and preferences, and also about the implementation and costs of local policies. Unless they generate and publish reliable data on a timely basis and communicate it to the central level, an information gap is generated. Nevertheless, the sub-national level views are only “partial” – limited to a specific area or territory. Thus the central government plays an indispensable role in managing the information so as to support a broader vision of public policy objectives. Information can also be used to identify capacity deficiencies so they can be corrected. Once again, this indicates a relationship of mutual dependence.

33. **A capacity gap is generated by insufficient scientific and technical expertise (soft capacity) and infrastructure (hard capacity) for designing and implementing water policies.** The *capacity gap* is

not restricted to the sub-national level. It also applies to the national level in terms of managing multi-level relations, allocating responsibilities and funds, and ensuring co-ordinated, coherent policy approaches among actors at central level. In some instances, the sub-national level experiments with innovative approaches in water policies, and they are subsequently “learned” and capacity built by peer levels or transferred from the sub-national level to the central level. Differences between capacity needed to shoulder water responsibilities, and the local authority’s organisational, technical, procedural, networking and infrastructure actual capacity inevitably impact the implementation of national water policies. In the aftermath of decentralisation (1980s) in Latin America, most regions and provinces which were transferred water management responsibilities lacked the capacity required to operate and maintain services effectively.

34. **The *funding gap* (or *fiscal gap*) refers to insufficient or unstable revenues to implement water policies across ministries and levels of government.** It is represented by the difference between sub-national revenues and the expenditures required for sub-national authorities to meet their responsibilities in the water sector. This gap reflects a mutual dependence between levels of government since sub-national authorities often depend on higher levels of government for funding water policies, while central government depends on the sub-national authorities to deliver them and meet both national and sub-national policy priorities. This interdependence is all the more crucial when government funding has been slashed in times of economic and financial crisis. The cost of construction and maintenance of water and sanitation infrastructure is constantly increasing and requires long-term large sunk investment, which, often, cannot be met only by public funds. In Argentina for example, the progressive deterioration of infrastructure and networks in a context of severe economic recession ended with the “regional” entities of the former national public company “*Obras Sanitarias de la Nación*” created in 1912.

35. **The *objective gap* occurs when diverging or contradictory objectives between levels of government or ministries compromise long-term targets for integrated water policy.** Overall, the objective gap underlines governments’ challenges in fostering strategic and territorialised planning of water policy. Frequently, when priorities are not clearly formulated at the highest political level, conflicting interests in water use, quality, energy efficiency and pricing policy prevent consensus on aligned targets. For example, at sub-national level, urban flood controls and ecological preservation or restoration of urban waters often conflict. In the past, exclusive emphasis on structural methods of flood control led to destruction of habitat as well as deterioration of water quality. When the objectives of flood control, ecological preservation and spatial planning converge, the impact on other policy areas can be minimised. All relevant stakeholders must therefore be engaged for the long haul, beyond political changes and electoral calendars. The timeframe for decisions is of crucial importance in strategic planning, especially in case of political discontinuity. In Mexico for example, a Mayor is can only be elected once, and for three years. But water policies are frequently long-term endeavours that involve planning, ex-ante evaluation and consultation, several stages of implementation and *ex post* evaluation. Short-term considerations and vested interests can result in action that is potentially counterproductive, and inversely long-term planning and commitment can face strong bottleneck on the ground because of political discontinuity.

36. **The *accountability gap* refers to a lack of transparency, institutional quality and integrity in water policy making.** Ensuring transparency across different constituencies is key for the effective implementation of water policies. But often, shortening the decision-making process introduces risks of capture and corruption, in particular when local governments do not have the capacity to monitor investment and civil society is not totally engaged. In addition, the 1990 decade in Latin America has seen a decrease in government provision of public goods and an increase in private sector participation in the water sector. The latter has changed traditional government accountability. In this context, the accountability gap can be reflected in the market entry process, award criteria, as well as contract provisions for unforeseen contingencies. The question here for governments is not whether citizen

awareness must be developed but whether mobilising public interest could lead to more effective water policies.

37. **Diagnosing all the co-ordination gaps represents one of the primary challenges in multi-level governance of water policy.** LAC countries may experience each gap to a greater or lesser degree, but given the mutual dependence that arises from decentralised contexts and the network-like dynamic of multi-level governance relations, countries are likely to face them simultaneously. Chapter 3 of the paper provides evidence on LAC countries' main co-ordination and capacity challenges across levels of government in the design and implementation stages of water policy. Prior to this, a closer look at the allocation of roles and responsibilities in LAC countries' water policy is helpful to identify interdependencies across public actors.

### *2.3. Water governance in OECD countries: an overview of the main findings*

38. **An analysis of the allocation of roles and responsibilities in water policy in 17 OECD countries has resulted in a matrix that permits “institutional mapping” of water policy.** The analysis of sixteen OECD countries<sup>5</sup> suggests the following observations:

- There is wide variation in the assignment of competences across ministries and levels of government in the water sector, but common trends are noticeable, especially regarding sub-national actors and their responsibilities. Most OECD countries have largely decentralised their water policy making.
- There is no systematic relationship between a country's constitutional structure and the organisation of water policy. Geographical, environmental and economic factors also have a considerable impact.
- River basin management has been encouraged in federal and unitary countries, by institutional factors but also by hydrological parameters and international incentives or regulations (*e.g.*, EU directives).

39. **The report presents a tentative typology of three categories with different governance challenges for developing and implementing coherent water policies.** This typology and its possible relevance for Latin America will be discussed below.

40. **The next objective of the report is to identify the principal co-ordination and capacity challenges** across ministries and public agencies, between levels of government, and across local actors involved in water policy, based on the OECD *Multi-level Governance Framework*.

41. **The relative importance of different governance gaps varies from country to country but here, too, common trends are evident:**

- In two-thirds of the OECD countries surveyed, the **funding** (or fiscal) **gap** is seen as the main obstacle to vertical and horizontal co-ordination of water policies.
- Despite well-developed infrastructure and the regular transfer of expertise, the **capacity gap** is the second most important challenge in OECD countries – especially at sub-national level.

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5. 17 responses to the questionnaire were received from Australia, Belgium (Flanders and Wallonia), Canada, Chile, France, Greece, Israel, Italy, Japan, Korea, Mexico, Netherlands, New Zealand, Portugal, Spain and the United Kingdom.

- Two-thirds of respondents still face a **policy gap**, owing to fragmentation of responsibilities at national and sub-national levels and the lack of incentives for horizontal co-ordination.
- The **administrative gap** (mismatch between hydrological and administrative boundaries) affects water policy implementation, even after the adoption of river basin management principles.
- **Information and accountability gaps** are major obstacles to integrated water policy in half of the OECD countries surveyed.

42. **A third contribution of the report is to identify existing governance instruments for building capacity and co-ordinating water policies at horizontal and vertical levels.** All OECD countries surveyed have set up co-ordination tools at the central government level. These mainly consist of line ministries, inter-ministerial bodies or mechanisms, or specific co-ordinating bodies. Most countries have also made efforts to co-ordinate water with other policy domains, including spatial planning, regional development, agriculture and energy. Performance measurement, water information systems and databases, financial transfers, inter-municipal collaboration, citizen participation and innovative mechanisms (e.g. experimentation) are important tools for co-ordinating water policy at the territorial level and between levels of government. Where they exist, river basin organisations are a powerful tool for addressing vertical co-ordination challenges and interactions at the local level.

43. **The report ends with tentative guidelines intended to serve as a tool for policy makers to diagnose and overcome multi-level governance challenges in the design of water policy** (Box 5). Guidelines are interdependent and should not be considered in isolation. However, they can help enhance the prospects for crafting successful water reform strategies in the future. They are intended as a step towards more comprehensive guidelines (to be developed at a later stage), based on in-depth policy dialogues on water reform with countries and recognised principles of water policy, economic bases and good governance practices.

**Box 5. Preliminary guidelines for effective management of multi-level governance**

- Diagnose multi-level governance gaps in water policy making across ministries and public agencies, between levels of government and across sub-national actors. This will help clearly define roles and responsibilities of public authorities.
- Involve sub-national governments in designing water policy, beyond their roles as “implementers”, and allocate human and financial resources in line with responsibilities of authorities.
- Adopt horizontal governance tools to foster coherence across water-related policy areas and enhance inter-institutional co-operation across ministries and public agencies.
- Create, update and harmonise water information systems and databases for sharing water policy needs at basin, country and international levels.
- Encourage performance measurement to evaluate and monitor the outcomes of water policies at all levels of government, and provide incentives for capacity building.
- Respond to the fragmentation of water policy at the sub-national level by encouraging co-ordination across sub-national actors.

- Foster capacity-building at all levels of government. This implies combining investment in physical water and sanitation (“hard”) infrastructure and in the institutions upon which water outcomes rely and their ability to fulfil their duties in an effective and co-ordinated way (“soft” infrastructure).
- Encourage a more open and inclusive approach to water policy making through public participation in water policy design and implementation.
- Assess the adequacy of existing governance instruments for addressing identified challenges and fostering co-ordination of water policy at horizontal and vertical levels.

### 3. Mapping institutional roles and responsibilities

44. **This section aims to identify *who does what* in terms of water policy design, regulation, budget and implementation as well as the modalities for allocating roles and responsibilities in the water sector.** It offers a tentative typology of LAC countries based on the institutional organisation of their water sector and identifies key features and trends within the region in terms of allocating roles and responsibilities<sup>6</sup>.

#### 3.1. Methodology

45. **Unclear, overlapping and fragmented roles and responsibilities across policy areas and between levels of government are often considered as the major obstacle to effective design and implementation of water policies.** The water sector is affected by numerous external drivers and generates important externalities in various policy domains, hence the multiplicity of actors mutually dependent and the inherent risks of confusion, efficiency costs and conflicts in both water resources management and water services delivery. In this context, it is crucial to understand clearly who is responsible for what in terms of strategic planning, priority setting, allocation of uses, economic and environmental regulation, information, monitoring, evaluation, at which level of government (national, regional, local) and how such responsibilities are defined (by a specific law on water, by Constitution, etc.). To respond to this need, an extensive questionnaire on Water Governance was sent to water directors from the CODIA network throughout 2010 (Box 6). The following section summarises the key highlights of the institutional mapping at central and sub-national levels.

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6. Information presented in the following tables was collected from responses to the 2010 OECD Survey on Water Governance, regarding the ministries, public agencies, levels of government and sub-national actors involved in specific areas of water policy. Detailed institutional mappings of the 13 LAC countries surveyed are attached to this paper within the country profiles at the end of the report.

### Box 6. Methodological note on the OECD Water Governance Survey

In all, 13 LAC countries participated in the OECD Survey and respondents mainly proceeded from ministries of environment and national water agencies.

Argentina	Subsecretaría de Recursos Hídricos de la Nación – SSRH
Brazil	Agência Nacional de Águas - ANA
Chile	Dirección de Obras Hidráulicas
Costa Rica	Ministerio de Ambiente y Energía
Cuba	National Institute of Natural Resources (INRH)
Dominican Republic	Instituto Nacional de Recursos Hidráulicos (INDRHI)
El Salvador	Dirección General de Ordenamiento Forestal, Cuencas y Riego. Ministerio de Agricultura y Ganadería
Guatemala	Ministerio de Ambiente y Recursos Naturales - MARN
Honduras	Secretaría de Recursos Naturales y Ambiente
Mexico	Comisión Nacional del Agua (CONAGUA)
Nicaragua	Ministerio del Ambiente y los Recursos Naturales
Panama	Autoridad Nacional del Ambiente (ANAM)
Peru	Autoridad Nacional del Agua (ANA)

This sample includes a wide range of countries with diverse institutional and geographical backgrounds; and varied levels of income and environmental features. It permits comparisons between areas where water is scarce and plentiful, and water policy is decentralized versus centralised.

The ease of performing comparisons within regions depends on the number of valid answers and questionnaires available. Some of the questionnaires were less helpful than others because a higher number of questions were left unanswered. Certain types of comparisons should be subject to particular caution, due to institutional features and the division of responsibilities and also because most quantitative data rely on perception indicators based on subjective judgments on a “1-to-3” scale (not important, important, very important).

#### Areas of water policy covered by the institutional mapping:

- Water resources management.
- Water supply (domestic, agriculture, industrial uses).
- Wastewater treatment.

#### Roles and functions targeted in the institutional mapping:

##### *Policy design and implementation*

- Strategy, priority setting and planning (including infrastructure).
- Policy making and implementation.
- Information, monitoring and evaluation.
- Stakeholders' engagement (creating citizen awareness, etc.).
- Implementation of central government policies at the territorial level.

##### *Regulation*

- Allocation of uses.
- Quality standards.
- Compliance of service delivery commitment.
- Economic regulation (tariffs, etc.).
- Existence of a specific regulatory agency in the water sector.
- Monitoring of regulatory enforcement at the sub-national level.

Source: OECD Survey on Water Governance (2010).

### 3.2. Institutional mapping at central government level: main features and observations

**Table. 2. Water policy at CENTRAL level in LAC countries: a diversity of situations**

Country of region	Unitary, federal or quasi-federal country	Number of principal actors in design and implementation	Number of actors in regulation	Role of central government (dominant actor, joint role with local actors, none)	Means of defining roles	Specific water regulatory agency (yes/no)
Peru	Unitary	13	10	Dominant	Constitution Law Ad hoc	Yes
Chile	Unitary	12	10	Dominant	Law Ad hoc	Yes
Costa Rica	Unitary	7	6	Dominant	Constitution Law	Yes
Brazil	Federal	7	5	Joint	Constitution Law	Yes
Honduras	Unitary	7	7	Joint	Constitution Law	Yes
Nicaragua	Unitary	7	6	Joint	Constitution Law	Yes
Cuba	Unitary	6	6	Dominant	Constitution Law	No
Argentina	Federal	5	3	Joint	Constitution Law Ad hoc	No
Guatemala	Unitary	5	3	Joint	Constitution Law	No
Dominican Republic	Unitary	4	9	Dominant	Law	Yes
El Salvador	Federal	4	5	Dominant	Constitution Law Ad hoc	Yes
Mexico	Federal	4	4	Dominant	Constitution Law Ad hoc	Yes
Panama	Unitary	4	7	Dominant	Constitution Law	Yes

#### *A hyper fragmented sector*

46. **General features can be observed out of the institutional mapping at central level.** As table 2 shows, in all LAC countries surveyed, the central government (via ministries or deconcentrated national agencies) still plays a significant role in water policy making, even in countries that have largely decentralised the responsibilities for water resources management and service delivery (Brazil, Mexico, Argentina). In most cases, central government prerogatives include strategic planning, priority setting and



environmental regulation, whilst economic regulation is often carried out at sub-national level (see table on institutional mapping at sub-national level).

47. **However, mapping the allocation of roles and responsibilities in federal countries that have devoted most powers to regions is a challenge** (box 7) Even though an overall “picture” can be provided in terms of central authorities’ involvement in water policy making, roles and responsibilities are so widely distributed across national and sub-national levels that any tentative attempt at comprehensive institutional mapping would involve a lot of generalisations that would obscure the diversity, fragmentation and omissions in the systems.

**Box 7. The challenge of mapping role and responsibilities in water policy: the case of Brazil**

In Brazil, each level of government (the Union, the States, the Federal District and the Municipalities) has the right to individually create its own legislation on nature conservation, soil and natural resources management, environmental protection and pollution control. Thus, it is often complicated to properly identify the roles and mission of each actor in water policy design and implementation.

Overall, the Federal state is the primary policy-making authority. The *Secretariat of Water Resources and Urban Development*, within the Ministry of the Environment, is in charge of proposing water management plans, laws and strategies for water resources management. The Ministry of Cities is in charge of water and sanitation services policies. The *National Water Authority (ANA)*, established in 2000, is a federal institution dedicated to the implementation of the national water resources policy and the regulation of access to water. At the regional level, river basin committees, state agencies for water resources planning and management, state water resources councils and states regulatory agencies are also engaged in water resources policy implementation. In some cases, especially regarding metropolitan areas, states are also in charge of water and sanitation services provision. However, in most of the country, this responsibility falls on municipalities or water users associations in rural areas.

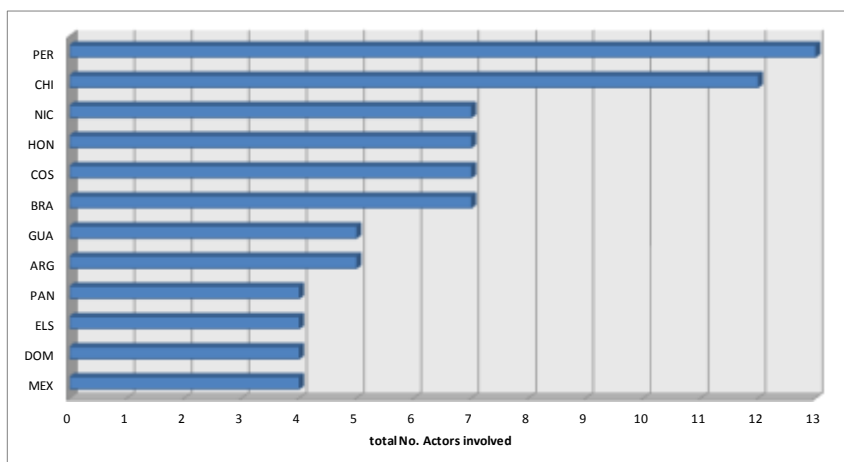
In both water policy design and implementation, agencies and authorities are well identified but it is their roles and responsibilities that remain unclear. In spite of the National Water Law (1997) as a common legal framework, the institutional organisation within the water sector lacks structure, common organizational ground and global strategy making. Therefore, co-ordination and monitoring instruments very hard to implement. The *National Water Resources Management System (SINGREH)* adopted in 2000 involves organized public organizations, private entities and civil society representatives that participate in the implementation of resources management instrument. However, it still requires co-ordinated and complementary water management actions across levels of governments. The need for such co-ordination, along with the multiplicity of agencies and administrations between federal, state and local levels and their overlapping roles, poses a considerable challenge in the current water sector context.

48. **In all LAC countries surveyed, multiple central authorities (ministries, departments, public agencies) are involved in water policy making and regulation at central government level.** The multiplicity of actors varies according to the area of water policy considered. On average, domestic water services usually involve the highest number of ministries, public agencies and departments, because of the externalities of water supply on other policy areas (e.g. education, health, etc.) while wastewater treatment usually involves the lowest number of central government authorities.

49. **The degree of institutional fragmentation at central government level varies across countries and is not systematically correlated to the institutional context.** As Figures 2 and 3 show the number of central authorities (ministries, departments, public agencies) involved in water policy making ranges from four in Mexico to 13 in Peru, and the number of authorities in charge of regulatory issues ranges from three in Argentina to 10 in Peru. This is an interesting indicator for measuring the fragmentation of roles and responsibilities, based on the natural assumption that the more actors there are, the more complex the situation is. However, such indicators have limitations that also need to be taken into account. Indeed, the “apparent” number of actors may be biased by the “area of competence” of the ministries in charge. For instance, in the case of Mexico, the situation appears less complicated, since only two ministries (SEMARNAT - Ministry for the Environment and Ministry for Health) and two deconcentrated bodies of SEMARNAT (CONAGUA and PROFEPA) are in charge of water policy making. A closer look at their prerogatives shows that such ministries embrace a wide diversity of areas, which may in fact be equivalent to having several ministerial departments or agencies, with a silo approach not only between but also within ministries if co-ordination tools are not put in place. Interestingly, we tend to observe an inverse relationship between the institutional setting of the country (federal v. unitary) and the number of central government agencies involved in water policy. As Figures 2 and 3 show, big federal countries such as Brazil, Mexico and Argentina are rather situated at the bottom of the chart rather than unitary ones (Chile, Peru), which tend to have a higher number of central agencies involved in water policy making. This suggests that pressures for fragmentation of policy responsibility are at work, whatever the institutional context.

**Figure 2. Number of authorities\* involved in water policy making at central government level**

(13 LAC countries surveyed)

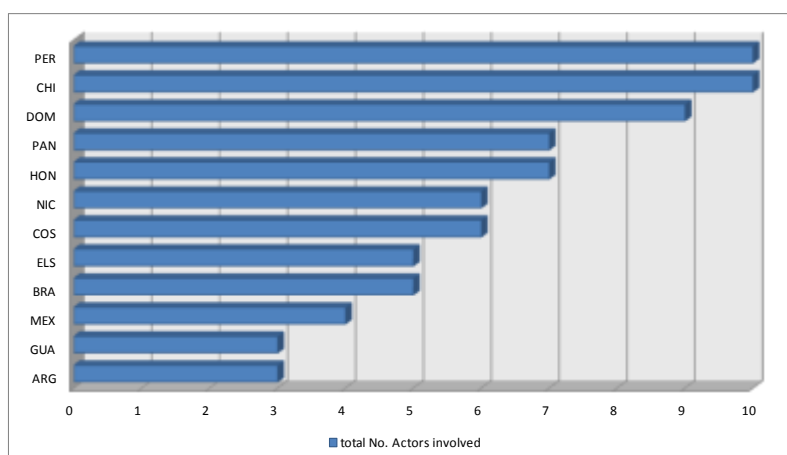


\* Ministries, departements, public agencies etc.

Source: OECD Water Governance Survey (2010).

**Figure 3. Number of authorities\* involved in water regulation at CENTRAL government level**

(13 LAC countries surveyed)



\* Ministries, departements, public agencies etc.

Source: OECD Water Governance Survey (2010).

50. **Mapping of the allocation of responsibilities provides the rationale for the adoption of governance tools to overcome the institutional complexity of water policy.** However, it is worth keeping in mind when using the number of actors as an indicator of fragmentation that several examples exist of highly fragmented policy-making contexts (e.g. Federal states such as Brazil and Argentina) where the multiple actors and layers, usually perceived as obstacles to policy coherence, are compensated for by sound co-ordination mechanisms (see section 3) that reduce the level of fragmentation.

51. **Half of LAC countries surveyed reported the involvement of other types of actors than traditional ministries at central government level in the design and implementation of water policy.** A relevant example is Chile (box 8), where eight central agencies are involved in water policy design and implementation. The role of such agencies in addressing institutional fragmentation will be further developed in section 4.

#### **Box 8. Multiple central agencies involved in water policy: the example of Chile**

In Chile, a high number of central agencies are involved in policy design, implementation and monitoring. They are the following:

- *The Ministry of Health* is responsible for overseeing water quality standards and environmental regulations in the industrial sector
- *The General Office of Waters* is responsible for the water resources administration and management toward sustainability, public interest, efficient allocation and information dissemination.
- *The Water Works/Infrastructures Office* provides water infrastructures to efficiently exploit water resources and protect populations against floods and other extreme events.

- The *Superintendent's Office for Sanitation Services* decides on drinking water and sanitation services' tariffs, signs concessions with providing companies supervise the quality of service and monitor industrial sites producing liquid wastes.
- The *National Commission for the Environment* works closely with other Ministries and agencies in developing environmental laws and criteria, particularly on natural resources' (including water) management, use and exploitation
- The *Rural Potable Water Programme*, developed by the Ministry of Public Work aims at supplying drinking water to rural areas
- The *National Commission on Irrigation* has the overall responsibility in irrigation matters, from policy design to infrastructure provision
- The *Chilean Commission on Copper* develops, implements and supervises natural resources' exploitation policies, including for water management in the mining sector

*A heavily regulated sector*

52. **The water sector has many intrinsic characteristics which require sound regulatory frameworks.** The sector consists mainly of natural monopolies, is territorially anchored at local level, requires large sunk infrastructure investments, entails high distribution and transportation costs, needs technology, know-how and expertise, has many externalities on different policy areas, etc. Because the water sector is rooted in the general interest and faces a low degree of competition (few international players and risks of abuse of dominant position), regulation is crucial to enable the public sector to carry out long term policy objectives, balance interest of all parties, prevent opportunistic behaviours, protect customers from private sector abuses and private sector from politically driven decisions,

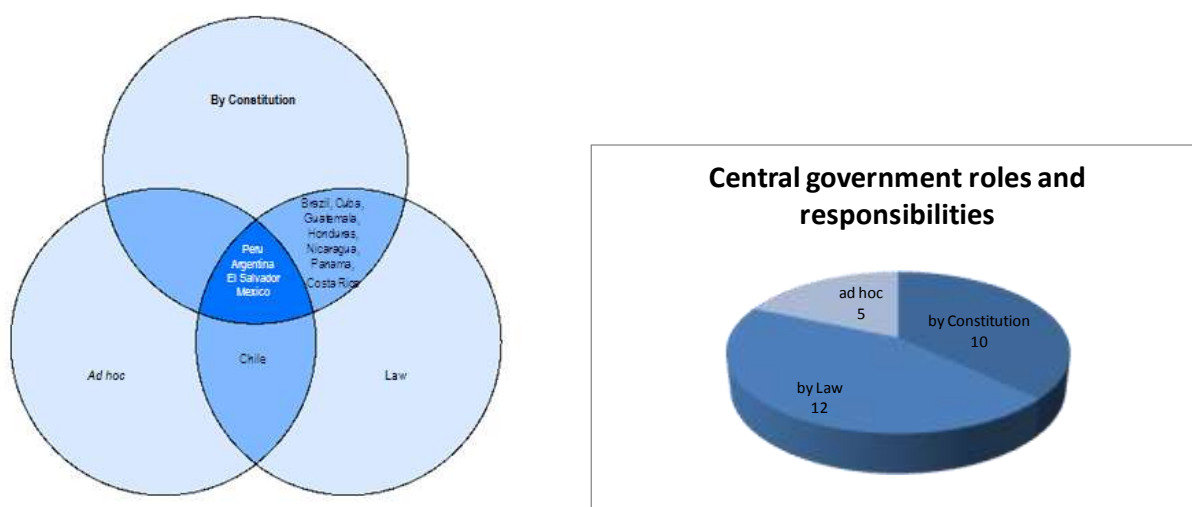
53. **Three categories of countries can be distinguished in terms of allocation of environmental and economic regulatory powers in the water sector at the national level.** In a first category of countries, these functions are carried out by ministerial departments and/or public agencies; in a second category of countries, such duties rely on specific regulatory agencies in the water sector; and a third category of countries, in the middle of the continuum, significant regulatory powers are granted to specific actors at national level. LAC countries' institutional mapping shows that these different models have sometimes been combined within a same country, as environmental regulation is often carried out by ministerial departments or agencies, while economic regulation is undertaken either at the territorial level (states, provinces, municipalities) or by specific regulatory agencies.

**Table 3. Allocation of regulatory powers at the national level**

Where regulatory functions are mainly carried out	Examples
Ministerial department	Cuba (INRH), Guatemala (MARN), Mexico (COFEPRIS)
Specific regulatory agency in the water sector	Chile (SISS), Costa Rica (ARESEP), Dominican Republic (INDRHI)
Public agency with specific regulatory powers	Mexico (CONAGUA), Brazil (ANA), Peru (ANA)

54. In almost all LAC countries surveyed (12 out of 13), the allocation of roles and responsibilities in water policy at central government level is primarily (but not only) defined by a specific law on water. As Figure 4 shows, most LAC countries (10 out of 13) have enshrined the allocation of water policy design, implementation and regulatory roles in their national Constitution. For example, Argentina’s federal structure is based on the duties assigned in art. 121 of the National Constitution, according to which “provinces hold all power not delegated to the Federal Government by this Constitution, and that which is expressly reserved by special agreements at the time of its incorporation”. The 1994 constitutional reform added article 124 of the charter and expressly stated that “provinces have original ownership of natural resources existing in their territory.”

Figure 4. How central governments’ roles and responsibilities in water policy are defined



55. However, even when there is a clear allocation of roles and responsibilities under a specific “water law”, co-ordination is still an imperative. Beyond the determination of *who does what*, the challenge lays in the problems of overlapping responsibilities generated by interpretation and implementation of water policy on the ground. Ministries, public agencies and other central government actors are required to co-operate given the interdependence of water-related issues and the need to address them collectively.

### 3.3. Institutional mapping at sub-national level: main features and observations

**Table 4. Water policy at SUB-NATIONAL level in LAC countries: a diversity of situations**

Country	Unitary, federal or quasi-federal country	Type of involvement (dominant role, joint role with CG, no competence)	Water resources	Water supply (domestic)	Water budget	WUAs (yes/no)	RBOs (yes/no)
Argentina	Federal	Joint role	Provinces	Provinces Municipalities	CG SNG RBO	Yes	Yes
Brazil	Federal	Joint role	CG Water-specific bodies RBO	Municipalities	CG SNG RBO	Yes	Yes
Chile	Unitary	None (except municipalities for sanitation in rural areas)	n/a	n/a	CG SNG	Yes	No
Costa Rica	Unitary	None (except municipalities for sanitation)	n/a	Municipalities	n/a	No	n/a
Cuba	Unitary	None	Regions Municipalities RBO	Regions Municipalities	CG SNG RBO Others (NGOs)	No	n/a
Dominican Republic	Unitary	None	n/a	n/a	CG	Yes	Yes
El Salvador	Federal	None	None	Municipalities Intermunicipal bodies Water-specific bodies RBOs	CG SNG	No	n/a
Guatemala	Unitary	Joint role	RBOs	Municipalities	CG SNG RBOs	Yes	Yes
Honduras	Unitary	Joint role	Municipalities Intermunicipal bodies Water-specific bodies	Municipalities Intermunicipal bodies Water-specific bodies	CG SNG	No	n/a
Mexico	Federal	Joint role	Regions Municipalities Intermunicipal bodies RBOs	Regions Municipalities Intermunicipal bodies RBOs	CG SNG	Yes	Yes

**Table 4. Water policy at SUB-NATIONAL level in LAC countries: a diversity of situations**  
(*cont.*)

Nicaragua	Unitary	Joint role	Regions Municipalities Intermunicipal bodies Water-specific bodies RBOs	Regions Municipalities RBOs	CG SNG	Yes	Yes
Panama	Unitary	None (except municipalities for domestic water supply)	None	Municipalities Others (water committees)	CG SNG	No	n/a
Peru	Unitary	Joint	Regions Municipalities Water-specific bodies RBOs	Regions Municipalities Water-specific bodies RBOs	CG	Yes	Yes

Note: CG (Central Government), SNG (Sub-national government), RBO (River Basin Organisation), NGO (Non-Governmental Organisation).

56. **In general, both municipal and regional authorities are well positioned to develop policy and programmatic solutions that best meet specific geographic, climatic, economic and cultural conditions.** They are equally well placed to develop innovative policy solutions that can be scaled up into regional or national programmes, or to provide a laboratory for national pilot programmes on the urban level. Local governments respond to a variety of water policy goals that aim to: i) reduce water consumption; ii) reduce energy demand of water delivery systems; iii) prevent water system infiltration (into sanitary sewer systems) of groundwater due to flooding; and iv) prevent disruption to the water system due to drought. In addition, local governments and their “street-level bureaucrats” provide a direct contact point for residents on questions of water conservation. In this sense, they have a greater ability to adjust policies to adapt to changing behaviour and are more likely to influence popular water habits than higher levels of government.

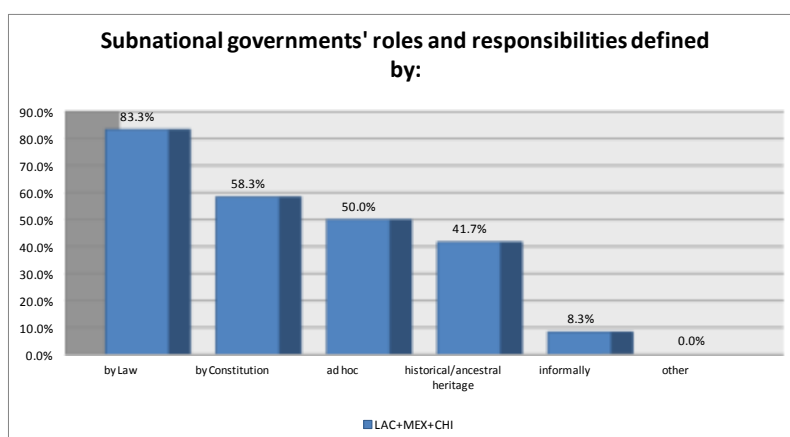
57. **Contrary to OECD countries (OECD, 2011), not all LAC countries surveyed involve sub-national governments in water policy design.** Whilst local and regional actors play a joint role with central government authorities in many countries (Argentina, Brazil, Guatemala, Honduras, Mexico, Nicaragua and Peru), their contribution is almost nonexistent in the Caribbean islands (Dominican Republic, Cuba) and Costa Rica.

*Modalities for defining roles and responsibilities at the sub-national level*

58. **In most LAC countries surveyed (83%) the allocation of roles and responsibilities at the sub-national level is primarily defined by a specific law dedicated to water, with a range of practices that vary from one country to another.** While each Argentinean province has its own set of laws outlining water roles and responsibilities, most LAC countries resorted to a National Water Law to allocate roles and competences in water to lower levels of government (need for a box with examples of national laws/countries). More than half LAC countries surveyed have also enshrined sub-national responsibilities in the water sector in their constitutional arrangements. Finally, some countries have *ad hoc* mechanisms outside legislative frameworks for allocating responsibilities at the sub-national government level. For instance, in Mexico, there are villages where daily simple or complex activities of communities, such as

the organisation of drinking water assemblies that do not fall under the jurisdiction of municipalities, are subject to customary law. Latin American countries also count with a specific water court. The Latin America water tribunal is indeed an autonomous, independent and international organization of environmental justice created to contribute in the solution of water related conflicts in Latin America. It is an ethical institution committed to preserving the water and to guaranteeing its access as a human right for current and future generations, but also a justice setting for searching solutions to the water conflicts, in addition to those efforts made by Latin-American citizens before other judicial and administrative institutions for the preservation of the environment and the water protection.<sup>7</sup>

**Figure 5. Sub-national governments' roles and responsibilities**



*Overall involvement of sub-national actors in water policy design and implementation*

59. Two categories can be distinguished with respect to the allocation of responsibilities to sub-national actors in water policy making: a first category of countries local and regional authorities play an important role in the design and implementation of water policies together with the central government; and, a second category of countries where sub-national governments' role in water policy making is either restricted to implementation only or non-existent. Contrary to OECD countries, there is no such category of country where local and regional authorities are the main actors in water resources management and service delivery because of highly decentralised setting (e.g. Canada, United States, and Belgium).

**Table 5. Involvement of sub-national actors in water policy design and implementation**

Level of involvement	Examples
Joint role with central government	Argentina, Brazil, Guatemala, Honduras, Mexico, Nicaragua, Peru
Main role: implementer	Chile, Costa Rica, Panama, El Salvador, Dominican Republic, Cuba

7. For additional information: [Latin American Water Tribunal Official website](#).

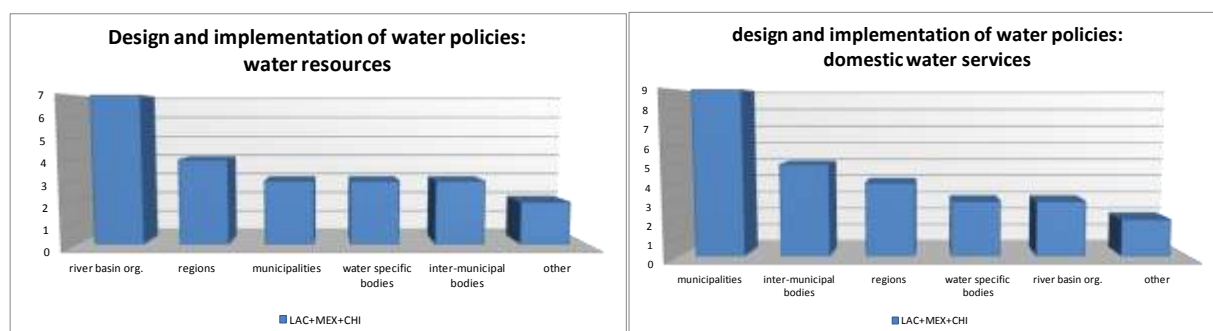


*Other actors involved in water policy at the sub-national level*

60. **Beyond sub-national governments, several LAC countries have involved other types of actors in policy design and implementation at the territorial level, mainly water users' associations and river basin organisations.** Water users' associations usually consist of groups such as irrigators, who pool their financial, technical, material and human resources to operate and maintain a water system. A Water Users' Association (WUA) often elects leaders, handles disputes internally, collects fees and carries out maintenance. In most areas, WUA membership depends on relationship to a water source (such as groundwater or a canal). Water user associations are widespread, but in some cases they are active only in specific areas (e.g. rural areas). In addition, where they exist, river basin organisations and water-specific bodies also play a significant role in water policy implementation at the territorial level. Examples can be found in several LAC countries (see chapter 3 on co-ordination mechanisms)

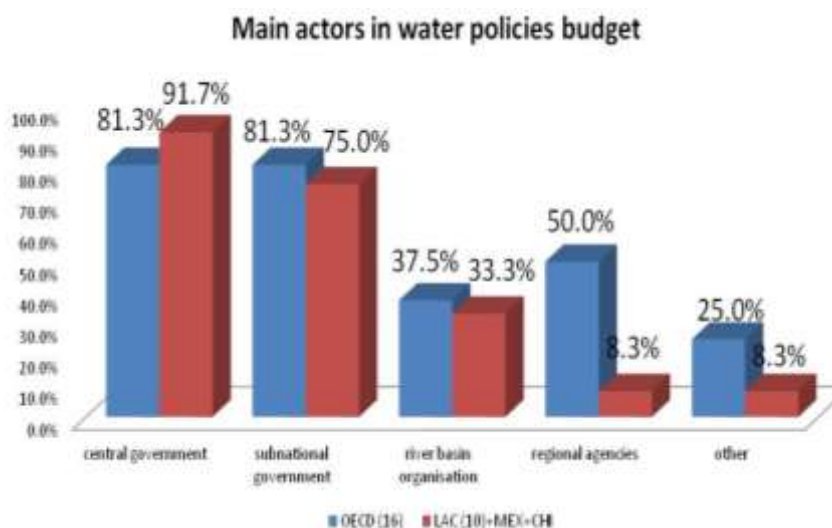
*Sub-national actors in water policy at the territorial level*

**Figure 6. Design and implementation of water policies: water resources and domestic water services**



61. **A closer look at the prerogatives of sub-national actors involved in water policy making, in the countries where they play an important role, reveals common trends.** As regards water resources management (and this is also true for water services for agricultural users), river basin authorities are the primary sub-national authority responsible for (co-)designing and implementing policies in half of the LAC countries surveyed. The second type of sub-national authority involved is the region, followed by water-specific bodies such as “regional water authorities in Chile, as well as municipalities and inter-municipal bodies. As for water services and specifically drinking water for domestic use, in two-thirds of LAC countries surveyed (9 out of 13) municipalities are the primary sub-national authorities in charge of (co-)designing and/or implementing policies. They are followed by regions and inter-municipal bodies. The trend is similar in the areas of water supply to industrial users and wastewater treatment. As water is a local resource with strong territorial characteristics, the explanation for sub-national actors' involvement lays mainly in theories related to local public goods, and the need for decentralised mechanisms to achieve optimal allocation. But in practice, the implementation of such an optimal water allocation scheme varies widely across countries and rarely involves a full delegation of responsibility to lower levels of government. Water management is generally a shared responsibility across levels of government.

Figure 7. Actors involved in water policy budgets



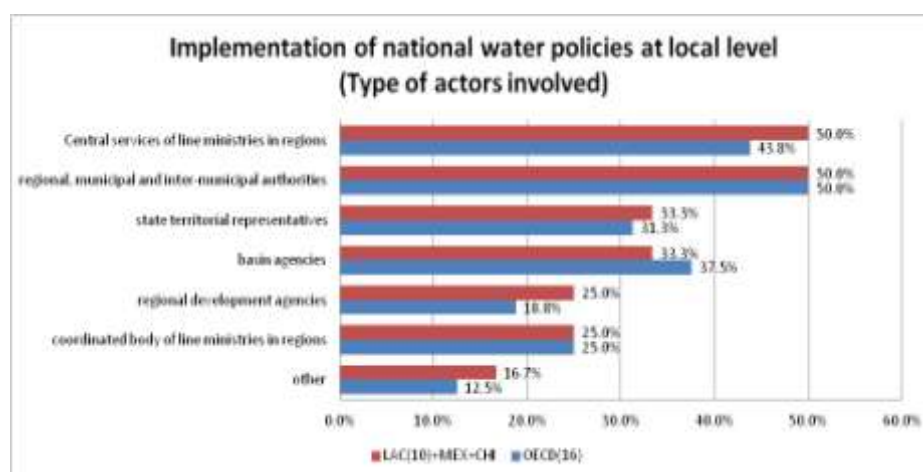
62. **Actors involved in water policy budget are similar in LAC and OECD countries.** In most LAC countries surveyed (91.7%) central government is the main actor in water policy budget, followed closely by sub-national governments (75%) and river basin organisations (33%). Sub-national governments involved in water financing include a wide variety of authorities, ranging from local and regional offices of deconcentrated bodies (e.g. CONAGUA in Mexico) to regional water authorities in Chile, provinces in Argentina. The involvement of the central government in water policy budgets is very high in most LAC countries. In Mexico for example, the contribution of the federal government takes the form of transfers via federal programmes to lower levels of government (mainly state governments). Besides, in the case of CONAGUA, the Mexican national water commission, additional federal resources are allocated to specific programmes such as PROMAGUA (by the FONADIN, the national fund for infrastructure, and PRODDER (*Programa de Devolución de Derechos*), a programme based on the payment of fees for the use and exploitation of national water resources by service operators. In 2008, investments from the Mexican federal government in the water sector were estimated at MXN 13.9 million, of which MXN 12.3 million were allocated to CONAGUA.

63. **In half of LAC countries surveyed, deconcentrated bodies at territorial level, regions, municipalities and inter-municipal bodies are the primary actors in charge of implementing central government policies at the sub-national level.**

64. **To summarise, despite the diversity of situations at the sub-national level governing the implementation of water policies designed by the central government, two categories of countries can be distinguished.** A first category includes countries where implementation of water policies at the sub-national level essentially relies on a single type of actor, i.e. representatives of central government in regions; and a second category includes countries with a combination of several sub-national authorities' responsibilities in the implementation stage. As table 6 shows, the first category includes rather centralised countries whilst the second one comprises federal states (Argentina, Brazil and Mexico) as well as large and less centralised countries (Peru). The institutional organisation of water policy is thus linked to the broader constitutional context of the country as well as its geo-physical characteristics.

**Figure 8. Implementation of national water policies at local level**

(Type of actors involved)



**Table 6. Implementation of central government water policies at the territorial level**

Responsibility for Implementation	Examples
A few types of actors, mainly state territorial representatives or deconcentrated bodies/services	Chile, Dominican Republic, El Salvador, Nicaragua, Costa Rica, Cuba
A multiplicity of actors, municipalities, inter-municipal bodies, regions RBOs, etc.	Argentina, Brazil, Mexico, Guatemala, Panama, Peru

### 3.4. Main conclusions from LAC countries institutional organisation of water policy

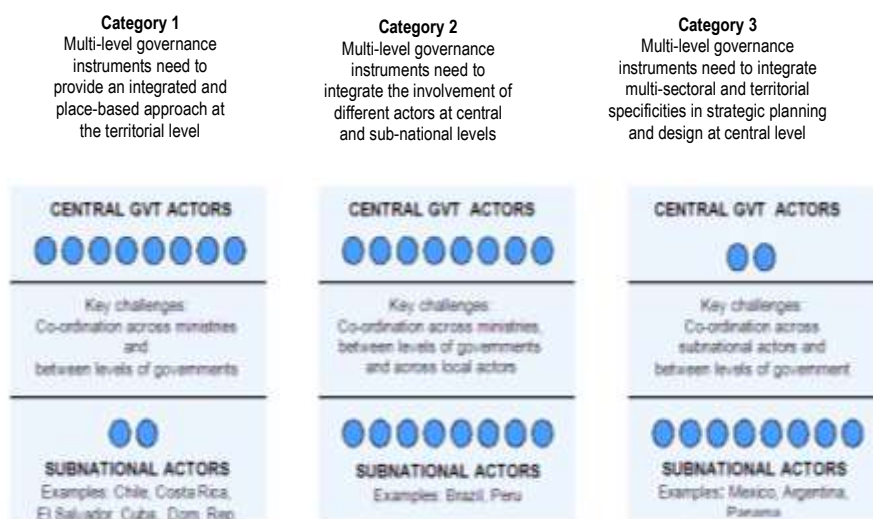
65. **No master plan exists for assigning competences across ministries and levels of government in the water sector, but common trends across countries can be noted.** Environmental responsibilities are often managed at the local level, which raises co-ordination and capacity challenges across local actors and between levels of government. While no hard and fast rules can be applied, municipalities are generally responsible for providing and managing service delivery (water and wastewater), while higher-tier local governments (e.g. regions, provinces) are responsible for competences associated with resources management. A holistic approach is called for in designing the institutional mapping, because some roles and responsibilities can complement with or neutralise each other at central and sub-national levels.

66. **No systematic correlation can be drawn between a given country's institutional organisation (unitary versus federal) and the institutional mapping of water policy.** There is a diversity of situations across LAC federal and unitary states in terms of the institutional organisation of water policy. On the one hand, some federal countries (Argentina, Brazil, Mexico) have delegated many water responsibilities to lower levels of government, but on the other hand, contrary to what happens in most OECD federal states (Belgium, United States, Canada) the central government in LAC countries still plays a very strong role (e.g. strategic planning, regulation, etc.) in ongoing water policy reforms, not only in terms of design but also at implementation levels given limited sub-national resources and capacities. In addition, while the Caribbean islands and Costa Rica still retain significant water responsibilities at central government level with highly centralised water policy making (Costa Rica, Cuba, Dominican Republic), most LAC unitary states (Chile, Peru, Guatemala, Nicaragua) have *de facto* delegated many responsibilities to lower levels of government.

67. **River basin organisations have been set up in half of LAC countries surveyed, federal and unitary countries alike, depending on institutional factors, hydrological considerations and international incentives or regulations.** All the federal countries surveyed (Brazil, Argentina, Mexico) have created river basin organisations, but more detailed study of these experiences reveals a diversity of situations, which reflect the varying degrees of “maturity of decentralisation” in water policy making. Indeed, Argentina seems to be a pioneer country in river basin management in LAC region, some federal states have only recently moved in this direction (Mexico).

68. **Based on the comparison of the allocation of roles and responsibilities at central and sub-national level in a series of OECD countries, the following diagrams tentatively define three models of water policy organisation.** These models raise different governance challenges related to the frequent “trade-off of decentralisation” i.e. the need to manage the relationship between diversity – to customise water policy according to territorial specificities – and coherence, i.e. the need to adopt a holistic and integrated approach to water policy. These models are not intended as normative in the sense that one would be better than the other, but they highlight different co-ordination challenges raised by a given institutional organisation of water policy even if – within a given category – the degree to which governance challenges have an impact on the performance of water policy may vary from one country to another. In most cases, countries have developed a series of mechanisms to address institutional challenges mentioned below. In addition to outlining the challenges to co-ordination, they could be enriched by adding other dimensions (e.g. capacity gaps, variety of tools in use, etc.), to produce a more elaborate matrix linking each model with policy objectives and desired outcomes. This would support the hypothesis that regardless of the model adopted (which is often dependent on institutional legacy and not always under government control), the same policy goals can be achieved with a combination of different governance instruments.

**Figure 9. Tentative categories based on the allocation of roles and responsibilities in water policy**



69. **It is widely acknowledged that fragmentation of administrative and legal water frameworks should be avoided.** To do so, detailed roadmaps should be defined for each step, from the definition of water policy objectives, constraints and outcomes in general, to standards and tariff setting and subsidies allocation, risk analysis and distribution, as well as the identification of legal and institutional frameworks. In practice, the multiplicity of actors across ministries and public agencies, between levels of government and at the sub-national level intrinsically raises multi-level governance challenges. At central government level, there is a wide diversity of policy areas related to water policy making (e.g. energy, agriculture, territorial development, health, public works/infrastructure, economy, finance, etc.). Because of the sectoral fragmentation of water-related tasks across ministries and public agencies, policy makers constantly face conflicting objectives and the temptation of retreating into silo approaches. At sub-national government level, a diversity of “local” actors are involved in water policy making (municipalities, intermunicipal bodies, regions, river basin authorities, regional development agencies, water users’ associations, etc.). This may generate obstacles in managing the interface between different local actors and building capacity at the sub-national level. Finally, because many LAC countries have decentralised or are in the process of decentralising their water policy making, joint action is required between central government and sub-national actors in the design, regulation and implementation stages of water policy. This requires overcoming obstacles related to co-ordination across levels of government. The following section introduces such challenges, through the *OECD Multi-level Governance Framework*, for diagnosing capacity and co-ordination “gaps” in water policy.

#### 4. Multi-level governance challenges in LAC water sector

70. **This section aims to identify the main obstacles preventing the design and implementation of integrated and coherent water policies in LAC countries.** Taking a closer look at the interplay between the different *public* actors involved in water policy making, the chapter proposes a tentative taxonomy of the main governance challenges, based on selected indicators and data collection from the OECD survey on water governance. Detailed horizontal and vertical co-ordination challenges for 13 LAC countries are synthesised in the country profiles attached to this report.

##### 4.1. Methodology for evaluating governance challenges in OECD countries’ water policy making

71. **Whilst there is a global acknowledgement that institutions “matter” in the water sector and that good governance is a key condition for success, little research has been undertaken to try to “measure” the level of fragmentation and related governance challenges experienced by countries when designing and implementing water policies, in a non-prescriptive way.** Taking stock of existing principles, guidelines, indicators, indexes and checklists for good governance in the water sector, the OECD has designed a “reading template” that identifies seven common multi-level governance “gaps”. These are used to assess, based on selected proxies, the relative importance of the different multi-level governance challenges in the water sectors of 17 OECD countries (OECD, 2011). This chapter uses the same framework, to appraise the level of territorial and institutional fragmentation in the 13 LAC countries covered by this study. The overall objective is neither to rank countries nor to determine an optimal model of governance, but rather to identify categories of countries facing similar challenges in order to facilitate peer-review dialogues and to learn from experiences within the LAC region when seeking appropriate policy responses.

72. **The assessment of LAC countries’ water multi-level governance challenges proposed in this section is based on the OECD Multi-level Governance Framework and data collection from the 2010 OECD Survey on water governance.** In the 13 countries surveyed, respondents from central administrations (most often from water directorates) were asked to rank a series of water governance challenges from 1 (not important) to 3 (very important), according to a set of indicators attempting to illustrate each of the multi-level governance gaps. Though several elements contribute to the 7 broad

governance challenges previously described, one proxy indicator per gap has been selected to facilitate the analysis. Table 7 summarises the main proxy indicators that were selected for the different gaps in order to design categories of water governance challenges in LAC countries.

**Table 7. Proxies for measuring multi-level governance gaps in water policy**

<b>Multi-level governance gaps</b>	<b>Proxy indicator</b>
Policy gap	Overlapping, unclear allocation of roles and responsibilities
Administrative gap	Mismatch between hydrological and administrative boundaries
Information gap	Asymmetries of information between central and sub-national governments
Capacity gap	Lack of technical capacity, staff, time, knowledge and infrastructure
Funding gap	Unstable or insufficient revenues of sub-national governments to effectively implement water policies
Objective gap	Intensive competition between different ministries
Accountability gap	Lack of citizen concern about water policy and low involvement of water users' associations

73. **The assessment of each gap is based on a single proxy indicator, considered likely to raise co-ordination challenges.** In practice, such an evaluation should also be complemented by other criteria and factual data.

- Respondents' perceptions of a mismatch between hydrological and administrative boundaries is a key element for evaluating the *administrative gap*, but additional elements should also be considered, such as the type and number of sub-national governments involved in design, regulation and implementation of water policies.
- While the perception of overlapping, unclear or non-existent allocation of responsibilities is crucial to measure the *policy gap*, other types of information are also enlightening. These include processes for defining the allocation of roles and the type and number of central government authorities involved in water policy design, regulation and implementation.
- Regarding the *funding gap*, respondents' opinions on the impact of unstable or insufficient revenues of sub-national governments on the implementation of water policies is an interesting indicator. A closer look at the types of actors (central, sub-national) involved in water policy budgets is also critical.
- Respondents' opinions on the impact of the lack of citizens' involvement on water policy implementation is clearly relevant for measuring the *accountability gap*, which in addition can also be approached via the interference of lobbies in water policies.
- A final example is the *objective gap*, which is measured here by respondents' opinions on the intensive competition between different ministries, but could also be approached by the possible contradiction between the national organisation and supranational recommendations and directives.

#### 4.2. A tentative classification of LAC countries' multi-level governance challenges in water policy

74. **Table 8 provides an overview of where multi-level governance co-ordination gaps appear to be important or very important in LAC region, based on responses to the 2010 Survey on Water Governance.** The objective is to produce “stylised features” that are analysed in the light of existing co-ordination tools, allowing for a customisation and integration of water policy.

75. **The degree to which effective co-ordination and implementation of integrated water policy may be hindered by multi-level governance gaps varies in LAC region, but common challenges have been identified.** A closer look at each of these gaps is provided in order of importance, starting with the *policy gap*, which was considered as the most important one by countries surveyed (12 out of 13), followed by the *accountability gap* (11 out of 13) and the *funding gap* (10 out of 13) .

**Table 8. Key multi-level governance challenges in LAC countries' water policy making**

« Important » or « very important » gap	No. of countries	Examples
Policy gap	12 out of 12	Argentina, Brazil, Chile, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru
Accountability gap	11 out of 12	Argentina, Brazil, Chile, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru
Funding gap	10 out of 12	Argentina, Chile, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru
Capacity gap	9 out of 12	Chile, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru
Information gap	9 out of 12	Argentina, Brazil, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Peru
Administrative gap	6 out of 12	Peru, Honduras, El Salvador, Brazil, Nicaragua, Guatemala
Objective gap	4 out of 12	Costa Rica, Guatemala, Honduras, Nicaragua

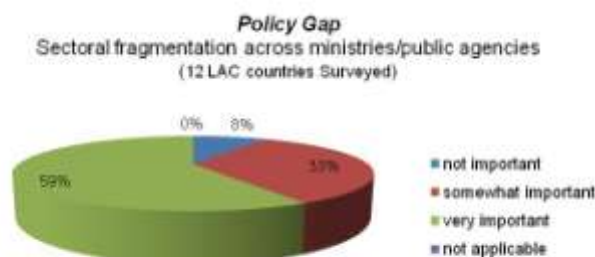
Note: Only 12 LAC countries were taken into account since Cuba did not answer.

#### *The policy gap*

76. **Almost all LAC countries surveyed pointed out the high impact of the over-fragmentation of roles and responsibilities on water policy implementation at the territorial level.** Sectoral fragmentation across ministries and between levels of government is indeed considered as an important or very important obstacle to integrated water policy in 92% of countries surveyed. Even if most LAC countries have set-up National Water Agencies (Mexico, Brazil, Peru, Panama, and Argentina etc.), the multiplicity of interlocutors at central level still impedes coherent water policy design and implementation on the ground and has significant impact on local and regional actors.

**Figure 10. Policy gap: Sectoral fragmentation across ministries/public agencies**

(12 LAC countries surveyed)



77. **Water policy coherence is highly dependent on the design of institutions and the allocation of roles and responsibilities at central and sub-national levels.** But, most of the time, countries experience a *policy gap* because water responsibilities are scattered across several ministries. These can range from the ministry of the environment, to agriculture, health, fisheries, industry, finance, transport, public works, rural development, infrastructure, housing, spatial planning, etc. These policy areas relate to different organisational cultures and have different constituencies (farmers, trade unions, voters, private companies, etc.), as well as different degrees of sensitivity to lobbies. Unless co-ordination is encouraged, this multiplicity of actors is likely to favour segmented working methods and complicate decision-making processes even further. Narrow sectoral perspectives and silo approaches then prevail, instead of cross-cutting agendas tailored to specific issues. Setting up a comprehensive “institutional map” that clearly identifies *who does what* in terms of managing water resources and services is therefore key for identifying possible overlaps or “grey areas” in water policy.

78. **A series of indicators can explain the causes of the policy gap and its impact on effective co-ordination and implementation of water policy in LAC region.** Such indicators are described in the following table, which also lists LAC countries, considering them as important or very important obstacles to effective co-ordination and implementation of water policies at the horizontal level. As table 9 shows, the first three explanatory factors relating to the *policy gap* are the lack of national level political leadership and commitment in water policy, the absence of strategic planning and sequencing of decisions and the problematic implementation of central government policies at local and regional levels. On the latter point, in Chile for example, the absence of strategic planning and a common frame of reference for water policy, especially in terms of property rights, is problematic and requires permanent consensus across ministries and agencies. In addition, two additional obstacles to effective co-ordination at central government level (Figure 11) are the absence of monitoring and evaluation of water policy outcomes, and the lack of staff and time. In Brazil for example, there is no co-ordination, regulatory framework nor integrated planning among the several ministries and agencies whose actions are related to water resources. Thus, actions are often disarticulated, especially in terms of infrastructure investments.

79. **Difficulties in implementing central government decisions at local and regional levels create tensions between ministries with conflicting interests at sub-national level and calls for a customisation of water policy at the territorial level.** For example in Mexico, the programmes of the National Water Commission (CONAGUA) seek to respond to increasing water demand from the different users, especially those that have fewer water resources. But there is a general acknowledgement of the need for a co-ordination agreement or convention between state and federal governments to encourage decentralisation of hydrological programmes. No real co-ordination exists at central government level to match up the actions of public agencies and demands from civil society, especially in terms of water resources and environmental protection. A lack of dialogue at national level as well as a lack of consensus

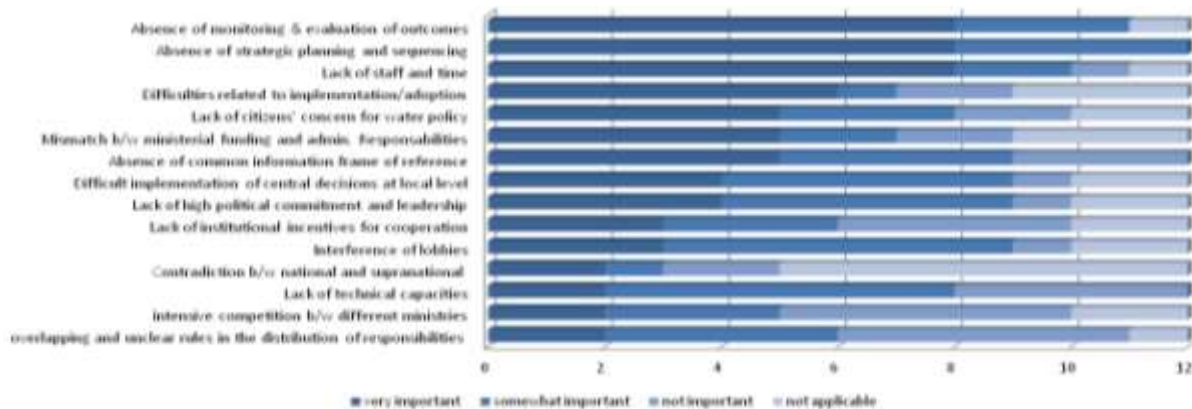


on water tariffs (metering, full-cost recovery, etc.) and strong political commitment at all levels, make it a challenge to design sustainable and financially viable water policies. The Mexican *2030 Water Agenda* launched in 2011 in Mexico is a starting point to meet these challenges. In the Dominican Republic, institutions' budgets depend on the *Ministry of Housing* or other central government bodies' decisions. Budget gaps and the difficult implementation of a pluri-annual budget programme and planning are pointed out as important obstacles. The implementation of the different water projects is not necessarily co-ordinated across administrative bodies (according to water availability in the river basins for example) but rather work on a case-by-case basis. Projects are improvised, approved and financed without any water resources management strategy. This represents a challenge to overcome and overlaps across administrative bodies, in particular for fluvial regulation utilities and water storage projects, need to be tackled. A significant obstacle to effective co-ordination in Guatemala is the disconnect between top-down designed policies and their implementation. The Water Specific Office (GEA) is the line authority, but many operational technical levels are neither managed nor assessed and therefore do not follow national policies, but rather sub-levels engineers/technical recommendations. Many decisions are taken by Ministries' departments or the Vice-Minister without any co-ordination with the GEA.

**Table 9. Indicators to measure the policy gap in the water sector**

<b>Main obstacles to horizontal co-ordination of water policies</b>	<b>No. of countries</b>	<b>Examples of countries</b>
Problematic implementation of central government decisions at local and regional level	10	Brazil, Chile, Costa Rica, Dominican Republic, Guatemala, Honduras, Mexico, Nicaragua, Panama Peru
Lack of national-level political commitment and leadership in water policy	10	Brazil, Chile, Costa Rica, Dominican Republic, El Salvador, Honduras, Mexico, Nicaragua, Panama, Peru
Absence of strategic planning and sequencing decision	10	Argentina, Brazil, Chile, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru
Interference of lobbies	8	Argentina, Brazil, Chile, Costa Rica, El Salvador, Honduras, Nicaragua, Panama
Lack if institutional incentives for co-operation (objectives, indicators)	7	Argentina, Brazil, Guatemala, Honduras, Mexico, Panama, Peru
Overlapping, unclear, non-existing allocation of responsibilities	7	Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Peru
Difficulties related to implementation of/ adaptation to recent reforms	7	Chile, Costa Rica, Guatemala, Honduras, Nicaragua, Panama, Peru
Competition between different ministries (political rivalries)	4	Costa Rica, Guatemala, Honduras, Nicaragua

Figure 11. Obstacles to effective co-ordination at central government level

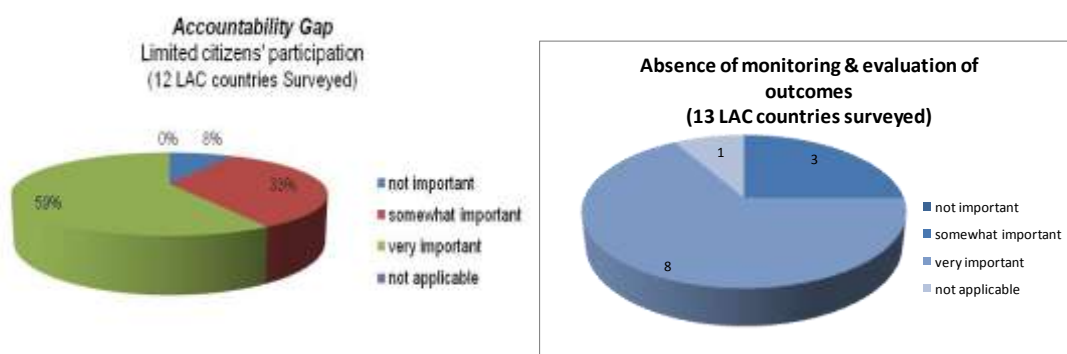


80. **LAC countries also pointed out a series of obstacles to co-ordinating water with other policy areas.** The integration of water and regional development policies for example, presents several major challenges because of the absence of common database and information systems, the lack of monitoring mechanisms, or performance indicators, the confusing allocation of roles and the lack of cooperation between the agencies engaged in these sectors. For the water-energy nexus, as for the co-ordination between water and agriculture policies, the major challenge lays in the mismatch between ministerial funding and administrative responsibilities. Indeed, as central agencies seem to define missions and objectives but do not invest the necessary means to achieve them, little co-ordination is possible between these policy areas. In addition, intensive competition between different ministries is common in water, energy and agricultural policies co-ordination in several LAC countries. In Chile for example, water policies in the agricultural sector are designed by two separate ministries with different interests: the *Ministry of Public Works*, through its Office of Water Infrastructures (dams, irrigation etc.) and the *Ministry of Agriculture's National Irrigation Commission*, which main constituencies are farmers and local irrigation organizations' member, both strong lobbyists. Last but not least, unclear allocation of roles and a lack of institutional incentives for co-operation are also cited as common concerns for both water-energy and water-agricultural policies coherence.

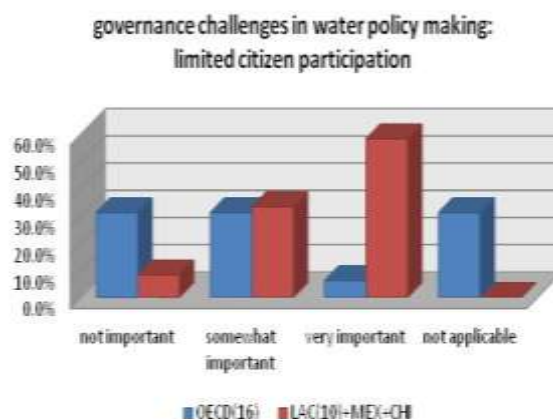
*The accountability gap*

81. **The accountability gap is likewise considered an important obstacle to inclusive water policy in more than 90% of LAC countries surveyed.** Generally, the main issues relate to a lack of public concern and low involvement of water users' associations in policy making. Indeed, limited citizens' participation was pointed out as an important gap in more than two-thirds of countries surveyed. But challenges related to the evaluation of water policies at central and sub-national level are also crucial to approach the *accountability gap*. Inadequate monitoring, reporting, sharing and dissemination of water policy performance also prevent policy coherence at horizontal and vertical levels. Periodic assessment of progress toward established policy goals is vital for understanding whether the applied efforts are effective and for adjusting policy where necessary. But feasibility is often limited due to considerations of political, financial and capacity, and this complicates the implementation of central government decisions at the sub-national level. In the absence of monitoring and evaluation of water policy outcomes were considered important obstacles to water policy implementation at the territorial level in almost all LAC countries surveyed (11 out of 13).

**Figure 12. Accountability gap: limited citizens' participation and absence of monitoring and evaluation of outcomes**



**Figure 13. Governance challenges in water policy making: limited citizen participation**



*The funding gap*

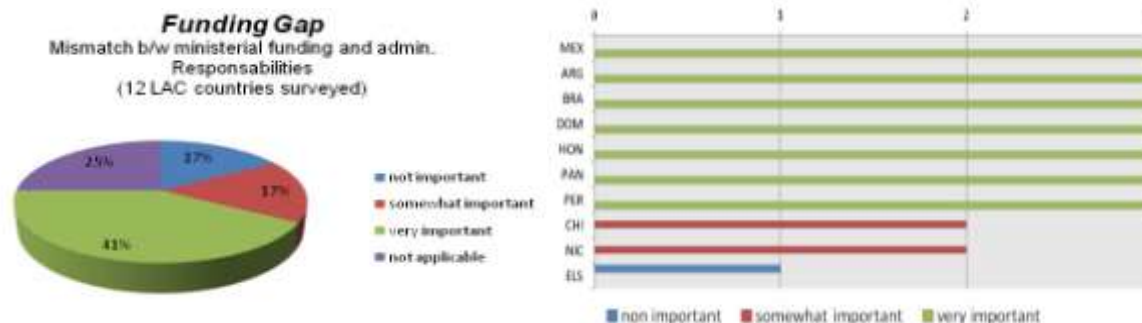
82. **Interestingly the funding gap, though important, was not considered the principal obstacle to integrated water policy in LAC countries.** Nevertheless, the mismatch between ministerial funding and administrative responsibilities is still a significant challenge in 58% of countries surveyed. The absence of stable and sufficient revenues of sub-national actors is indeed an important challenge for coordinating water policy between levels of government and for building capacity at the sub-national level. A more detailed analysis of this topic would require a clear separation between the different water cycles (services, ecosystems and natural resources), since they do not raise the same financing challenges. But in cases (water resources and services), identifying and assessing financial mechanisms for sustainable water policies is critical. Well-functioning institutions underpin increased and more effective investments in water development, hence the importance of the governance-financing nexus. Poor institutions constitute amplified investment risk and affect the competitiveness of countries in global markets. Sustainable water management (and cost recovery) can only be achieved through stable policy and regulation, institutions with clear responsibilities, co-ordination of national, local and “outside water box” actors (multi-level governance).

83. **Decentralisation has impacts on access to and cost of funding and investment programmes need to be based on long-term strategy, achievable targets, realistic goals, and appropriate governance tools.** The water crisis is widely recognised as a complex interaction of multiple causes and effects. At its core, governance deficit, mismanagement and under-financing play a major role, inducing and reinforcing each other. In many developing countries, despite the flow of funding in the form of ODA, loans or otherwise, governments struggle and usually fail to meet the financial requirements that water-related strategies and plans entail. The lack of basic elements of a sound governance framework in many of the countries, including absorption capacity at both national and local levels, impedes the efficient use of available funding and the mobilisation of much needed additional sources of finance, particularly from the private sector.

84. **In addition to co-ordination between levels of government, the funding (or fiscal) gap can also hinder co-ordination across ministries, thus affecting implementation of water policies.** Asymmetries of revenue and funding are also likely to undermine the co-ordination of water policies across ministries and public agencies. A ministry with a higher budget will have more ability to tilt policy towards its own agenda, which may be problematic if that agenda is not coherent with that of the other ministry. Often, ministries of finance and economy are not directly involved in making decisions during water policy reforms, which can raise implementation challenges at a later stage. The finance arrangements of ministries may hinder the adoption of more coherent policies.

**Figure 14. Funding gap: mismatch between ministerial funding and administrative responsibilities**

(12 LAC countries surveyed)



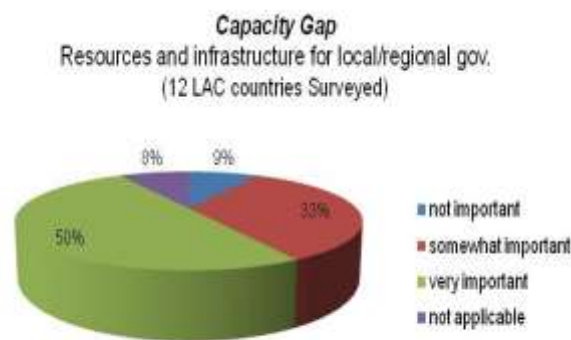
*The capacity gap*

85. **The “capacity gap” was pointed out as a major obstacle for effective implementation of water policy in two-thirds of LAC countries surveyed.** This refers not only to the technical knowledge and expertise, but also to the lack of staff (at central and sub-central levels) as well as obsolete infrastructure. In addition, the new technologies and innovative water processes introduced in response to cost-effectiveness objectives, water scarcity and climate change (desalination, nanotechnologies, spatial technologies, recycling of water use, etc.) require transfers of know-how at the sub-national level, especially when service delivery is not managed by the private sector. More generally, in LAC countries, some skill sets are in good supply (e.g. mechanical engineering) while others may still be in need of reinforcement (e.g. planning, hydrology, climatology, financing) to implement integrated management.

86. **In many LAC countries, the lack of expertise and competent staff is a major threat to the implementation of the water reform agenda.** In Honduras, one of the main difficulties for co-ordination at central level is the lack of sustainable water resources policies, projects, strategies and actions due to the fact that there is not any stability in the water sector’s workforce. Each new government hires a new staff, which often lacks adequate capacities and requires time achieve some continuity with the previous processes. Nowadays, water managers deal with a wider range of issues than in the past, and catchments have been subject to more modification and are more ecologically fragile than they used to be. Discrepancies in knowledge, information, technical expertise and enforcement capacity across ministries and between levels of government can create obstacles to integrated water policy as Figures 15 and 16 show.

**Figure 15. Capacity gap: resources and infrastructure for local/regional governance**

(12 LAC countries surveyed)



**Figure 16. Obstacles to vertical co-ordination: insufficient knowledge/infrastructure**

(12 LAC countries surveyed)

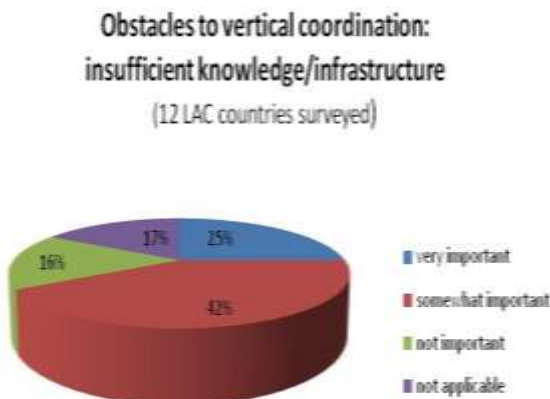
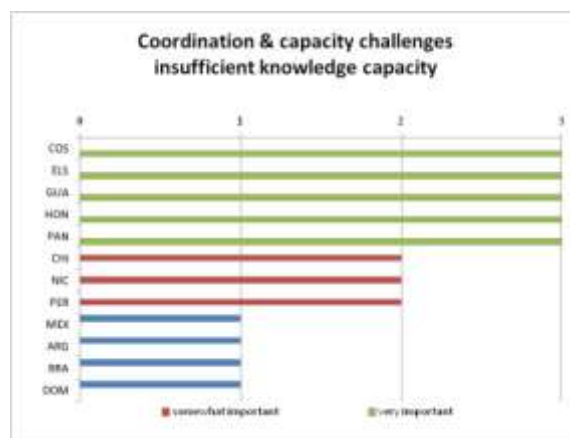


Figure 17. Co-ordination and capacity challenges: insufficient knowledge capacity



87. **In several LAC countries, capacity challenges have been exacerbated by the decentralisation processes in the early 1990s.** More generally, countries willing to decentralise their water policy face a fundamental sequencing question: at what point is the sub-national level ready or sufficiently mature to assume responsibilities associated with devolved or decentralised tasks in water policy making? Will learning by doing be sufficient, or is it essential to build capacity before it is possible to properly deliver on assigned competences? There is no right or wrong answer to these questions. Capacity development needs vary with the pre-existing levels of administrative infrastructure. Established sub-national governments with well-developed institutions may need little capacity building when faced with new responsibilities. But where sub-national governments or related institutions must be created or have historically had a limited role, the difficulties will be greater.

88. **In focusing on capacity-building needs, one may recall the guidance in the Dublin Statement on water and sustainable development.**<sup>8</sup> It invites countries to identify, as part of their national development plans, training needs for water resources and management. It also suggests they take steps internally, if necessary with technical co-operation agencies, to provide the required training and working conditions to retain trained personnel. The statement notes that governments must assess their own capacity to equip their water and other specialists to implement the full range of activities for integrated water resources management. This requires providing an enabling environment, that is, institutional and legal arrangements for effective water-demand management. In addition, raising awareness is a vital part of a participatory approach to water resources management. Information, education and communication support programmes must be an integral part of the development process.

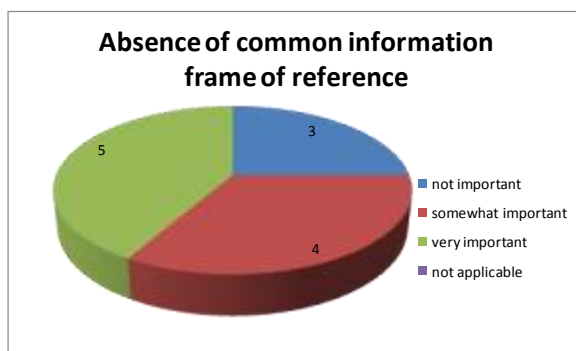
*The information gap*

89. **The information gap remains a prominent obstacle to effective water policy implementation in two-thirds of the LAC countries surveyed (9 out of 12).** In particular, adequate information generation and sharing among relevant actors as well as scattering and fragmentation of the generated primary water and environmental data are important bottlenecks across ministries, agencies and levels of government involved in water policy. In addition, substantive problems with data inhibit integrated water policies in

8. For the entire Dublin Statement on Water and Sustainable Development: [Dublin Statement on Water and Sustainable Development](#).

several ways (including jargon, a mix of terminologies, unclear definitions, overlapping meanings of terms related to water).

**Figure 18. Absence of a common information frame of reference**



*The administrative gap*

90. **The administrative gap is an important governance challenge for half LAC countries surveyed, despite the existence of river basin organisations.** Indeed, several countries pointed out the lack of fit between administrative zones and hydrological boundaries, even after creation of river basin organisations (Peru). Often, municipalities take only their own perspectives and plans in to account in executing their budgets, and the lack of an integrated approach and territorially customised water policy compromises the efficiency of budget execution. A closer look at the missions of river basin organisations in LAC shows that the lack of regulatory powers may explain the remaining mismatch between administrative and hydrological boundaries.

**Figure 19. Administrative gap: mismatch between hydro and administrative boundaries**

(12 LAC countries surveyed)

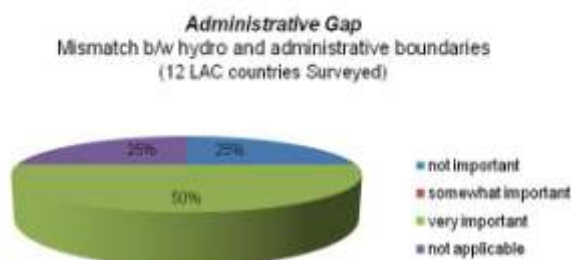


Figure 20. Basin agencies

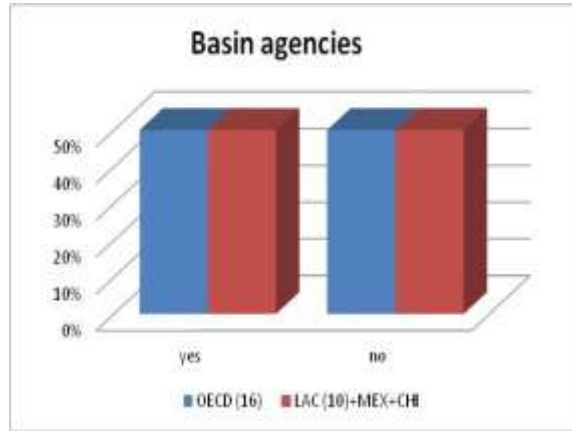
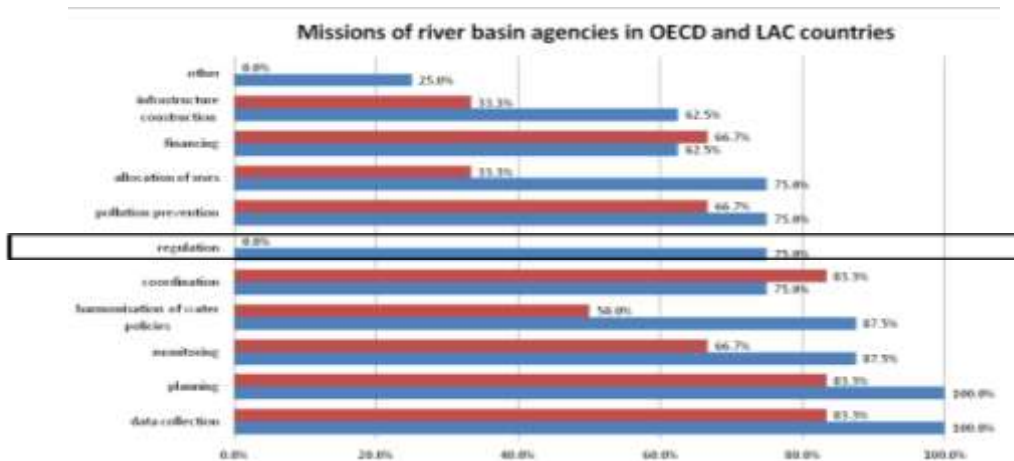


Figure 21. Missions of river basin agencies in OECD and LAC countries



*The objective gap*

91. LAC countries also experience an objective gap in striking a balance between the often conflicting objectives in financial, economic, social, environmental areas for collective enforcement of water policy. One significant example is the design of water-pricing policies, which is often complicated by the need to balance financial and social objectives. Historically, water has been significantly under-priced, so price increases can pose a political challenge. Conversely, if tariff structures are not properly designed with social considerations in mind, price increases may disproportionately affect poorer households. Policy coherence across sectors is therefore crucial, as regional development, land management, agriculture and even energy policies also affect water demand. In addition, water outcomes are often driven by decisions made in policy areas over which water managers have little or no say. For example, irrigation water users respond to water prices, but also to energy and output prices and to the support they receive from governments. Besides, agriculture is the largest consumer of water and source of water pollution. Support for agricultural production and subsidies for variable inputs continue to misalign incentives to farmers and aggravate overuse and pollution of water. In the context of climate change, the



water-energy nexus is also emerging as a critical policy area. The development of non-fossil fuel energy sources, such as hydropower and biofuels, has put serious pressure on water resources. Furthermore, the development of alternative water sources (such as desalination and reuse) consumes large quantities of energy; and water scarcity may force the closure of power plants that require fresh water for cooling. An *objective gap* can also occur between rural and urban areas, and upstream and downstream states. Such conflicting interests ineluctably undermine effective implementation of responsibilities at central government level in collective enforcement of water policies, especially when legislation is outdated.

92. **Water management cuts across many strategic directions and a lack of real recognition of conflicts between different government policies (e.g. energy and water) regularly creates difficulties for local and regional authorities.** A holistic perspective is therefore needed from the centre, which acknowledges the conflicts undermining successful water management and sets clearer direction in certain areas. In addition, the prospects of success are greater when the timeframe for one policy aligns with activities in another policy. In theory, time scales are relatively easy to co-ordinate. For instance, regulatory and budget cycles can be synchronised over time (e.g. multi-annual budgeting) so that decisions that require coherence can be taken independently of political calendars and agendas, which vary from one ministry to another. Strategic planning is more difficult to design if policies, legislation and institutions on the water environment are questioned from one government to another. It essentially requires a public relations effort to manage the expectations of those who have a vested interest in previous policies, so that they can be engaged in policy changes and build flexibility towards policy coherence at the central and local level.

### *Conclusion*

93. **The degree to which effective co-ordination and implementation of integrated water policy may be hindered by multi-level governance gaps varies widely across and within LAC countries, but common challenges have been identified.** The primary obstacle pointed out by almost all LAC countries surveyed is the *policy gap* (12 out of 13), followed by the accountability gap (11 out of 12) and the *funding gap* (10 out of 12). Information and capacity gaps are also crucial in two-thirds of LAC countries surveyed (9 out of 12), followed by the administrative gap (6 out of 12) and the objective gap (4 out of 12).

94. **Understanding multi-level governance challenges in water policy requires a holistic approach to co-ordination gaps because of the fact that they are interrelated and can exacerbate each other.** For instance, any country facing a sectoral fragmentation of water roles and responsibilities across ministries and public agencies (*policy gap*) may also suffer from the conflicting goals of these public actors (*objective gap*). Because of silo approaches, policy makers may not willingly share information (*information gap*). This in turn undermines capacity-building at the sub-national level (*capacity gap*) because local actors, users and private actors have to multiply their efforts to identify the right interlocutor in the central administration. Hence the need to identify the mutual interdependencies between different institutions involved in water policy making at local, regional and central levels. This implies recognising the impediments to effective co-ordination of public actors at the levels of administrative, funding, knowledge, infrastructural and policy levels, to address water information and data “gaps” and promote shared strategies for more effective water policies.

## 5. Multi-level co-ordination instruments for water policies: evidence from LAC region

95. **This section aims to identify the policy instruments used by governments to bridge multi-level governance gaps considered to be bottlenecks in the co-ordination and implementation of water policy.** A more in-depth focus on a series of instruments fostering horizontal co-ordination across ministries, horizontal co-ordination across local actors and vertical co-ordination between levels of government shows the variety of practices adopted by LAC countries for multi-level co-ordination of water policies and capacity-building at sub-national level.

96. **Encouraging co-ordination and capacity-building is a critical step toward bridging multi-level governance gaps in water policy.** Meeting water governance challenges calls for a mix of well-integrated policy measures. This can be difficult to achieve in a context of fragmented responsibilities among various public actors as decisions are made at different territorial levels (international, national, regional, municipal, basin, etc.). Greater policy coherence is called for, both horizontally and vertically, among different institutions. This does not mean uniformity, but an attempt to create synergies between customised approaches, and it requires mutually reinforcing actions across government, departments and agencies for achieving the agreed-upon policy objectives, defining long-term strategies and adapting them to different contexts. Transparency, flexibility, rapid adaptation to a changing environment, early warning of any incoherence and mechanisms for dialogue and solving disputes among different communities are all crucial ways of achieving integrated policy.

97. **To cope with multi-level governance challenges, LAC countries have adopted several co-ordination mechanisms.** Measuring the degree of performance of such governance tools or assessing their impact on the efficiency, equity and sustainability of water policy would require more in-depth and specific work at national, sub-national and basin levels. But by reviewing current governments' responses to previously identified challenges, this chapter provides the preliminary arguments for confronting tools and gaps. Further OECD work will be considered at a later stage, through policy dialogues with selected LAC countries, in order to start the discussion on the efficiency of these respective governance instruments and the extent to which they contribute to bridging the gaps.

### *5.1. Overview of governance instruments for managing mutual dependencies in the water sector*

98. Table 10 provides an overview of existing water policy co-ordination and capacity building tools in LAC countries, ranging from "hard" (legal arrangements, contracts, etc.) to "soft" mechanisms (voluntary industry agreements, stakeholders' information measures, consultations, etc.) and formal to informal ones. A more detailed view of their objectives, use and references in the different countries is available in the country profiles attached to this report.

**Table 10. Governance instruments for co-ordinating water policies at horizontal and vertical levels**

Upper horizontal co-ordination tools		
Gap(s) targeted	Tool	Examples of countries
Information gap Objective gap Policy gap	Multi-sectoral conferences between central government actors and between sub-national players	Argentina, Brazil, Chile, Cuba, Mexico, Panama, Peru
	Co-ordination group of experts	Argentina, Costa Rica, Cuba, Honduras, Mexico, Panama
	Inter-agency programmes	Argentina, Costa Rica, Dominican Republic, Guatemala, Mexico
	Inter-ministerial body or commission	Argentina, Chile, Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Mexico, Nicaragua, Panama, Peru
	<i>Ad hoc</i> high-level structure	Argentina, Brazil, Chile, Costa Rica, Guatemala, Mexico, Nicaragua, Panama, Peru
	Central agency	Argentina, Brazil, Chile, Costa Rica, Dominican Republic, Mexico, Panama, Peru
	Line ministry with specific water prerogatives	Brazil, Chile, Costa Rica, Dominican Republic, El Salvador, Honduras, Mexico, Nicaragua, Panama, Peru
	Ministry of water (exclusively)	Cuba, Nicaragua
Vertical and lower horizontal co-ordination tools		
Gap(s) targeted	Tool	Examples of countries
Administrative gap Capacity gap Funding gap Information gap Objective gap Policy gap	Water agency or river basin organisation	Argentina, Brazil, Cuba, Honduras, Mexico, Nicaragua, Peru
Accountability gap Funding gap Objective gap Policy gap	Regulations for sharing roles between levels of government	Argentina, Cuba, El Salvador, Mexico, Panama, Peru
Administrative gap Information gap Objective gap Policy gap	Co-ordination agency or commission	Brazil, Mexico

**Table 10. Governance instruments for co-ordinating water policies at horizontal and vertical levels (cont.)**

Vertical and lower horizontal co-ordination tools		
Gap(s) targeted	Tool	Examples of countries
Accountability gap Capacity gap Funding gap Information gap Objective gap Policy gap	Contractual arrangements	Argentina, Brazil, Chile, Cuba, El Salvador, Guatemala, Mexico
Accountability gap Capacity gap Funding gap Information gap	Financial transfers/funds	Chile, Cuba, Mexico
Accountability gap Capacity gap Funding gap Information gap	Performance indicators and experimentation at the territorial level	Cuba, Mexico, Panama, Peru
Information gap Capacity gap Objective gap Policy gap	Shared databases and water information systems	Argentina, Brazil, Cuba, Dominican Republic, Mexico, Panama, Peru
Administrative gap Capacity gap Funding gap Information gap Objective gap	Intermunicipal co-operation or specific bodies	Argentina, Brazil, Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua
Accountability gap Administrative gap Capacity gap Funding gap Information gap Objective gap Policy gap	Citizen engagement	Brazil, Chile, Costa Rica, Cuba, Dominican Republic, El Salvador, Honduras, Mexico, Nicaragua, Panama, Peru
Capacity gap Funding gap Information gap Objective gap	Private sector participation	Chile, Cuba, Dominican Republic, Mexico, Panama, Peru

*Tools for improving water governance: Main trends and features in LAC countries*

99. **There are several options for co-ordinating water policies – including within a given country – and incentives for adopting them proceed from a variety of parameters.** Co-ordination instruments across ministries, between levels of government and across local actors are more or less binding, more or less formal and more or less flexible. Most of them aim to create a framework for combining tools, funds and organisations or establishing a multi-stakeholder platform for dialogue for integrated water policy at all levels. Their creation relies on several factors, ranging from scarcity concerns, which is usually a driver for effective water management, to institutional mismatch or equity and efficiency objectives, even in developed and water-rich states.

100. **Each co-ordination mechanism can help bridge different gaps, and each specific gap may require the combination of several tools.** All LAC countries surveyed have set up some co-ordination mechanisms at horizontal level, but countries where sub-national actors play merely an “operational” role in water policy (Costa Rica, Cuba, Dominican Republic) have not necessarily adopted vertical co-ordination mechanisms. The following section offers closer scrutiny of a selection of tools, showing examples of countries and regions using them. However, the interaction between different governance instruments, as well as their performance in terms of co-ordination and capacity-building, can only be assessed holistically, within the framework of a policy dialogue and more in-depth approach at different territorial levels.

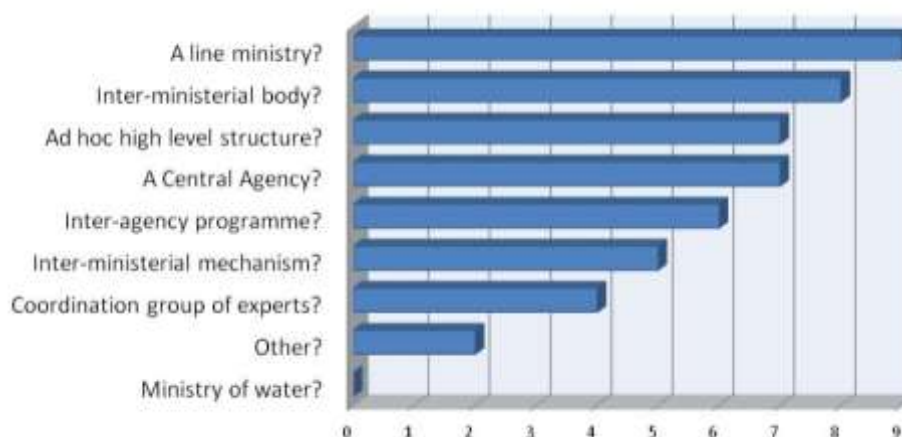
### 5.2. Institutional mechanisms for upper horizontal co-ordination of water policy

101. **Central governments willing to move away from a sectoral approach to water policies face the issue of how to organise their action to embrace an integrated perspective.** The distribution of water responsibilities among several national administrative bodies often results in a fragmentation of these functions and frequent conflicts in decision-making processes and resources distribution. A concerted effort is needed to encourage the various institutional and managerial systems that formulate and implement water policy to work together. Consistency is also needed to ensure that individual policies are not contradictory, and that they converge in a coherent strategy. This demands a strong political will to overcome silo tendencies, and to stimulate and co-ordinate formal agreements within the public administration.

102. **All LAC countries surveyed have co-ordination mechanisms at central government level, but none of them has created a ministry specifically and exclusively dedicated to water.** The water sector therefore differs from other policy areas such as health and energy, where there is frequently a specific ministry to ensure central co-ordination. Given the externalities of water on other policy areas, a totally clear-cut responsibility for water devoted exclusively to a “single actor” at central government level does not appear to be a panacea for co-ordinating water policy. Several countries have ministries that explicitly include “water” in their prerogatives, but also embrace other policy areas such as rural affairs or agriculture.

**Figure 22. Existing co-ordination mechanisms at central government level**

(13 LAC countries surveyed)



103. **The line ministry that has a specific responsibility for water is the first instrument adopted for ensuring interdepartmental and interministerial co-ordination in LAC countries.** In most cases, these have wide responsibilities over a broader set of areas than water policy. Positive implications in the concentration of different water-related responsibilities within the same line ministry include a more open, coherent view for water policies, the concentration of technical and administrative skills and the possibility for a more integrated programming approach. Examples of line ministries in water policy making can be classified into three main categories: a first category where water policies are encompassed within broader environmental issues; a second category where water policies are included with infrastructure and public works, and a third category where water policies are grouped with environmental challenges and specific rural concerns. This categorisation does not necessarily imply that the allocation of water responsibilities will generate a specific “sectoral” dominant of water policy, though the assumption can be made. Providing an adequate response to the needs of water policy therefore requires an association of the *how* (which ministry? which sector? which policy area) to the *what* (what price? what regulation?).

**Table 11. Categories of line ministries with a specialisation in water policy in LAC countries**

Categories of line ministries	Examples of countries
Water policy with broader environmental issues	Brazil: Ministry of Environment Costa Rica: Ministry of Environment, Energy and Telecommunications Dominican Republic: Ministry of Environment and Natural Resources El Salvador: Ministry of Environment and Natural Resources Honduras: Ministry of Natural Resources and the Environment Mexico: Ministry of Environment and Natural Resources Nicaragua: Ministry of Environment and Natural Resources
Water policy with infrastructure and public works	Argentina: Ministry of Public Works Chile: Ministry of Public Works
Water policy with rural affairs	El Salvador: Ministry of Agriculture and Live Stock Peru: Ministry of Agriculture

104. **Inter-ministerial bodies, committees and commissions are the second type of governance tools used in upper horizontal co-ordination of water policy.** Two-thirds of LAC countries surveyed have created these platforms for dialogue and action between public actors in charge of water policy at the central government level.

105. **Formal co-ordinating bodies, such as *ad hoc* high-level structures and a central agency, are also frequently used by governments for horizontal co-ordination of water policy.** These are often government agencies or specific government offices that help promote co-operation and collaboration. They are a key force for building capacity and sharing good practices, as well as overcoming sectoral fragmentation of water-related tasks across ministries. They act as a forum for aligning interests and timing across ministries and public agencies. A prominent example of high level structures acting as co-ordinating bodies is CONAGUA, the National Water Commission in Mexico (Box 9) and many LAC countries have also set up *National Water Agencies* including Brazil, Peru, Cuba, the Dominican Republic, Guatemala and Panama (Box 10).

### **Box 9. High level structures to co-ordinate water policy : the case of CONAGUA in Mexico**

CONAGUA was established in 1989, as an administrative, normative and consultative decentralized agency of the *Ministry of Environment and Natural Resources* (SEMARNAT). It follows previous water-related administrations such as the Direction for Water, Land and Colonization (1917), the Nation Irrigation Commission (1926), the Ministry of Water Resources (1946) and the Ministry of Agriculture and Water Resources (1976).

Its role is to manage and preserve national waters and their inherent goods in order to achieve sustainable use, with joint responsibility of the three tiers of government (federal, state, and municipal), thus requiring co-ordination initiatives. This decentralised agency of the *Ministry of Environment and Natural Resources* (SEMARNAT) is the highest institution for water resource management in Mexico, including water policy, water rights, planning, irrigation and drainage development, water supply and sanitation, and emergency and disaster management (with an emphasis on flooding).

CONAGUA enjoys considerable *de facto* autonomy, employs 17 000 professionals and has 13 regional offices and 32 state offices. The 2004 amended National Water Law (NWL) restructured CONAGUA key functions through the transfer of responsibilities from the central level to sub-national entities. These are playing an increasing role in the water sector, limiting CONAGUA's role to the administration of the NWL, the co-ordination of water policies, the conduct of national water policy, and planning, supervision, support and regulatory activities.

The Technical Council of CONAGUA is an interministerial body in charge of approving and evaluating CONAGUA programmes, projects, budget and operations, as well as co-ordinating water policies across departments and public administration agencies. It is composed of the highest representatives from SEMARNAT, the Ministry for Social Development (SEDESOL), the Ministry of Agriculture, Rural Development, Fisheries and Food (SAGARPA), the Ministry of Treasury and Public Credit (SHCP), the Ministry of Energy (SENER), the Ministry of Public Administration (SFP), the National Commission of Forestry (CONAFOR) and the Mexican Institute of Water Technologies (IMTA).

### **Box 10. National water central agencies for co-ordinating water policies**

Several LAC countries have created *National Water Agencies* (ANA).

In Brazil, the ANA is a federal institution created in 2000, under the *Ministry of the Environment*, as part of the National Water Resources Management System. With administrative and financial autonomy, it is responsible for implementing the National Water Resources Policy and the principles of integrated water resources management, granting and providing funds, regulating access to water, promoting its sustainable use and arbitrating conflicts among users. ANA acts as an executive-regulatory agency and plays a number of management and co-ordination roles, and consists of ten functional superintendencies with implementing and administrative functions. Providing a managerial structure, an authority and the means to implement and co-ordinate the National Water Law, ANA has brought a general improvement of water resources management in Brazil.

In Peru, the National Water Authority (ANA) is the highest technical and normative authority of the country's water resources management system, created in 2008. It is in charge of the multisectoral and sustainable use of water resources and promotes the IWRM principles. It must also assure the environmental quality at the national level and develop co-ordination strategies between central, regional and local levels. Its missions are to administrate and protect water resources in all river basins, to recognize and assure the economic, social and environmental values of water and to involve all levels of government and the civil society. In Nicaragua, the National Water Authority's (ANA) missions are to manage and preserve the country's water resources with an integrated approach and in collaboration with central government's institutions involved in the water sector as well as civil society. ANA formulates the National Water Resources Plan and river basin management plans. The agency also carries out scientific research, technical development and publishes weekly studies on the economic and financial assessment of the water sector.

In Cuba, the *National Institute for Water Resources* (INRH) was created in 1989 to manage, implement and control the National Water Resources Policy. In 2000, it underwent a reorganizational process and changed its structure, functions and role allocation at the central level. Today, the INRH has created multiple decentralized agencies (15 provincial delegations) responsible for: (i) water resources protection and quality control; (ii) necessary regulations to reach the financial, social and environmental objectives for water resources; (iii) water infrastructure management and safety; (iv) collect of data on water cycle, and surface and ground water characteristics; (v) storm water management; and (vi) the organization of the national water resource registry.

In the Dominican Republic, the 1962's Law establishing the General Directory of Irrigation was closely followed by the creation of the National Institute of Water Resources (INDRHI) to manage the protection and sustainable exploitation of water resources, and assure the quality and quantity of water, especially for the irrigation sector. The INDRHI's missions encompass the management of all water and irrigation infrastructures and utilities in co-ordination with the Ministry of Agriculture and the users, the protection of water resources with the Ministry of Environment and Natural Resources, and technical and scientific studies on water resources.

In Guatemala, a Specific Cabinet for Water (GEA) was created in 2008 to co-ordinate all governmental efforts in policy design, management, plan and financing of the water sector in order to contribute to the national development goals and objectives. To do so, the GEA (i) advocates for and implements IWRM principles, (ii) co-ordinates actions between the government, civil society and private companies for the sustainable use of water, (iii) allocates human and financial resources, and (iv) promotes institutional strengthening and citizen participation to foster good governance. It provides monitoring instruments, multi-level dialogue mechanisms, regulation and co-ordination plan between sectors (transports, energy, and marine resources).

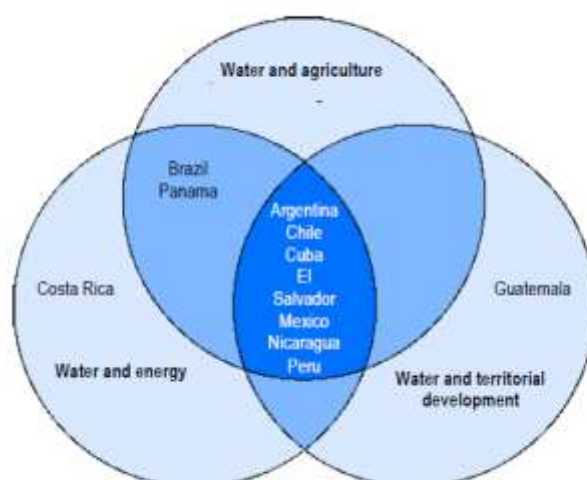
Panama has a National Authority for the Environment (ANAM - created in 1998) to achieve the National vision: "Built a country with a healthy environment and a culture of sustainability in order to reach high levels of human development". ANAM has autonomy to manage all natural resources, including water, to implement the National Environment Policy and encourages a cultural change towards more participation of all sectors to improve the quality of life.

106. **Inter-agency programmes are also a means to foster co-ordinated strategic planning of water policy at central government level.** Some LAC countries have designed their national water plans or programmes jointly between several ministries and public agencies (Argentina, Brazil). Often interagency programmes have been used as a support for this collective task of setting strategic planning in water policy making. In Honduras for example, the Inter-institutional Technical Group (GTI) is a national co-ordination mechanism working on project planning, inter-institutional co-ordination and discussions on Integrated Management of Water Resources mainly to co-ordinate the national actions regarding the Fight against Desertification and Drought Convention's implementation. The GTI considers each group as a network of institutions and organizations. Under the Secretary of Natural Resources and the Environment's authority, it has been in place since 2004, through the General Office of Water Resources and gathers several governmental institutions, NGOs, civil society, international cooperation, etc. Currently, the GTI does not have terms of office nor rules and the institutions' participation is only voluntary. Without obstacle, the GTI should be soon formalized.

107. **Most LAC countries have engaged in efforts to co-ordinate water and other policy areas such as regional development, agriculture and energy** (Figure 23). These efforts take different forms, ranging from political commitment at a high level to joint action of ministries and agencies at the sub-national level, sound legislative mechanisms and regular meetings of relevant stakeholders. Improving coherence between water and other policy areas requires government-wide decision making. Quite apart from issues of international equity and commitment to the Millennium Development Goals, achieving some measure of policy coherence has increasingly become advantageous and in LAC countries' own self-interest. They, as well as developing countries, can benefit, given the interdependence of the world economy and the global markets in food and energy. Decision makers need to be well versed in the relevant policy options before they disburse public funds or adopt regulatory policies that could negatively affect water policy in developing countries. Co-ordination with agricultural policy is of particular importance – and, at times, particular complexity (Box 11). A number of other LAC countries have also put in place specific arrangements to address the water-energy nexus (Box 12) and the relationship between water and regional development (Box 13).



Figure 23. Co-ordination across policy areas



#### Box 11. Co-ordination between water and agriculture policies at central government level

Most often, effort to co-ordinate water and agriculture policies are carried out through strategies and programmes at the ministerial level. For example, in Nicaragua the *Ministry of Environment and Water Resources* co-ordinates with the *Ministry of Agriculture and Live Stock* on matters of irrigation and water reuse (Azucareros engineers).

The Dominican Republic *National Development Strategy* promotes the *Ministry of Economy, Planning and Development's* role and includes an upcoming strategy for the farming sector to tackle the limited consultation between water policies and agricultural policies in the actual strategy.

In Argentina, the *Natural Resources Federal Plan* promotes inter-sector co-ordination at national and regional level, especially for irrigation, drainage and land use issues.

Peru has recently implemented a capacity-building programme funded by the Ministry of Agriculture (through a sub-sector irrigation program) to strengthen the *National Board of Irrigation* and *District Users organizations* so that they can adequately match new norms and promote the efficient management of water.

In Chile, co-ordination mechanisms exist between the *General Office of Waters*, the *Ministry of Agriculture* (Irrigation National Commission's Executive Secretary, Farming Development Institute) and the *Ministry of Public Utilities' Water Utilities Office*.

In Brazil, water and agriculture co-ordination is also promoted through events. The *National Water Agency* has organized workshops to discuss water use in agricultural sector. Previous thematic meetings included "Present and Future of irrigated agriculture in Brazil from the view point of Water Resources Management", "State of the art irrigated agriculture in Brazil – The Point of view of Water Resources Management" as well as a Permanent Forum on irrigated agriculture development, provided by the Ministry of National Integration.

### **Box 12. Co-ordination between water and energy policies at central government level**

In Mexico, the *Technical Committee on Water Utilities Operation* is composed of the *National Water Commission* (CONAGUA), the *Federal Commission on Electricity*, the *Mexican Institute of water Technology* and the *National Autonomous University of Mexico's Engineer Institute*. During its weekly meetings, the Committee, with representative experts from these different institutions, analyzes and discusses all aspects of the country's dams operation, including hydroelectric ones, in order to optimize water management, including flood control, all the while taking the risk they pose into account. The Mexican *Secretary of Energy* is currently studying the possibility of using micro-hydroelectric plants: they are 112 estimated small projects that could be developed by the private sector to produce a total capacity of 6,604MW and annually generate 16,042,2GWh, using the main irrigation dam's hydraulic infrastructure.

In Panama, according to the *Public Services Authority* (ASEP), every promoter with an interest in hydropower projects must obtain the *National Authority of Environment* (ANAM)'s water resource authorization. This mechanism limits water use conflicts and assures water availability through water assessments.

In Brazil, the legal framework establishes that a previous authorization from the *National Water Agency* (ANA) is required for concessions to exploit hydropower potential. According to the Law No. 9984/2000, in order to authorize the exploitation of hydropower potential in a water body of Federal jurisdiction, the Brazilian Electricity Regulatory Agency - ANEEL must previously obtain from ANA the 'declaration of reserve of the water availability'.

In the *Dominican Republic*, there is no explicit water policy although the *National Water Resources Institute* (INDRHI) has promoted their design. However, the INDRHI and other institutions participated in a consulting process launched by the National Commission on Energy to design an energy policy. The *Ministry of Economy, Planning and Development* (MEPyD) is currently leading a consensus project for a National Development Strategy (END) with several declarations for each sector, including water, agriculture, energy, the environment. The END was submitted to the Congress in 2010.

### **Box 13. Co-ordination between water and territorial development at central government level**

In some countries, legislation is used as a tool for co-ordinating water, spatial planning and regional development policies.

In the Dominican Republic for instance, the law establishing the *National Water Resources Institute* (INDRHI) and the fresh water law both include possible studies and evaluation of river basins as well as water resource exploitation planning, entrusting these tasks to the INDRHI. The *Ministry of Environment and Natural Resources*, in accordance with the general Law on Environment and Natural Resources (Law 64, 2110), is in charge of river basin plans design. This Law also addresses the *Ministry of Environment and Natural Resources'* responsibility in territorial planning.

Another interesting example is Peru where the water resources law establishes that river basin councils are in charge of designing, approving, implementing, monitoring, updating and evaluating water resources plans. To do so, they must obtain active and sustainable participation of their members in the planning, co-ordination and consultation in order to reach the sustainable use of water resources in every sector. For financial and organizational reasons, these water resources plans are progressively being implemented, with priority given to scenario that consolidates the local structure.

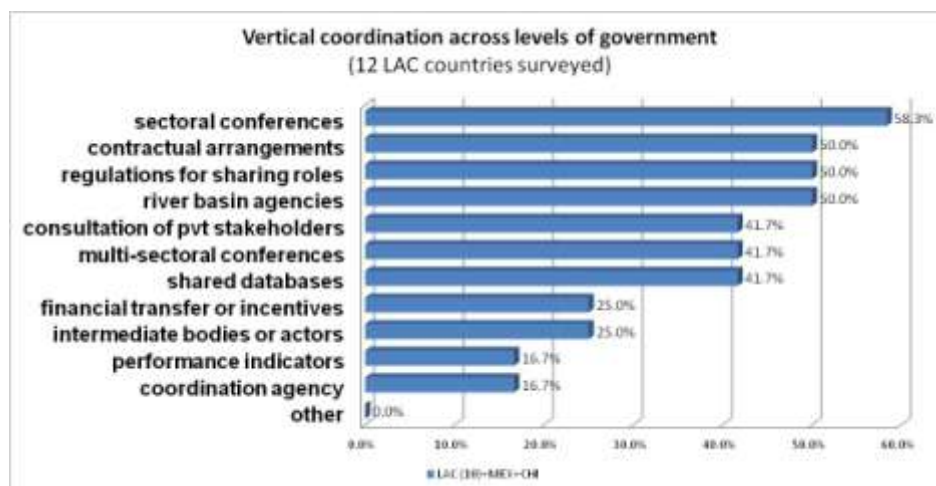
In Mexico, joint action of ministries and agencies at the central level take place to co-ordinate water and regional development policies. Prior to the implementation of Federal Government's public policies for the construction of water and sanitation utilities at national level, Inter-institutional Collaborative Agreements became official between Federal Public Administration's departments and institutions. Human, financial, infrastructural and technical resources were co-ordinated through these agreements in order to develop studies and projects, and implement basic infrastructures and utilities in low human development indicators municipality. As an example of this type of mechanisms, the Secretary of Social Development, the National Commission for Indigenous Peoples Development and the National Water Commission jointly signed a collaborative agreement effective from 2009 to 2012.

### 5.3. Co-ordinating water policies between levels of government and across sub-national actors

108. In LAC countries, a wide variety of mechanisms exist for co-ordinating water policies across levels of government. These include, for example, the consultation of private actors (including citizens' groups, water users "associations and civil society") and financial transfers and incentives across levels of government (e.g. earmarked versus general-purpose grants for financing infrastructure). Other instruments they can consider are co-ordination agencies, contractual arrangements, (multi)sectoral conferences, performance indicators, regulations, shared databases, river basin organisations, regulation and performance indicators, and intermediate bodies. Some LAC countries have chosen to use all the mechanisms listed in Figure 24 (e.g. Mexico), while others have not, due to centralised water policy and limited involvement of sub-national actors (Costa Rica, Cuba etc.). This section will focus on some of these instruments.

Figure 24. Vertical co-ordination across levels of government

(12 LAC countries surveyed)



109. **Sectoral conferences are the primary governance tools adopted to foster vertical co-ordination.** CONAGUA in Mexico has organised several roundtables or "sectoral conferences" (governance, financing, etc.) at local and regional levels in the design stage of its 2030 Water Agenda.

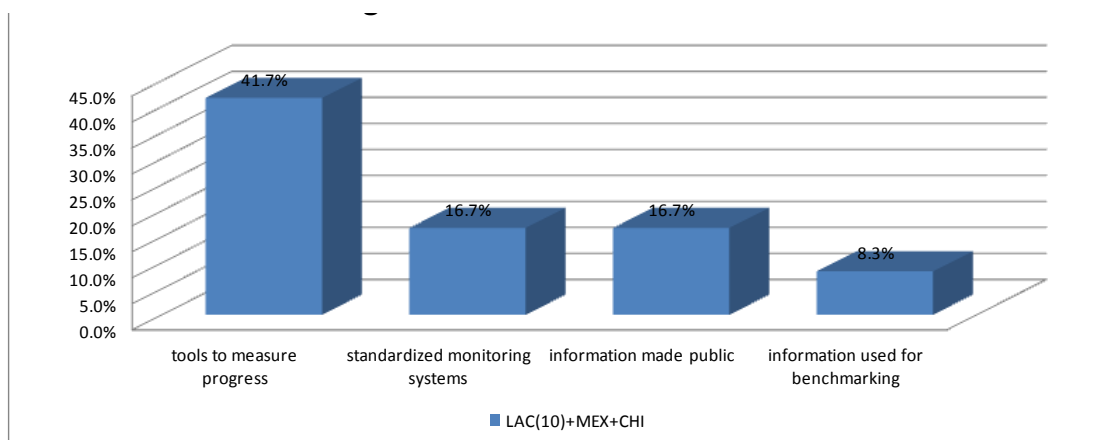
110. **Contractual arrangements between levels of government are also frequently used in multi-level governance relations to help manage interdependencies and solve some institutional weaknesses** (OECD, 2007). Contracts enjoy a degree of flexibility of use and diversity of application, permitting governments to reorganise rights and duties without requiring a constitutional or legislative change. Complex policy domains, involving multiple stakeholders and issues, as in the water sector, generally rely on contracts among levels of government. First, contracts allow a customised management of interdependencies, which are useful in unitary states as an instrument in decentralisation policies. They are often broad in scope, with multiple goals. In most countries, contracts function as tools for dialogue, for experimenting and clarifying responsibilities and thus for learning. Impact evaluation should be encouraged, so as to make use of the results in adjusting the policy. Collaboration through contracts makes the need for strategic leadership at the sub-national level even more vital. In Brazil for example, contracts are signed between the National Water Agency (ANA), States and River Basin Committees (water pacts)

to enable the joint implementation of water resources management instruments through the establishment of goals, activities and deadlines for each party. There are no exchanges of financial resources among the parties, being each one responsible for supporting the implementation of its activities in the pact. ANA has already celebrated “integration pacts” with the State agencies of São Paulo, Minas Gerais, Rio de Janeiro and Espírito Santo, in order to implement the water resources management instruments at the PCJ, Paraíba do Sul and Doce river basins. The results achieved are related to the reduction of compliance costs and the adoption of an integrated approach for the implementation of water resources management instruments in those river basins.

**111. Regulations and legal mechanisms can also address the capacity and funding gaps in water policy.** On the one hand, they can mandate resources for new and existing competences devolved to lower levels of government, thereby increasing funding capacity. On the other hand, if the technique used to provide the funds limits the willingness at the sub-national level to raise its own revenues, and increases its dependence on transfers, laws and legislation can serve to widen the funding gap. With respect to the capacity gap, legislation can be used to help establish frameworks or parameters that build sub-national capacity by allocating competences and resources. If it helps to define roles and responsibilities clearly, legislation can overcome problems of duplication and overlap. Assigning tasks, rather than allocating funding, can be a better way of managing problems of resource allocation. It also provides sub-national authorities with an opportunity for “learning by doing”, which can increase their overall capacity in the medium and long term. In El Salvador for example, regulations are used to distinguish uses, purposes and implementation areas for control and water supply mechanisms. In the case of irrigation water in rural areas, both the Irrigation and Drainage Law, implemented by the *Ministry of Agriculture and Live Stock* and the Environment and Natural Resources Law determine water quality standards. Last but not least, the Honduran *National Plan* frames the Regional Development Councils as dialogue and consultation authorities between central government, civil society, local governments and workers communities regarding sectoral analysis and proposals to provide an effective, organized and transparent public management. The *Regional Development Councils* are in charge of (i) gathering, in each region, the basic data for the National Plan’s indicators and determining which gaps need to be fill in order to reach the set objectives; (ii) establishing the Regional Territorial Plan; (iii) deciding on which specific actions and means to adopt in accordance with the National Plan; and (iv) discussing and reaching consensus on regional problems. The Councils gather representatives from each region’s sectors.

**112. Building capacity and facilitating co-ordinated actions across levels of government can be achieved through performance measurement, monitoring and evaluation of water policy outcomes at sub-national level.** Such measurement aims to provide information that can be used to enhance the effectiveness of decisions on policy priorities, strategies and resource allocation (OECD, 2009a). It usually takes place through monitoring and evaluation. Monitoring is an ongoing process and requires collecting and assessing both quantitative and qualitative information, and building a picture of the functioning and outputs of public policies and programmes. Evaluation occurs at specific moments in the cycle, and uses qualitative and quantitative data to assess whether or not objectives have been met. Both can help identify areas where co-ordination can be improved; support dialogue and negotiation for better allocation of resources or competences, and facilitate negotiating contractual arrangements. Performance indicators can reinforce linkages among policy stakeholders at different levels of government and contribute to learning and capacity-building. Such measurement becomes an invaluable tool for all levels of government, as well as for the other stakeholders in a multi-level governance context, including private water operators. It is a basis for dialogue, discussion and acquisition of knowledge, and helps a community of actors identify common reference points. But a key concern is to what extent such information on performance is used to guide water policy decision-making and prioritise government actions.

Figure 25. Monitoring at sub-national level



113. **A growing number of countries have established indicators for assessing the performance of their water sector, reinforcing incentives for sub-national governments and improving the knowledge base.** Several LAC countries have adopted tools to measure progress in water policy implementation though monitoring systems are not always standardised across basins, and information is not systematically made public (e.g. to water users and NGOs) or used for benchmarking bodies in charge of water policies that guide public decisions. In Mexico for instance, the public administration's federal programmes are closely monitored and evaluated according to the Rules of Operations (*Reglas de operaciones*). In the water sector, federal programmes are developed on topic such as access to drinking water, sanitation, sewer systems and hydro-agricultural infrastructure for which the programmes tend to improve management of supply and demand, or the modernization of irrigation utilities. For each programmes, monitoring and evaluation mechanisms are set up to assess their impact on the ground and the cost-effectiveness of their implementation. For the Water and Sanitation programmes, such indicators include service provision performance (number of litres per second, number a sewer connections, etc.), the service regional coverage (for instance number of people with access to clean water and the sewer system) and the programmes' structure and organization (financial management, public participation, among others).

114. **Though indicator systems are associated with strong benefits, certain caveats should be considered.** Indicator systems are costly, both directly (i.e. the cost of development and implementation) and indirectly (i.e. opportunity costs and the potential for inadvertent generation of unintended consequences). They can also increase the administrative burden on the reporting organisation and its staff. It is difficult to capture complexity with water data and indicators, which can lead to developing too many indicators rather than concentrating on a core group. Besides, it is tempting on the part of central government to substitute ex ante control of water services with performance indicators. This can lead to retaining control of how sub-national authorities implement water policy, as they will probably make choices and decisions that allow them to perform well within the parameters of the indicator system, at the expense of other elements. There is no optimal design for an indicator-based performance measurement system in the water sector. Its development should be a collaborative effort between the national and sub-national level, and the information it yields ought to cover inputs, processes and outputs that are relevant for ongoing activities. To use such information optimally, clear objectives for the data need to be established and proper indicators selected. Systems are needed to generate, validate and distribute the data; the information needs to be used in a suitable and timely fashion; incentive mechanisms are needed to

encourage actors to follow a particular course of action; and appropriate use of the performance information must be planned for.

115. **In addition, water information systems (WIS) and common databases are key mechanisms for sharing water basin, country and international policy needs and information in different areas.** Mexico has an annual publication on the “situation of the drinking water and sanitation sector”, and has set up an information network of water and sanitation companies (ANEAS). Peru also counts with a national information system on water resources, and the Dominican Republic has a joint database between the *National Institute for Water Resources* and the *National Office of Meteorology*.

116. **In most countries, water data are commonly available for the hydrological but are less common in the case of the economic and financial aspects and even more limited for institutional and territorial data.** A substantial effort has been made to improve the understanding and science of hydrological systems to guide water decision makers. Data collection efforts improving knowledge of the connections between groundwater and surface water are available, as well as for determining sustainable environmental flows in the context of climate change. But further innovations in economic, financial and institutional water data collection are still needed. These would include using new technologies, voluntary initiatives to collect data, and permitting public agencies to regulate, finance or charge for data collection, maintenance and analysis (OECD, 2010). It is not easy to assess how effective existing information systems and shared databases in the water sector are in bridging the information gap. A cost-benefit analysis of existing WIS is needed at local, regional, national and international levels, to determine how current water information and data are collected and used by policy makers (and even whether it is being used at all), and the costs and benefits of collecting, analysing and communicating this information. Increased efforts are needed to communicate the reporting and analysis of water data to policy advisors and the wider public, and not simply to the research community. Institutional obstacles and opportunities for effective governance of WIS should also be pinpointed, to identify areas of institutional overlap and synergies in water data collection; to mobilise local stakeholders in designing WIS; foster co-ordination between data producers and users; and encourage multi-discipline approaches in WIS.

117. **The water governance survey across LAC countries revealed few experimental policies at territorial level.** An interesting example can however be found in Chile. The desalination plant built in the city of Antofagasta, Chile, to supply water for the population, brings water from the *Altiplano* to the coast, across 300 km. In addition to securing water supply, the water’s high levels of arsenic are reused in local mines and other industrial sectors. These initiatives were mostly implemented in the Northern part of the country where areas suffer from water shortages (especially surface water, as groundwater is already overexploited) and provided enough experience to launch similar desalination plants in other cities, such as Arica, where the positive consequences in terms of water resources management and territorial planning lowered the pressure on ground water as well as the contamination levels. This experimentation also illustrates the combination of local involvement and private companies in financing this kind of initiatives.

118. **In recent years, river basin management has been proposed as one element for addressing the administrative gap, ensuring a holistic and hydrological approach to co-ordinate water policy across sub-national actors and between levels of government.** On the one hand, the basin perspective makes it easier to integrate physical, environmental, social and economic influences on water resources. On the other hand, the decentralisation of water governance has increased the number of relevant (administrative) boundaries and organisations. In combination with the introduction of basin management, problems of interplay now arise that have not so far been sufficiently addressed by practitioners and by scientific research. The literature advocating Integrated Water Resources Management (IWRM) and basin management, for example, rarely deals with the friction between bodies organised along administrative and hydrological boundaries. Communication between these organisations across levels and in various policy fields is essential for efficient water management that can support adaptive water governance. The

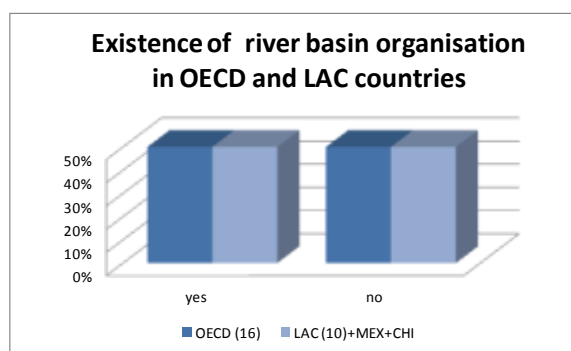
implementation of effective water policies, therefore, raises the question of the “relevant scale” for service delivery and resources management, in light of the fact that environmental issues, given the possibility of externalities, often require larger-scale approaches reducing territorial fragmentation (OECD, 2009c).

**119. In all LAC countries where they exist, river basin organisations play a co-ordination role of water policy across levels of government.**

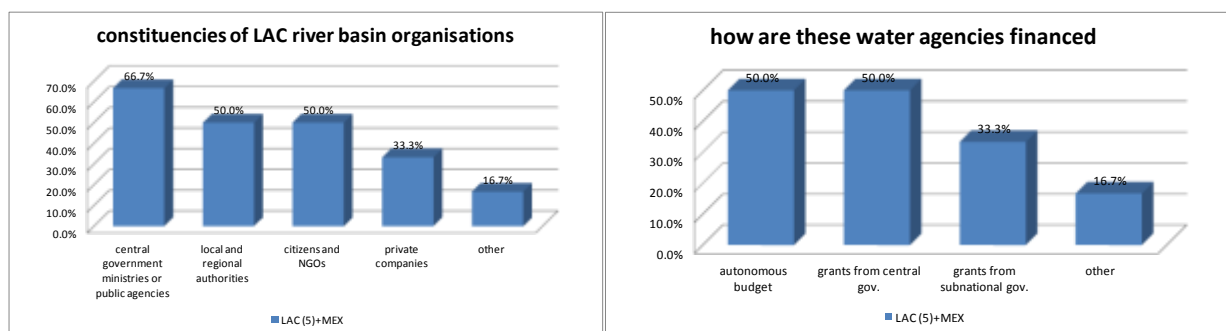
- *River basin committees* (RBC) have been established early on in Argentina to promote an integrated approach of water management, both in quality and quantity but the lack of financial autonomy of these organizations made them very dependent on local and national government for administrative and economic issues. While some of these river basin committees evolved into more technical organisms, others however remain active initiatives and involve all stakeholders in the design and implementation of management plans. RBCs' implementations in Argentina have been facilitated by the decentralization process and were established to further distribute competencies in the provinces and promote development through the management of water resources' exploitation.
- In Brazil, the first *river basin organizations* were created in the 1970s but it is the 1997 Law for “Water resources national policy and system” that officially integrated water management at the basin scale in the national water resources strategy. The *Water Resources National system* includes, among other bodies, river basin committees in charge of the basin administrative management and allowing participation from the central government, municipalities, water users and civil society to promote multi-actor dialogue and debate on water, arbitrate use conflict and implement basin management plans.
- Costa Rica's Law on water resources introduce river basin organizations and councils in 2000. Therefore, a basin organization was settled in every hydrological unit to develop Regional Water Plan. In Nicaragua, the Law on National Waters established the creation of *regional organization for river basins*. They are autonomous governmental agencies with operational, technical, administrative and legal functions for each hydrographical basin. They are responsible for designing the water resources regional policy, arbitrating water use and inter-institutional conflicts and promoting the implementation of users associations.
- In Panama, the Inter-institutional Commission for the Panama Canal Basin was developed following the 1997 Panama Canal Authority's integrate efforts, initiatives and resources into the conservation and management of the basin and promote its sustainable development. To this end, the Commission has to develop mechanisms for implementing strategies, policies, programmes and projects developed by relevant organisations engaged in the canal basin.
- In Mexico, the recently created Basin Authorities (BAs) are been developed from the 13 existing regional offices of CONAGUA. They are expected to be responsible for formulating regional policy, designing programmes to implement such policies, conducting studies to estimate the value of the financial resources generated within their boundaries (water user fees and service fees), recommending specific rates for water user fees and collecting them. A total of 25 Basin Councils (BCs) have been established with the same basin boundaries as the BAs, including two or more within the area of one BA in some cases. Some states are located entirely within the area of one BC. In other cases, where a state is divided between two or more BCs, the state participates in all the BCs within its territory.

120. **River basin organisations’ missions, constituencies and financing modes vary across LAC countries.** All river basin authorities have functions related to planning, data collection, harmonisation of water polices and monitoring. However, their role in the allocation of water uses, prevention of pollution, co-ordination, financing and regulation is not systematic and none of LAC countries river basin organisations (contrary to OECD ones) have regulatory powers. In most cases, the principal actors in river basin organisations are central government ministries and public agencies, and/or local and regional authorities. Sometimes, river basin authorities are also accountable to citizens and NGOs. In the sample of countries surveyed, basin authorities are financed both by autonomous budgets (e.g. collection of water revenues) and grants from the central government, and in some cases, sub-national governments also contribute to river basin authorities’ funding (e.g. Mexico, Argentina, Brazil). The maturity of river basin organisations also varies across LAC countries, especially in co-ordinating competing uses, which requires equitable approaches to resolving conflicts in the political and legal arenas. Argentina and Brazil are pioneers in setting up river basin agencies, while other LAC countries, such Peru have only recently adopted such arrangements.

**Figure 26. Existence of river basin organisation in OECD and LAC countries**



**Figure 27. Constituencies of LAC river basin organisations and how these water agencies are financed**



121. **Though watershed agencies have emerged to resolve issues related to the *administrative gap*, they are often not politically meaningful to stakeholders, particularly agricultural users, whose water and land use behaviour is so critical to water security.** Watershed agencies are not without their flaws, and have been criticised for embracing a top-down approach, driven by experts and lacking in transparency. In addition, the prioritisation of holistic management often typical of watershed management agencies has resulted in “poacher-gamekeeper” conflicts of interest, in which regulatory, ownership and service provision functions overlap, sometimes with negative consequences.



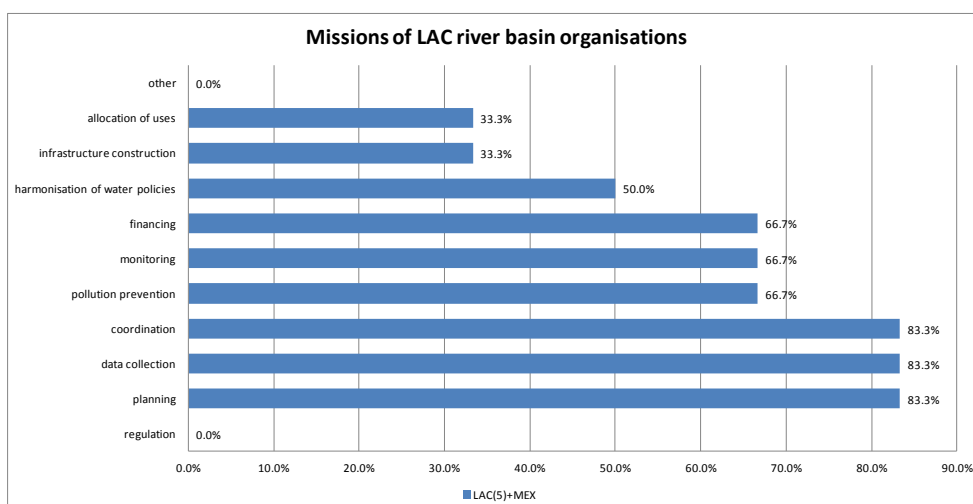
### Box 14. The Latin-American Network for Basin Organisations (LANBO)

The LANBO (*Red Latinoamericana de Organizaciones de Cuencas* – RELOC in Spanish) was created in 1998 as part of the RIOB. At the initiative of Brazil, it was later restructured and in 2008, 67 institutions from 21 countries gathered to agree on common principles. The LANBO aims to promote IWRM as an essential element for sustainable development and carries out various actions regarding information sharing, knowledge and capacity building, cooperation programmes, etc.

The LANBO encourages open and amicable interrelations among members to share expertise and experiences, as well as financial and legal mechanisms, to contribute to water management at the basin scale, all the while highlighting the variety of practices and the importance of local specificities.

Source: Official LANBO website: Latin-American Network for Basin Organisations.

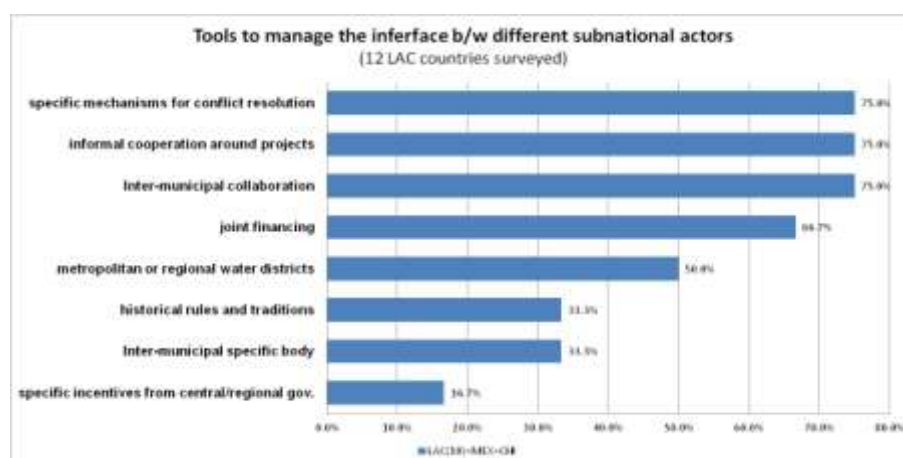
Figure 28. Missions of LAC river basin organisations



122. Some countries have set up co-ordination mechanisms across basins to create networks to facilitate co-ordination at the territorial level and dialogue with central government (Figure 29). A major feature of LAC countries as compared to OECD ones is the preponderance of conflict resolution mechanisms (75% of countries surveyed) and informal cooperation around projects.

**Figure 29. Tools to manage the interface between different sub-national actors**

(12 LAC countries surveyed)



123. **In addition to river basin organisations, LAC countries employ a wide range of mechanisms to manage the interface between actors at the sub-national level and to build capacity.** As Figure 29 shows, a strong emphasis is put on specific mechanisms for conflict resolution, in relation to transboundary water.

- In El Salvador for example, the main source of water is the Lempa River which has its source in the country and flows towards Guatemala and Honduras. Maintaining collaboration with both countries is therefore fundamental for the sub-Ministry of Water in terms of human supply but also industrial and rural supply.
- In Honduras, effectively managing transboundary water relies on the responsibility of each party in order to maintain a fair cost-benefit relationship which requires the implementation of official agreement as well as public consultation and approval. This represents an important challenge considering the various cultural aspects of Honduras which call for place-based processes in achieving citizen acceptance and participation.
- In Panama, the transboundary water issues remain untouched. Despite the common aquifers with Costa Rica (Sixaola aquifer) and Colombia (Choco aquifer) important policy, management and information gaps still need to be bridged.

Currently in the process of being approved, the Peruvian National Water Resources Strategy aims at, among other aspects, promoting and supporting the integrated management of water resources in transboundary river basin. The main policy challenge remains to strategically

124. **Other tools for lower horizontal co-ordination include:** inter-municipal collaboration, metropolitan or regional water districts, specific incentives from central and regional governments, joint financing between local actors involved in water policy, as well as ancestral rules. Other tools frequently used in the water sector include training, workshops and conferences as well as experimentation policies at the territorial level, which can synthesise many of the mechanisms previously explored.

125. **The involvement of local actors and citizens is important for managing rivers in a sustainable way, better co-ordinating public action across levels of government and reducing conflicts at the local level.** Widening public participation is seen as a means to increase transparency of environmental policies and citizens' compliance to influence the direction of environmental protection. In LAC countries, public participation often takes place via water users association (Box 15), which are strongly linked with irrigation practices as agriculture still plays a major role in each country's economic growth and development.

**Box 15. Examples of water users' associations' involvement in water policy**

In the Dominican Republic, the *National Institute for Water Resources* has transferred the management, operation and maintenance of irrigation systems to the 28 Irrigation Boards of the country. In addition to 10 independent groups (not integrated in a Board), 178 irrigation associations that have been set-up throughout the Dominican Republic, gathering over 89,000 users. These Irrigation Boards fix their own tariffs and, through transparency and democratization mechanisms in water rights allocation, have substantially reduced corruption in the sector.

In Argentina, Irrigation Consortiums have been created in Mendoza and Salta provinces. In Chubut and Rio Negro provinces, drinking water and sanitation cooperatives also exist.

The National Irrigation Sub-District Users' Board of Peru (*Junta Nacional de Usuarios de los sub distritos de riego del Peru*) participates in revising water resources laws and, as one of the main farmers association of the country, is often involved in mediation process with central government regarding new prerogatives and decisions. Peru also has Non-rural sectors' associations.

In Brazil, water users' participation is not organized into organization or council but they do have representatives in the National Water Resources Council, States' water Resources Councils and River Basin Committees.

In Chile, when several citizens share the same groundwater drilling infrastructure, they can constitute associations (*Asociacion de Canalistas*) in order to commonly built, operate and maintain aqueducts and other infrastructures as well as fairly distribute water among all members.

126. **In addition to these instrument, the thematic core group "Good Governance" and the Americas regional process of the 6th World Water Forum, held in Marseille, France on 12-17 March 2012, have identified several examples of good practices and replicable solutions in Latin America and the Caribbean.** These solutions (Box 16) will be further analysed and explored in the coming months in the framework of country-wide policy dialogues to improve water governance.

**Box 16. Water governance in Latin American and the Caribbean countries  
Solutions from the 6<sup>th</sup> World Water Forum**

**Mexico: The 2030 Water Agenda**

The 2030 Water Agenda aims to consolidate sustainable water policy and hand over to the next generation a country with (i) clean water bodies, (ii) balanced supply and demand for water, (iii) universal access to water services and (iv) settlements safe from catastrophic floods. A first version of the 2030 water Agenda was presented in March 2011. Since then, the Mexican National Commission for Water (CONAGUA) has carried out technical-prospective studies as well as hundreds of meetings throughout the country to collect and review initiatives from all sectors and all groups of actors, encompassing a broad scope of participation. Numerous working groups, with particular territorial or thematic perspective, have focused on identifying the necessary changes to make all components of the 2030 Water Agenda feasible. Progress on each of these areas will be reported annually in the Agenda's updates.

For each of the 38 initiatives that make up the 2030 Water Agenda, one or more organizations have committed to seeing through the necessary changes and measures to support their initiatives and thus the overall objectives of the Agenda. Furthermore, hundreds of organizations, groups and individuals have contributed to these efforts and have stated their commitment to this national engagement. They are committed to make the necessary efforts for changes to take place and to implement the 2030 Water Agenda initiatives on a daily basis.

**Honduras: Local participation strategy for water and sanitation services' regulation**

In Honduras, the modernization of the drinking water and sanitation sector began with the 2003 Frame Directive which is fundamental in the country's decentralization policy of public management and separation of duties. The law assigned the service provision responsibility to municipalities and water administrative boards. These providers work with technical assistant from the central government and are subject to regulation and control by the Regulation Body of Water and Sanitation Services (ERSAPS). The government retains the sectoral planning and co-ordination responsibility through the National Council of Water and Sanitation (CONASA) - integrated in 4 State Secretaries - , municipalities associations' representatives, water administrative committees and users.

The Frame Directive requests that all service provision's processes include wide citizen participation. Municipal and citizen participation depend on compromises with the law's postulates, which requires the creation of local organizations for compliance. To comply with the frame directive, the Government of Honduras, through the ERSAPS has established a sound strategy: the creation of two local bodies, the Municipal Commission for Water and Sanitation (COMAS), responsible for planning and co-ordination, and the Supervision and Local control Unit (USCL), a citizen participation body in charge of service provision control and users reclamations. Since 2011, there is also a Regulation and Control Technician (TRC) in charge of informing regularly the ERSAPS about operations through a website.

The strategic vision is:

- An application at the national level
- A progressive implementation, while new investment projects are developed; or political decisions are required at the municipal level and need high citizen participation.
- An acceptance in monitored topics (which are not common in the country)
- Adoption of self-sufficient tariffs for the management model

The solution adequately works with the formal compromise between local government, citizens, government's executive unit and aid worker of the water sector. Compromise and support have also been reached with the World Bank in the PROMOSAS, the IDB in the PIAPS, the Swiss Cooperation in Latin America the UNDP and NGOS such as CARE and CRS.

### **El Salvador: Promoting watershed preservation through community involvement, the case of the Micro-La Poza community**

This is a success story about community involvement in watershed preservation in the La Poza basin of El Salvador. In a region marked by deforestation, a local foundation provided outreach to the public and decision makers on the need to improve conservation of natural resources and demonstrated the value of investing in watersheds and the environmental services they provide. Other actions included community meetings, soil conservation projects and the establishment of a payment fund for environmental services.

### **Mexico: The Women's Blue Agenda**

Since 2005, the Mexican Institute of Water Technology has developed a series of workshops in rural and urban communities to promote gender analysis and women participation in integrated water management and policy. The results of these workshops are published in the Women' Blue Agenda which highlight issues relating to water for domestic purposes, irrigation and environmental protection, and makes a strong connection between land rights and access to water.

The fundamental purpose of the workshops is to open up space for reflection and debate with grassroots women on water issues, to make their voice heard and their demands audible. The workshops focused on a participatory analysis of needs, problems, strategies, and political advocacy for change in order to set local agendas. Based on these agendas, the workshops seek to contribute to the proposals for public policy advocacy, laws, regulations as well as participatory mechanisms to promote a greater role for women, as well as gender equity, in integrated water management and policy.

Eight workshops were conducted involving 239 women and 35 men. This project was selected as "Best Practice" in Latin America during the Festival of Good Practices on Gender. This "virtual" festival is part of the "America Latin Genera: knowledge management for gender equality" project, a UNDP initiative supported by the Government of Japan. These meetings identified common messages in the actions proposals of different regions (Morelos, Veracruz, Tabasco, Tlaxcala, Oaxaca, Puebla and Guerrero) and states (Campeche, Tabasco, Chiapas, Yucatan, Zacatenas, Coahuila, Chihuahua and Sonora. These common principles were water, climate change, food security and disaster prevention. Other topics of interest included solid waste, sustainable agriculture and biodiversity.

### **Brazil: The Guarani Aquifer System (GAS), from scientific knowledge to good governance**

The Guarani Aquifer is one of the largest freshwater aquifers in the world, underlying northeastern Argentina, central-west Uruguay, the west-central and southeast regions of Brazil, and with portions extending into Paraguay. Its immense capacity to supply the region with water for both present and future generations depends upon the good governance that can consider conservation and protection of the aquifer system as important priorities. The experience of the Guarani Aquifer System laid more emphasis on finding a solution to a possible dispute through interdisciplinary stakeholders' dialogue and a participatory approach. The excellent quality of the Guarani water makes it prime for consumption, and it is a crucial opportunity to experiment with diverse responses in an attempt to find viable solutions on governance. Securing and maintaining the water resources of the aquifer is a priority for all riparian states because sustainable water management can serve as a basis for social and economic growth and development for much of South America and the MERCOSUR Common Market. While no management framework currently exists, advocacy and support for increased understanding and scientific knowledge of the functioning of the system, cooperation and protection of the Guarani Aquifer continues to grow. Parallel advancements and progress in the development of a legal framework for the Guarani Aquifer, and transboundary groundwater generally, would have a dynamic impact on the management of these sensitive resources.

### **Honduras: River Basin Management Initiatives Supported at the Goascorán River**

There is a *Binational Management Committee* in the Goascorán River that developed a management plan for the basin; however it hasn't reach its full potential because it focuses its work only at the local level. Therefore IUCN and Fundación Vida have been working with stakeholders in order to re activate and empower the binational committee as well as to update the management plan in order to achieve its implementation. The final objective of this solution is to see a beneficial process of sustainable development being applied in the basin by both countries. The Goascorán River Basin has a superficial extension of 2.345,5 Km<sup>2</sup> and it is shared by Honduras and El Salvador. Due to its location and natural resources, the river basin is an important territory in terms of environment, economics and geopolitics. This solution contribute to the target because the committee is an existing structure with a good local base, and it is being supported in order to involve stakeholders at all levels in the river basin management; therefore the actions taken by this Committee will have legitimacy and sustainability. It is comprehensible that the strengthening and

empowerment of the Committee will open wide possibilities of having effective participation on the implementation of the watershed management plan.

**Nicaragua: Implementation of a participatory policy on access to drinking water focusing on least covered areas**

For implementation purposes the Nuevo FISE has designed an instrument (MEPAS) which defines the processes and procedures for management of project cycles, with a view toward facilitating co-ordination, communication and transparency among participating stakeholders (Nuevo FISE, mayor's offices and communities) regarding investments in the drinking water and sanitation sector in rural areas and small population centers (villages). Further, it establishes specific procedures for the delivery of services to the indigenous and afro-descendant populations on the Nicaraguan Caribbean Coast, assuring respect for their organizational structures and culture. In addition, the model covers the development of local capacities in the municipality through the creation of the Drinking Water and Sanitation Units (UMAS), whose role is to support the Drinking Water and Sanitation Committees (CAPS) during the operation and maintenance of the water and sanitation.

The Water and Sanitation Project Implementation Model (MEPAS) is being executed nationwide since 2008, with a perspective toward becoming sustainable in the medium and long term. It is based on the empowerment of communities and their active participation before, during and after project implementation, in co-ordination and with support from local governments (municipal administrations). The agreement reached on a Services Delivery Model has led to alignment and harmonization between donor agencies working directly with government agencies of the water sector. Having on hand a single instrument facilitates the co-ordination of activities between participating stakeholders and allows for periodical reviews keyed to continuous improvement along the lines of ownership, alignment and harmonization and the promotion of a sector wide approach.

## **Conclusion**

127. **Governance instruments for managing mutual dependencies in the water sector at horizontal and vertical levels reveal a wide variety of mechanisms in place across and within LAC countries.** All countries surveyed have put in place co-ordination mechanisms at central government level (some countries have even adopted almost all co-ordination instruments listed, e.g. Mexico) and most of them have engaged in efforts to co-ordinate water with other policy areas such as spatial planning, regional development, agriculture and energy. Most countries have also set up vertical co-ordination instruments, except in countries where sub-national levels are only involved in the implementation stage of water policy.

128. **Co-ordination mechanisms range from hard to soft, formal to informal, clear-cut to flexible instruments.** Incentives for co-ordinating water policies and building capacity at the territorial level proceed from a variety of parameters. While national and sub-national capacity is of primary importance in multi-level governance relations, the line between co-ordination and capacity is not always clearly demarcated. Co-ordination can help in disseminating good practices and spreading the benefits of diversification of water policy, thereby also building capacity. Thus, co-ordination and capacity-building go hand in hand: they are synergistic processes that can be mutually reinforcing, provided there is a territorial approach to water policies.

129. **Despite the efforts to foster integrated water policies, LAC countries still report significant challenges in co-ordinating water policy action across ministries and between levels of government.** The adoption of all possible co-ordination instruments does not necessarily guarantee "effective" water governance, as such tools may overlap and ultimately neutralise each other. To respond to changing circumstances and to enable incremental evolution rather than occasional major overhauls, administrative flexibility should be promoted, e.g. through the use of task forces or commissions with specific mandates. No governance tool can offer a panacea for integrated water policy, and no systematic one-to-one correlation exists between tools and gaps. A given tool can solve several gaps, and solving a specific gap may require the combination of several tools.

**Table 12. Remaining governance challenges in LAC countries' water policy**

Most important water governance challenges according to respondents	Country
Mismatch between hydrological and administrative boundaries	Brazil, Costa Rica, Dominican Republic, Guatemala, Nicaragua, Peru
Horizontal co-ordination across ministries	Argentina, Costa Rica, Dominican Republic, Honduras, Nicaragua, Panama,
Vertical co-ordination between levels of government	Costa Rica, Dominican Republic, Honduras, Panama
Horizontal co-ordination between sub-national actors	Argentina, Costa Rica, El Salvador, Honduras, Panama, Peru
Local and regional governments' capacity to design/implement water policies	Chile, Guatemala, Mexico, Nicaragua, Panama, Peru
Allocation of water resources across uses (residential, industrial, agriculture)	Guatemala, Mexico, Nicaragua, Panama, Peru
Limited citizen participation	Argentina, Chile, Costa Rica, Guatemala, Mexico, Nicaragua, Panama
Economic regulation (tariffs, private sector participation etc.)	Brazil, Guatemala, Mexico, Panama
Enforcement of environmental norms	Costa Rica, Mexico, Panama
Managing the specificity of rural areas	Chile, Costa Rica, Panama, Peru
Managing geographically specific areas (islands, mountains, etc.)	Argentina, Chile, Costa Rica, Panama
Managing specificity of urban/metropolitan areas	Argentina, Chile, Panama

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## 7. Country profiles

*Argentina*

# ARGENTINA

### Acronyms

SSRH	Sub-Secretary for National Water Resources
ENOHSA	National Agency for Water and Sanitation Utilities
MINAGRI	Ministry of Agriculture
MINSAL	Ministry of Health
SADU	Secretary of Environment and Sustainable Development
OC	River Basin Organisation
INA	National Water Institute

### 1. Institutional mapping of water policy roles and responsibilities at central government level: allocation of roles across ministries and public agencies

#### A. Design and implementation of water policies

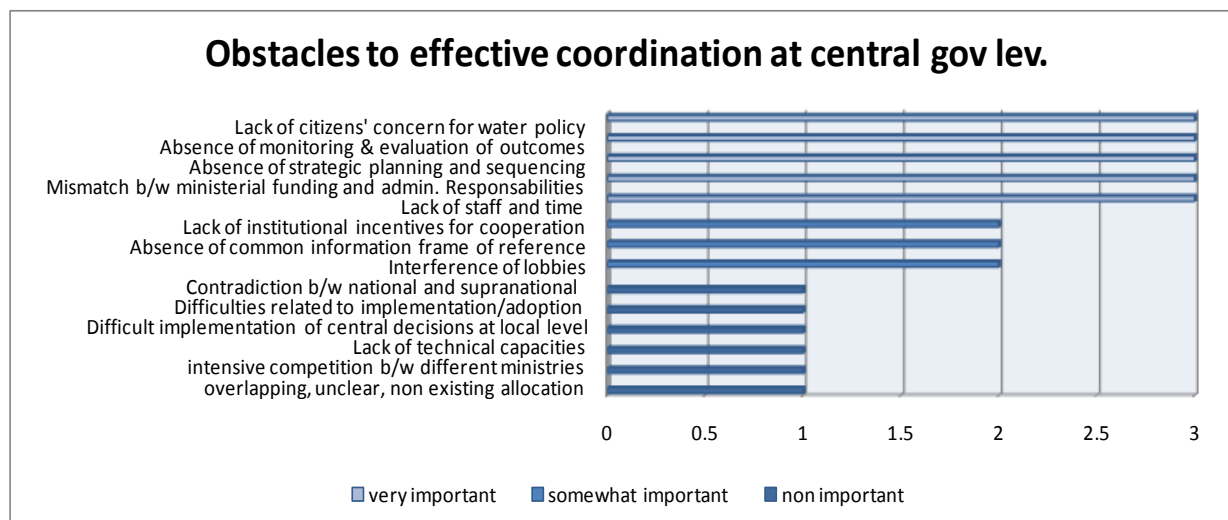
Roles	Areas	Water services			
		Water resources	Water supply		
Domestic	Agriculture		Industry		
Allocation of uses	Provinces	Provinces	Provinces	Provinces	Provinces
Quality of standards	Provinces	Ministry of Health	Provinces	Provinces	Provinces
Compliance of service delivery commitment	Provinces	Provinces	Provinces	Provinces	Provinces
Economic regulation (tariffs, etc.)	Provinces	Provinces	Provinces	Provinces	Provinces
Environmental regulation (enforcement of norms, etc.)	Provinces	Provinces	Provinces	Provinces and through minimum budgets from the Secretary of Environment and Sustainable Development	Provinces
Other	River Basin Organisations and Federal Water Council (COHIFE)		River Basin Organisations		

## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water services			Wastewater treatment
		Water resources	Water supply		
			Domestic	Agriculture	
Strategy, priority setting & planning (including infrastructure)	Sub-Secretary for National Water Resources (SSRH)	SSRH / National Agency for Water and Sanitation Utilities (ENOHSA)	Ministry of Agriculture		SSRH/ENOHSA
Policy-making and implementation	SSRH	SSRH/ENOHSA			SSRH/ENOHSA
Information, monitoring & evaluation	SSRH	SSRH/ENOHSA			ENOHSA
Stakeholders' engagement (citizens' awareness, etc.)	SSRH	SSRH/ENOHSA			
Others (specify)	River Basin Organisation/ Water National Institute				

## 2. Co-ordination of water policy making across ministries and public agencies at central government level

### A. Obstacles to horizontal co-ordination in water policy making



## B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water		X	
A line ministry			
A central agency for water related issues ?	X		Sub-Secretary for National Water Resources (SSRH)
An inter-ministerial body ? (Committee, commission)			Federal Water Council (COHIFE)
An inter-agency programme ?	X		River Basin and Streams Authority
A co-ordination group of experts			Argentina-Chile Working Group
An inter-ministerial mechanism for addressing territorial water concerns			SSRH promotes the creation of inter-provinces River Basin Committees while our political organisation is at the federal level. It is the goal of the Territorial Management National Plan (Secretary of Public Services)

### 3. Institutional mapping of water policy roles and responsibilities at sub-national level: allocation of roles across local and regional authorities

#### A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

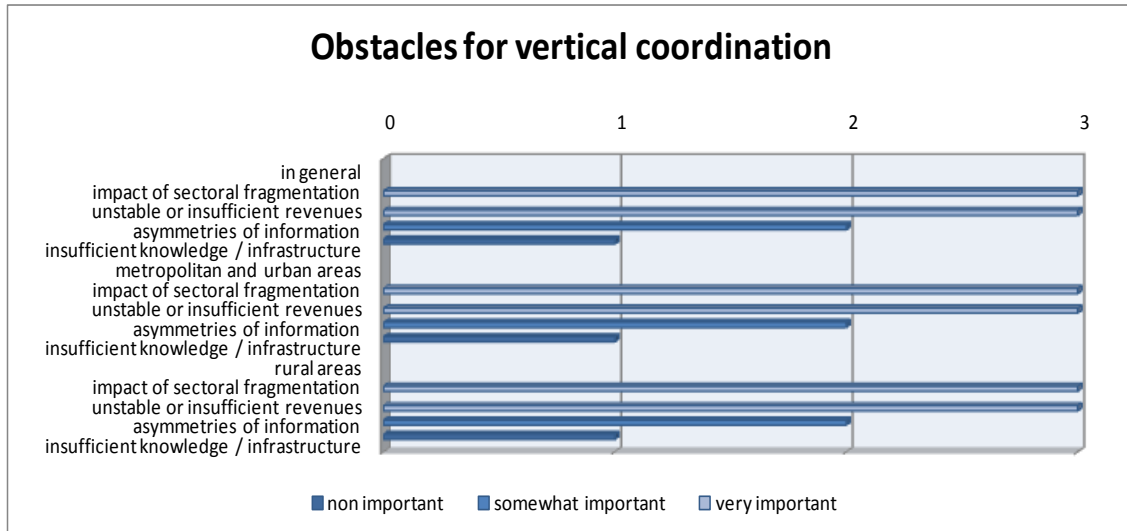
Actors at sub-national level	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Municipalities			X			X
Regions (provinces, states in federal countries, autonomous regions, cantons)			X	X	X	X
Inter-municipal bodies			X			X
Water specific bodies						
River basin organisations	X					
Other (specify)	X					

#### B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

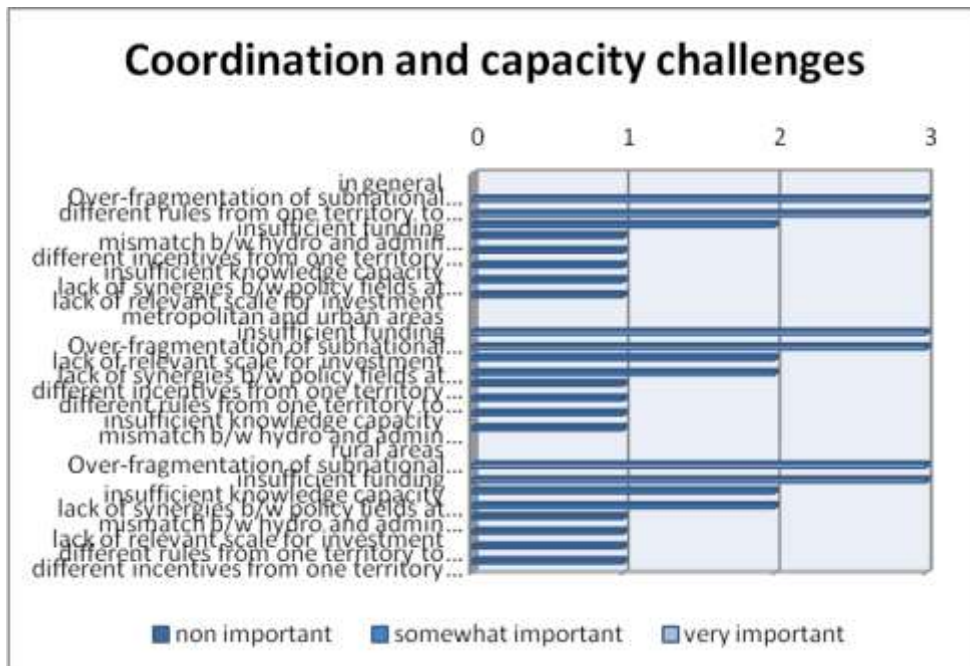
Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Allocation of uses		Provinces	Provinces and/or Municipalities	Provinces	Provinces	Provinces and/or Municipalities
Quality standards		Provinces	Provinces	Provinces	Provinces	Provinces
Compliance of service delivery commitment						
Economic regulation (tariffs etc.)		Provinces	Provinces	Provinces	Provinces	Provinces
Environmental regulation (enforcement of norms etc.)		Provinces	Provinces	Provinces	Provinces	Provinces
Control at sub-national level of national regulations' enforcement		Provinces	Provinces and/or Municipalities	Provinces	Provinces	Provinces and/or Municipalities

4. Co-ordination of water policy making between levels of government and across local actors

A. Obstacles to vertical co-ordination in water policymaking



B. Obstacles to capacity building and co-ordination at territorial level



### C. Existing mechanisms for co-ordinating water policy between levels o government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies	X		
Regulations for sharing roles between actors	X		
Co-ordination agency or commission		X	
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)	X		Agreements for specific issues
Intermediate bodies or actors (e.g. state territorial representatives)		X	
Financial transfers or incentives		X	Water Infrastructure Fund: finances water utilities in provinces, especially as a response to water emergencies
Performance indicators		X	
Shared databases	X		Digital Water Database available at SSRH. Groundwater Database. National Water website's database ( <a href="http://www.hidricosargentina.gov.ar">www.hidricosargentina.gov.ar</a> )
Sectoral conferences between central and sub-national water players	X		Federal Water Council workshops
Multi-sectoral conferences	X		COHIFE's Water Policy meeting
Consultation of private stakeholders (profit and non-profit actors)			
Other (specify)			

### D. Specific focus on selected mechanisms

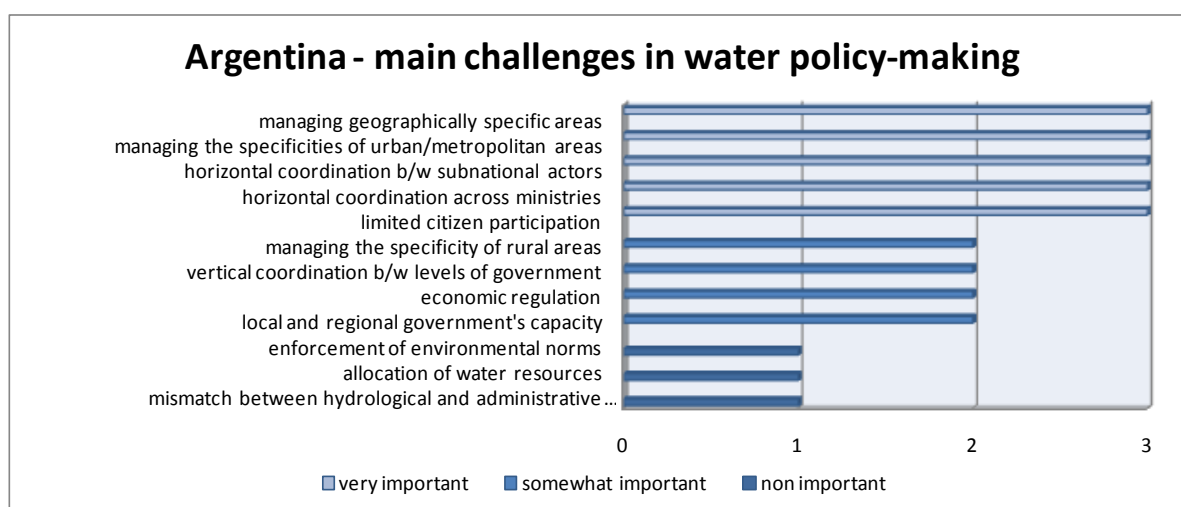
#### *a. Tools to manage the interface between actors at sub-national level*

Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration	X		
Inter-municipal specific body	X		ACRA (Rio Azul)
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)	X		Budget allocations for infrastructures
Historical rules and traditions			
Specific mechanisms for conflict resolution	X		
Informal co-operation around projects	X		
Joint financing	X		
Metropolitan or regional water district	X		AySA – APLA (Buenos Aires Metropolitan Area)
Other (specify)			

*b. Tools for capacity building at sub-national level*

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)	X			Concession contracts for operating hydroelectric power station as well as several surface water irrigation systems
Financial incentives (specify from whom and for what)				
Performance indicators and targets holding local governments accountable				
Citizens' participation				Promoted for some budget committees (Pilcomayo)
Involvement of civil society organisations	X			Invited to budget committees 'meetings to discuss specific issues
Databases (sharing information)	X			Attempted but not sustainably
Historical arrangements (water courts)	X			River bank inspection in the Mendoza province's irrigation areas
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			Many public bodies promote participation through workshops
Specific performance monitoring mechanisms for staff (teams or individuals)				
Other (specify)				

*5. Final assessment of remaining challenges*



Brazil

# BRASIL

## Acronyms

SRHU	Secretariat of Water Resources and Urban Environment
MMA	Ministry of Environment
ANA	National Water Agency
Mcidades	Ministry of Cities
MI	Ministry of National Integration
MAPA	Ministry of Agriculture, Livestock and Food Supply
MDIC	Ministry of Development, Industry and Foreign Trade of Brazil
CONAMA	National Council of Environment
MS	Ministry of Environment

1. Institutional mapping of water policy roles and responsibilities at central government level : allocation of roles across ministries and public agencies

### A. Design and implementation of water policies

Areas	Water resources	Water services			
		Water supply			Wasterwater Treatment
Roles		Domestic	Agriculture	Industry	
Allocation of uses	ANA				
Quality of standards	MMA/ CONAMA National Council of Environment	Ministry of Health - MS			
Compliance of service delivery commitment					
Economic regulation (tariffs, etc.)		ANA			
Environmental regulation (enforcement of norms, etc. )	MMA / CONAMA				
Others (specify)					

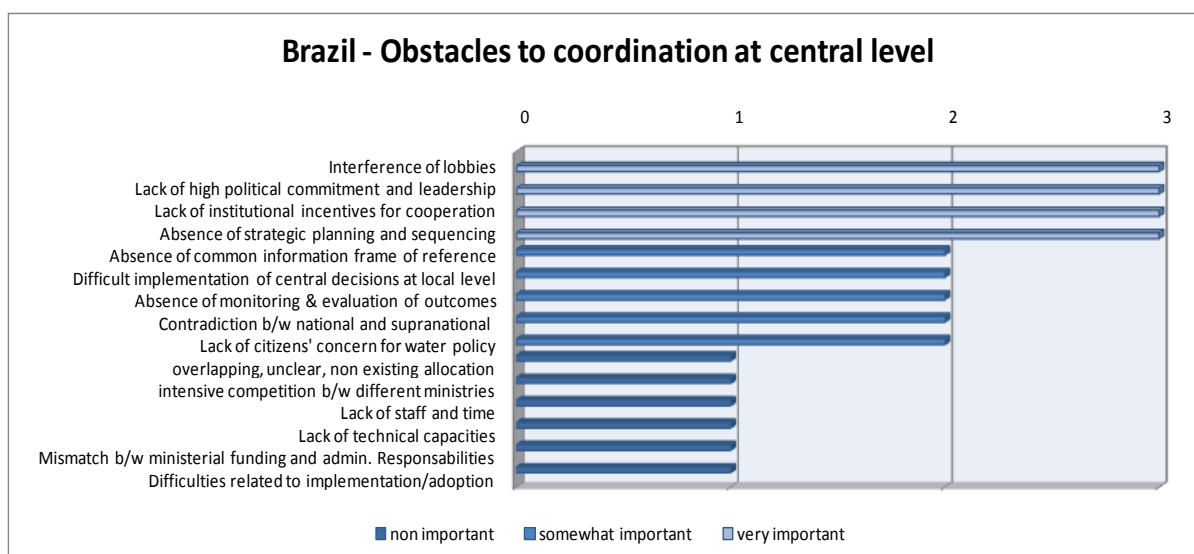


## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)		Secretariat of Water Resources and Urban Environment SRHU/Ministry of Environment - MMA	Ministry of Cities - MCidades	Ministry of National Integration – MI Ministry of Agriculture, Livestock and Food Supply - MAPA	MCidades, Ministry of Development, Industry and Foreign Trade of Brazil - MDIC	MCidades
Policy-making and implementation		SRHU/MMA- Policy-making ANA/National Water Agency - Implementation	MCidades	MI, MAPA	MCidades, MI, MDIC	MCidades
Information, monitoring & evaluation		SRHU/MMA	MCidades	MI, MAPA	MCidades, MI, MDIC	MCidades
Stakeholders engagement (citizens' awareness, etc.)		SRHU/MMA ANA	MCidades	MI, MAPA	MCidades, MI, MDIC	MCidades

## 2. Co-ordination of water policy making across ministries and public agencies at central government level

### A. Obstacles to horizontal co-ordination in water policymaking



## B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water		X	
A line ministry	X		Ministry of Environment – MMA <a href="http://www.mma.gov.br">www.mma.gov.br</a>
A central agency for water related issues	X		National Water Agency (ANA) <a href="http://www.ana.gov.br">www.ana.gov.br</a>
An inter-ministerial body (Committee, commission)		X	
An inter-agency programme		X	
A co-ordination group of experts		X	
An inter-ministerial mechanism for addressing territorial water concerns		X	

### 3. Institutional mapping of water policy roles and responsibilities at sub-national level : allocation of roles across local and regional authorities

#### A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

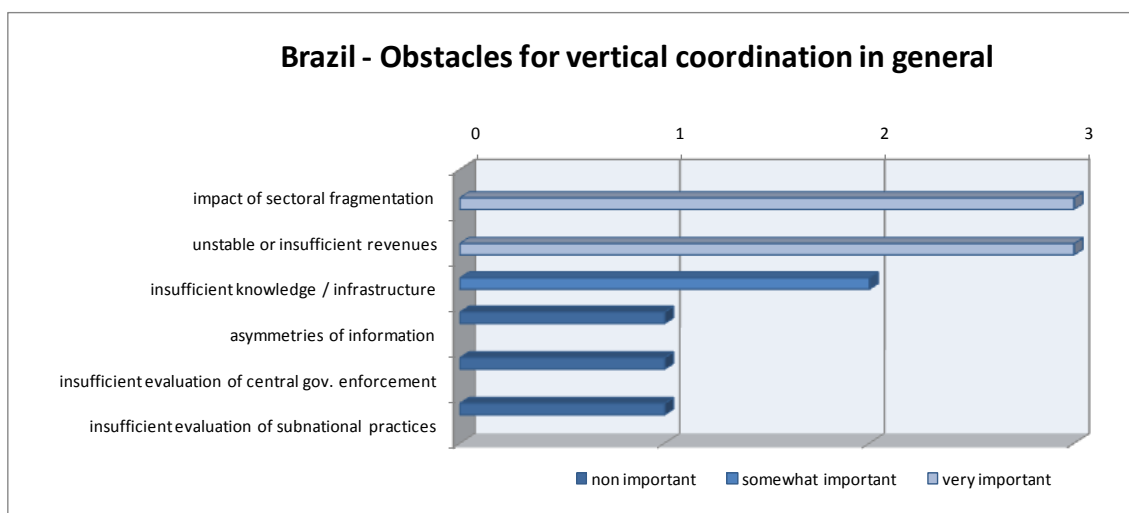
Actors at sub-national level	Areas	Water services			
		Water supply			Wastewater treatment
		Domestic	Agriculture	Industry	
Municipalities		Municipality	Water users	Municipality/ water users	Municipality
Regions (provinces, states in federal countries, autonomous regions, cantons)	State Secretariat of Water Resources/ or of Environment/ State agencies for water resources planning and management	State (in case of water utilities that serve more than one municipality)	Water users	State (in case of water utilities that serve more than one municipality)/ water users	State (in case of water utilities that serve more than one municipality)
Inter-municipal bodies					
Water specific bodies	State Water Resources Council				
River basin organisations					
Other (specify)	River Basin committee				

## B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

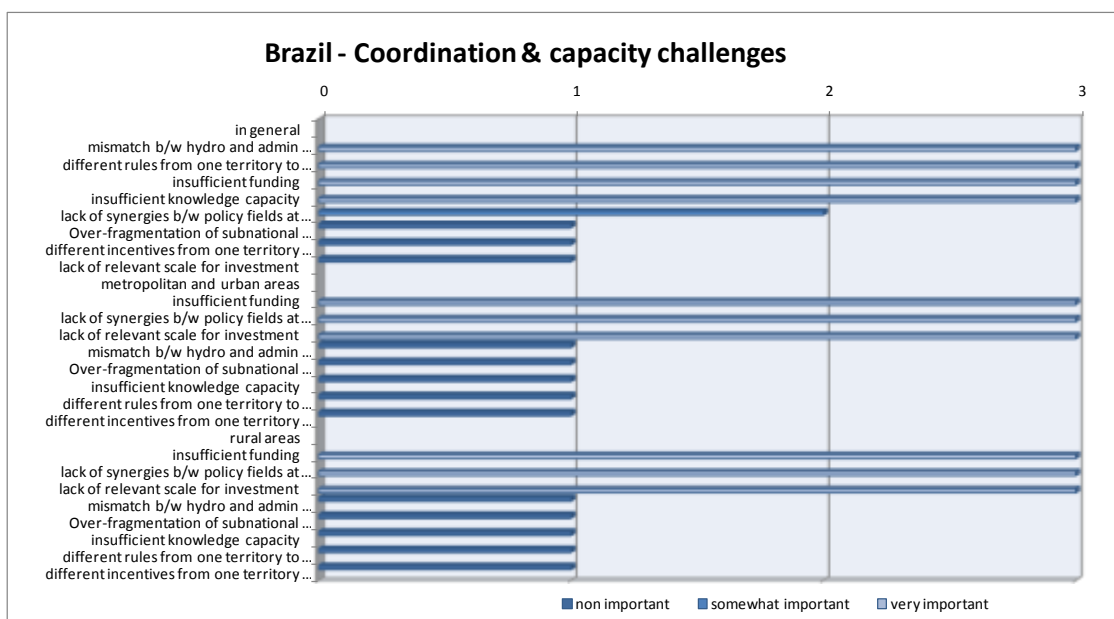
Roles	Areas	Water resources	Water services			
			Water supply			Wastewater treatment
			Domestic	Agriculture	Industry	
Allocation of uses		State Secretariat of Water Resources/ or of Environment/ State Agencies for water resources planning and Management	Municipality			
Quality standards		State Water Resources Council				
Compliance of service delivery commitment			Municipality		Municipality	Municipality
Economic regulation (tariffs etc.)			Municipality/ States or State/Municipal Regulatory Agencies		Municipality/ Regulatory Agencies	Municipality/ State Regulatory Agencies
Environmental regulation (enforcement of norms etc.)						
Control at sub-national level of national regulations' enforcement		State Environmental Council/ Municipal Environmental Council				

### 4. Co-ordination of water policy making between levels of government and across local actors

#### A. Obstacles to vertical co-ordination in water policymaking



## B. Obstacles to capacity building and co-ordination at territorial level



## C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies	X		Water Agency and River Basin Committee <a href="http://www.cbh.gov.br">www.cbh.gov.br</a>
Regulations for sharing roles between actors	X		Federal Constitution
Co-ordination agency or commission		X	
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)	X		Agreements among ANA, States and river basin committees (water pacts)
Intermediate bodies or actors (e.g. state territorial representatives)		X	
Financial transfers or incentives		X	In progress
Performance indicators		X	In progress
Shared databases	X		Common databases shared by ANA and the State of Rio de Janeiro and Minas Gerais
Sectoral conferences between central and sub-national water players	X		Several
Multi-sectoral conferences	X		Several
Consultation of private stakeholders (profit and non-profit actors)			

## D. Specific focus on selected mechanisms

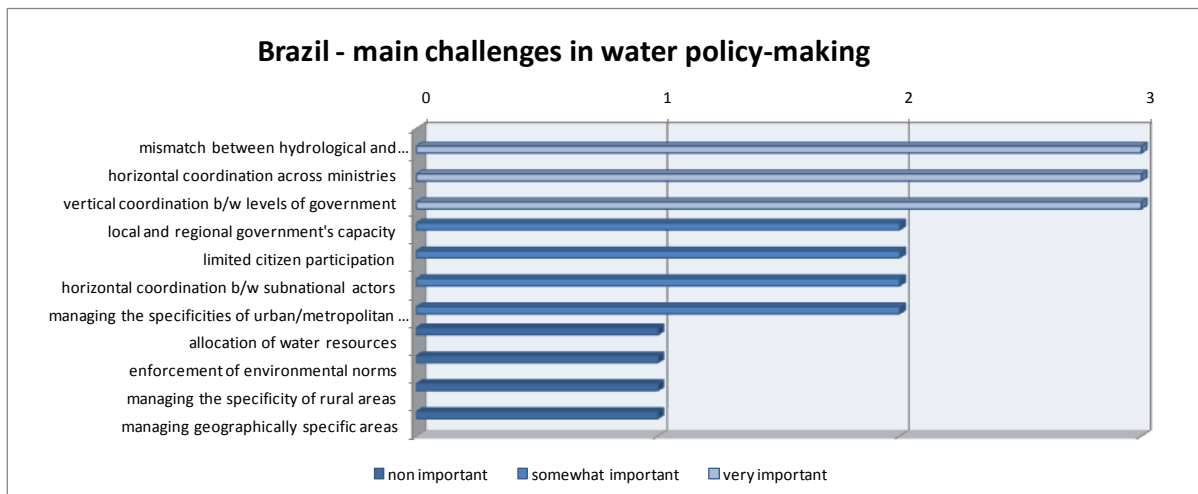
### a. Tools to manage the interface between actors at sub-national level

Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration	X		Intermunicipal Consortium – Consortium PCJ <a href="http://www.ana.gov.br">www.ana.gov.br</a>
Inter-municipal specific body		X	
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)		X	River Basin Committee <a href="http://www.cbh.gov.br">www.cbh.gov.br</a>
Historical rules and traditions		X	
Specific mechanisms for conflict resolution	X		
Informal co-operation around projects		X	
Joint financing		X	
Metropolitan or regional water district	X		State Water and Sanitation Company <a href="http://www.aesbe.org.br">www.aesbe.org.br</a>
Other (specify)			

### b. Tools for capacity building at sub-national level

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)	X			A few cases of municipal concessions for private companies to operate water and sanitation utilities
Financial incentives (specify from whom and for what)	X			Financial resources from water charges assigned to the municipalities for investments on water management, infra-structure design and sanitation infra-structure implementation
Performance indicators and targets holding local governments accountable		X		
Citizens' participation	X			River basin committees, sanitation and environmental municipal councils
Involvement of civil society organisations	X			
Databases (sharing information)		X		
Historical arrangements (water courts)		X		
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			There is a continued capacity building program conducted by ANA and river basin agencies on water management for the municipalities' technical staff
Specific performance monitoring mechanisms for staff (teams or individuals)		X		
Other (specify)				

5. Final assessment of remaining challenges



Chile

# CHILE

## Acronyms

CCC	Chilean Copper Commission, Ministry of Mining
CNE	National Energy Commission
CNR	National Irrigation Commission
CONAMA	National Commission for the Environment
MOP/DGA	Ministry of Public Utilities/ General Office of Waters
MOP/DOH	Ministry of Public Utilities / Office of Water Utilities
MINAGRI	Ministry of Agriculture
MINECO	Ministry of Economy
MINSALUD	Ministry of Health
PAPR-DOH	Rural Drinking Water Programme, Office of Water Utilities, ministry of Public Utilities
SISS	Superintendent's Office of Sanitation Services

### 1. Institutional mapping of water policy roles and responsibilities at central government level : allocation of roles across ministries and public agencies

#### A. Design and implementation of water policies

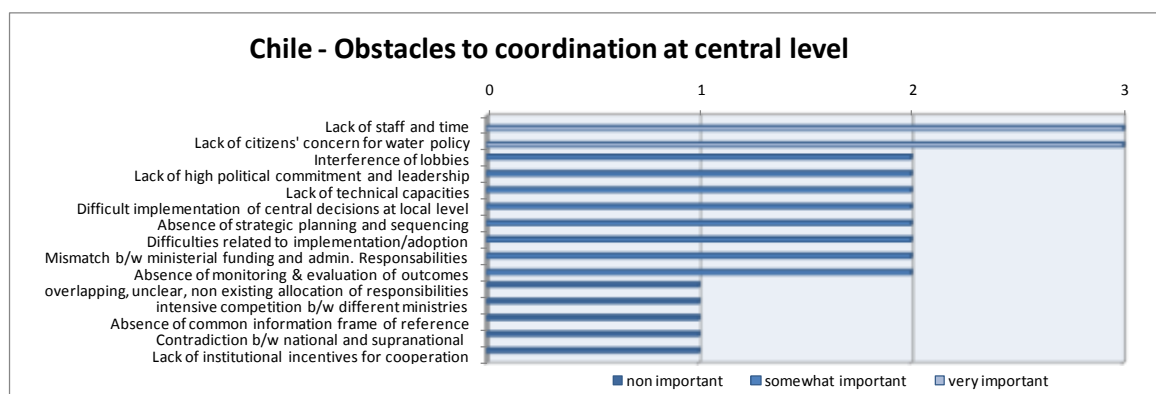
Areas	Water resources	Water services			Wasterwater Treatment
		Water supply			
Roles		Domestic	Agriculture	Industry	
Allocation of uses	General Office of Waters (DGA)	DGA	DGA	DGA	
Quality of standards	SISS CONAMA	SISS	MINAGRI and MOP	Ministry of Health	SISS
Compliance of service delivery commitment		Sanitation Companies			Sanitation companies at the urban level
Economic regulation (tariffs, etc.)	DGA	SISS at the urban level Proper committees at the rural level	National Irrigation Commission's Ministries Council	Ministry of Economy	SISS
Environmental regulation (enforcement of norms, etc )	CONAMA	CONAMA, SISS	MINAGRI	Ministry of Health	SISS
Others (specify)					

## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)	MOP through: DGA/ DOH	SISS DOH MOP	Minagri through CNR and DOH	Hydroelectricity: CNE Mining: Chilean Copper Commission, Ministry of Mining	Urban: SISS Rural: MOP, Parliament is reviewing a law initiative to institutionalize wastewater treatment	
Policy-making and implementation	MOP, DGA	Urban: SISS Rural: MOP - DOH	Minagri, Executive Secretary of CNR, MOP-DOH		Urban: SISS Rural: MOP, through DOH	
Information, monitoring & evaluation	DGA	Urban: SISS Rural: PAPP - DOH	Minagri CNR		Urban: SISS  Rural: Office of Water Utilities, Ministry of Public Utilities	
Stakeholders' engagement (citizens' awareness, etc.)	DGA, National Commission for the Environment, DOH, CNR	Urban: SISS Rural: Sanitation Companies - DOH	Minagri CNR	Hydroelectricity CNE Mining: Chilean Copper Commission, Ministry of Mining	Urban: SISS Rural: Limited but town councils and regional government can be mentioned	
Others (specify)	Experts organizations	Sanitation Companies	Irrigation Associations	Private Associations	Sanitation Companies	

## 2. Co-ordination of water policy making across ministries and public agencies at central government level

### A. Obstacles to horizontal co-ordination in water policy making





## B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water		X	
A line ministry	X		Ministry of Public Utilities ( <a href="http://www.mop.cl">www.mop.cl</a> ), through the General Office of Waters ( <a href="http://www.dga.cl">www.dga.cl</a> ) and the Office of Water Utilities
A central agency for water related issues ?	X		MOP, DGA ( <a href="http://www.dga.cl">www.dga.cl</a> )
An inter-ministerial body ? (Committee, commission)	X		National Irrigation Commission's Ministries Council, implemented by law
An inter-agency programme ?		X	
A co-ordination group of experts			
An inter-ministerial mechanism for addressing territorial water concerns	X		Regional Water Committee and/or at the river basin level Work Committees with users engaged in large irrigation utilities Minagri - MOP

### 3. Institutional mapping of water policy roles and responsibilities at sub-national level : allocation of roles across local and regional authorities

#### A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

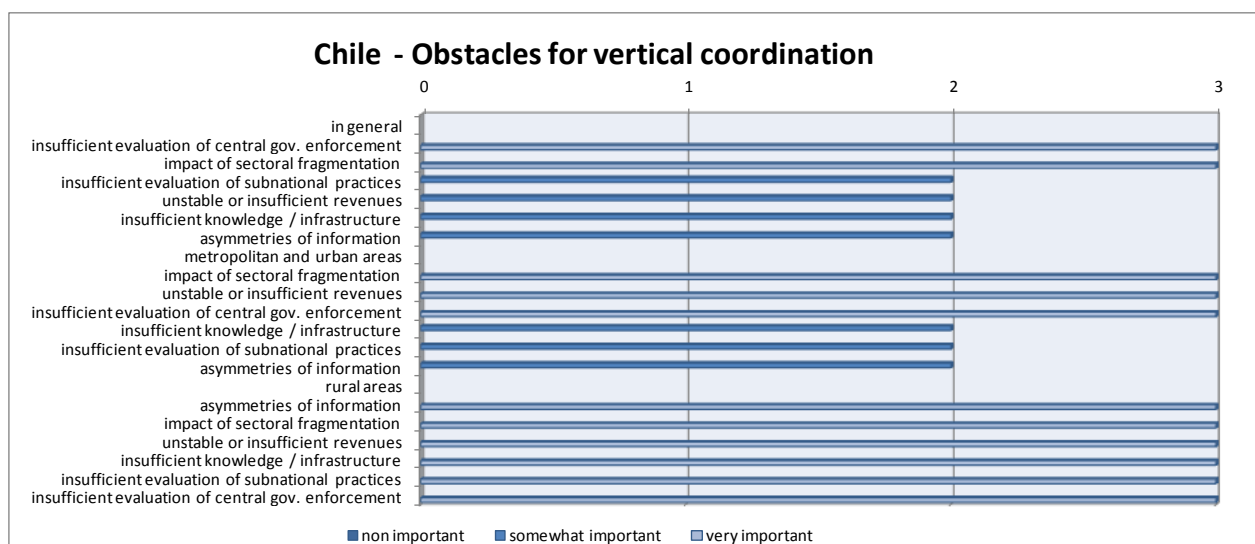
Actors at sub-national level	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Municipalities	No	No	No	No	Yes, at the rural level	
Regions (provinces, states in federal countries, autonomous regions, cantons)	No	No	No	No	No	
Inter-municipal bodies	No	No	No	No	No	
Water specific bodies	No	No	No	No	No	
River basin organisations	No	No	No	No	No	
Other (specify)	DGA, CONAMA	SISS, DOH, APR	DGA, CNR, INDAP, Minagri, MOP-DOH	DGA	SISS	

#### B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

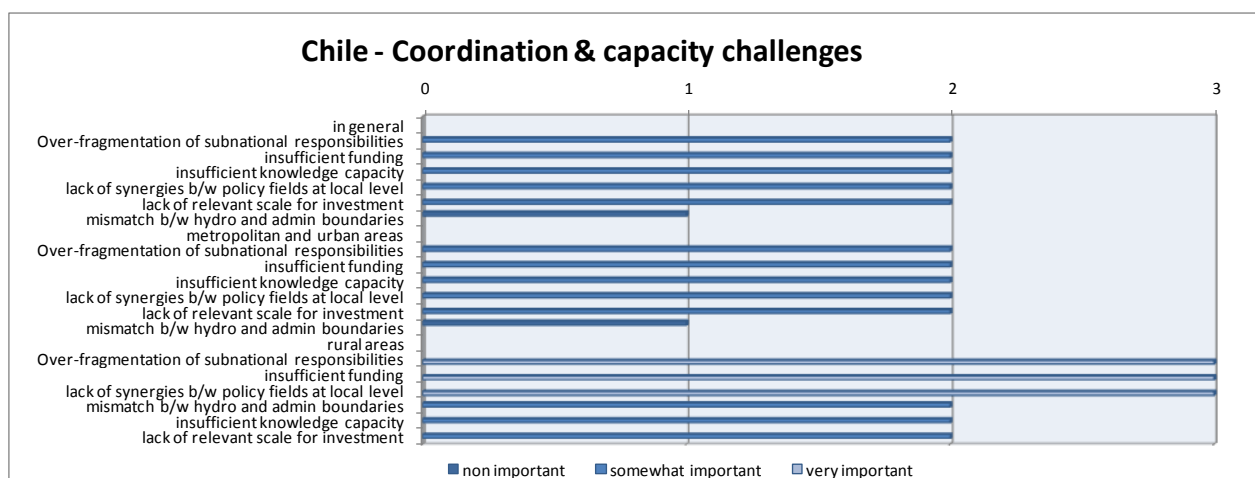
Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Allocation of uses	DGA	SISS APR MINSAL	DGA	DGA	SISS	
Quality standards	DGA CONAMA	SISS MINSAL	MINAGRI	MINSAL	SISS	
Compliance of service delivery commitment	DGA	SISS APR				
Economic regulation (tariffs etc.)	DGA	SISS APR		Ministry of Economy	SISS APR	
Environmental regulation (enforcement of norms etc.)	DGA CONAMA	SISS APR	MINAGRI	CONAMA	SISS APR	
Control at sub-national level of national	DGA CONAMA	SISS	MINAGRI	DGA	SISS	

#### 4. Co-ordination of water policy making between levels of government and across local actors

##### A. Obstacles to vertical co-ordination in water policymaking



##### B. Obstacles to capacity building and co-ordination at territorial level



##### C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies		X	No River Basin Organisation exist
Regulations for sharing roles between actors		X	
Co-ordination agency or commission		X	
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)	X		Regional development strategies
Intermediate bodies or actors (e.g. state territorial representatives)		X	
Financial transfers or incentives	X		Planning agreements
Performance indicators		X	
Shared databases			Water Committees in some river basins (informal organisations)

Sectoral conferences between central and sub-national water players	X	
Multi-sectoral conferences		
Consultation of private stakeholders (profit and non-profit actors)	X	Citizen participation

#### D. Specific focus on selected mechanisms

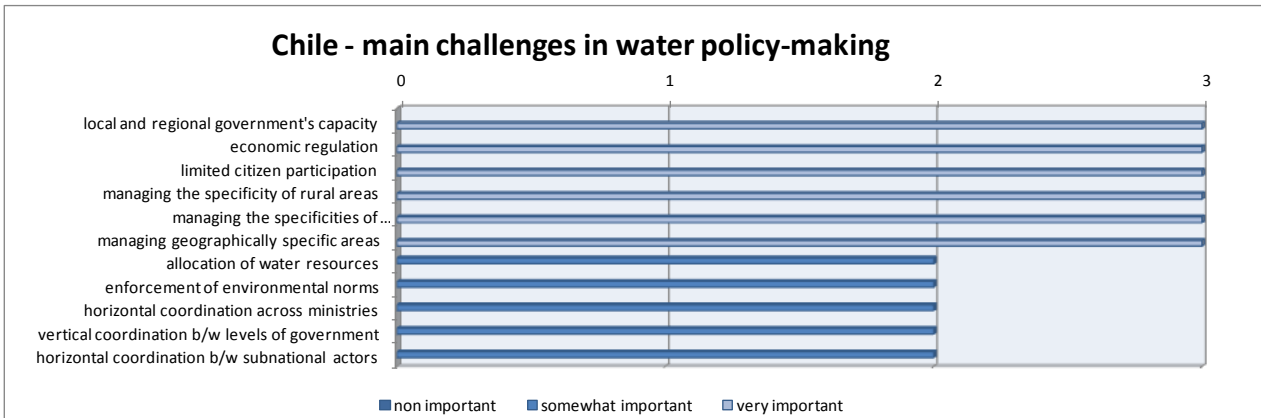
##### *a. Tools to manage the interface between actors at sub-national level*

Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration		X	
Inter-municipal specific body		X	
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)		X	
Historical rules and traditions		X	
Specific mechanisms for conflict resolution		X	
Informal co-operation around projects	X		
Joint financing	X		Users contribution in irrigation
Metropolitan or regional water district		X	
Other (specify)			

##### *b. Tools for capacity building at sub-national level*

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)	X			Support from Sanitation Companies for water supply in rural areas
Financial incentives (specify from whom and for what)	X			Regional development funds
Performance indicators and targets holding local governments accountable		X		
Citizens' participation	X			Water Users Organisations
Involvement of civil society organisations		X		
Databases (sharing information)		X		
Historical arrangements (water courts)		X		
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			Several isolated initiatives in some regions
Specific performance monitoring mechanisms for staff (teams or individuals)		X		
Other (specify)				

5. Final assessment of remaining challenges



# COSTA RICA

## Acronyms

MINAET	Ministry en Environment, Energy and Telecommunications
MS	Ministry of Health
MAG	Ministry of Agriculture and Livestock
AyA	Costa-rican Institute of Aqueducts and Sewer Systems
ICE	Costa-Rican Institute of Electricity
SENARA	National Service of Ground Waters, Irrigation and Drainage
IDA	Institute of Agricultural Development
JASEC	Joint-Administration for the Electric Service of Cartago
ESPH	Public Services Company of Heredia
CGR	General Finance Office of the Republic / Contraloría General de la República
ASADAS	Associations of Municipal Aqueducts and Sewer Systems Administrations

### 1. Institutional mapping of water policy roles and responsibilities at central government level : allocation of roles across ministries and public agencies

#### A. Design and implementation of water policies

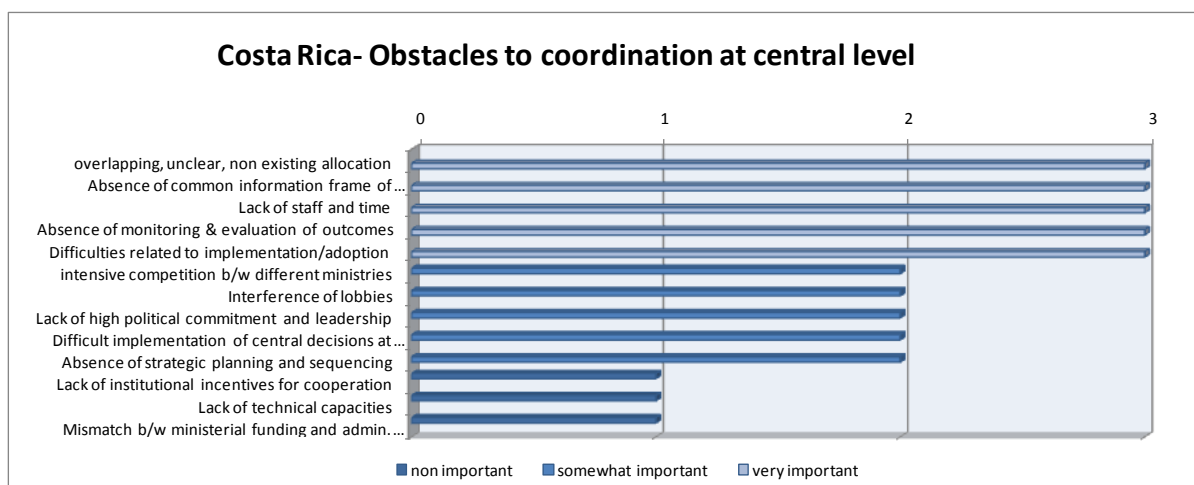
Areas	Water resources	Water services			
		Water supply			Wasterwater Treatment
Roles		Domestic	Agriculture	Industry	
Allocation of uses	MINAET	MINAET	MINAET	MINAET	
Quality of standards	MINAET	MS		MINAET	MINAET
Compliance of service delivery commitment	MINAET AyA (and ASADAS)	AyA ASADAS	SENARA	AyA ESPH Municipalities	MS AyA ESPH Municipalities
Economic regulation (tariffs, etc.)	ARESEP	ARESEP	ARESEP	ARESEP	ARESEP
Environmental regulation (enforcement of norms, etc. )	MINAET	MINAET	MINAET	MINAET	MINAET
Others (specify)					

## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)		MINAET	MINAET IDA	MINAET AyA	MINAET MS AyA	
Policy-making and implementation		MINAET	MINAET MAG IDA	MINAET AyA	MINAET MS AyA For implementation, also ESPH and Municipalities	
Information, monitoring & evaluation		Same organizations and CGR	Same organizations and CGR	Same organizations and CGR	Same organizations and CGR	
Stakeholders engagement (citizens' awareness, etc.)		Consultation and workshops with NGOs				

## 2. Co-ordination of water policy making across ministries and public agencies at central government level

### A. Obstacles to horizontal co-ordination in water policy making



## B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water		X	
A line ministry	X		Ministry of Environment, Energy and Telecommunications, MINAET, Office of Water ( <a href="http://www.drh.go.cr">www.drh.go.cr</a> )
A central agency for water related issues	X		As above
An inter-ministerial body (Committee, commission)	X		Minister, Vice-Minister, Office of Water and also various specific committees and councils such as Waters Advisory Organ, Waters Bodies, Spilling Tax Management, Hydrant Management, National Committee for Water and Meteorology
An inter-agency programme	X		Guanacaste province's Water Plan
A co-ordination group of experts	X		National Committee for Water and Meteorology
An inter-ministerial mechanism for addressing territorial water concerns			

### 3. Institutional mapping of water policy roles and responsibilities at sub-national level : allocation of roles across local and regional authorities

#### Allocation of roles and responsibilities in water policy design and implementation at territorial level

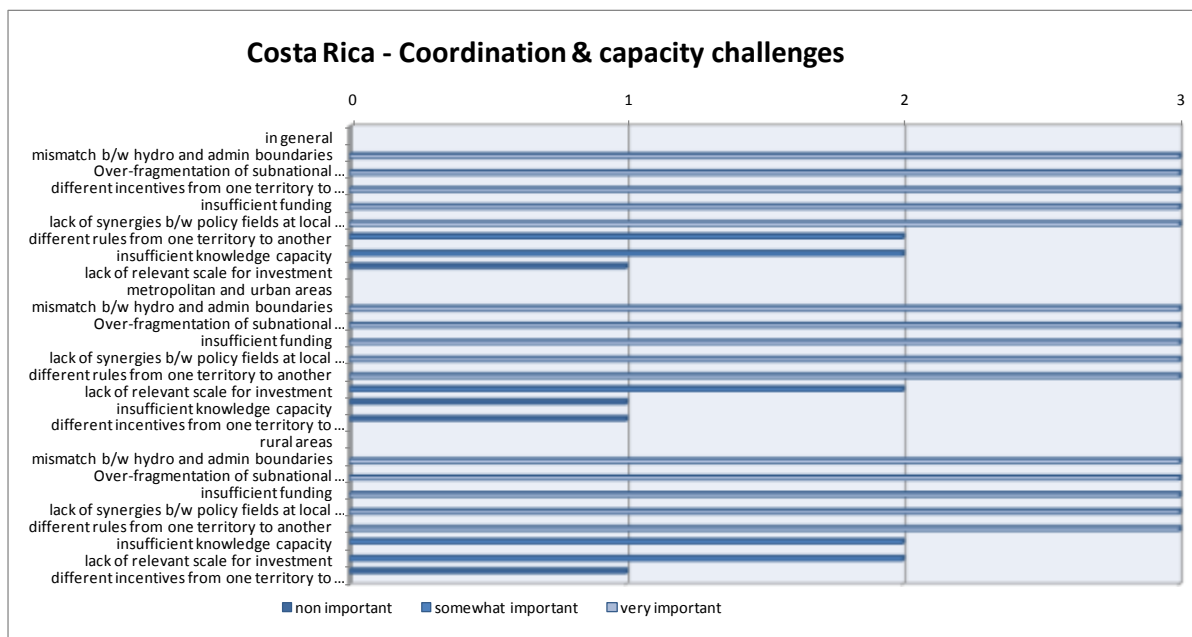
Actors at sub-national level	Water resources	Water services			
		Water supply			Wastewater treatment
		Domestic	Agriculture	Industry	
Municipalities	N/A	Service only			Service only
Regions (provinces, states in federal countries, autonomous regions, cantons)	N/A				
Inter-municipal bodies	N/A				
Water specific bodies	N/A				
River basin organisations	Only one, by law, for the river basin management, not water				
Other (specify)					

### 4. Co-ordination of water policy making between levels of government and across local actors

#### A. Obstacles to vertical co-ordination in water policymaking

*No data available*

B. Obstacles to capacity building and co-ordination at territorial level



C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

*No data available*

D. Specific focus on selected mechanisms

*a. Tools to manage the interface between actors at sub-national level*

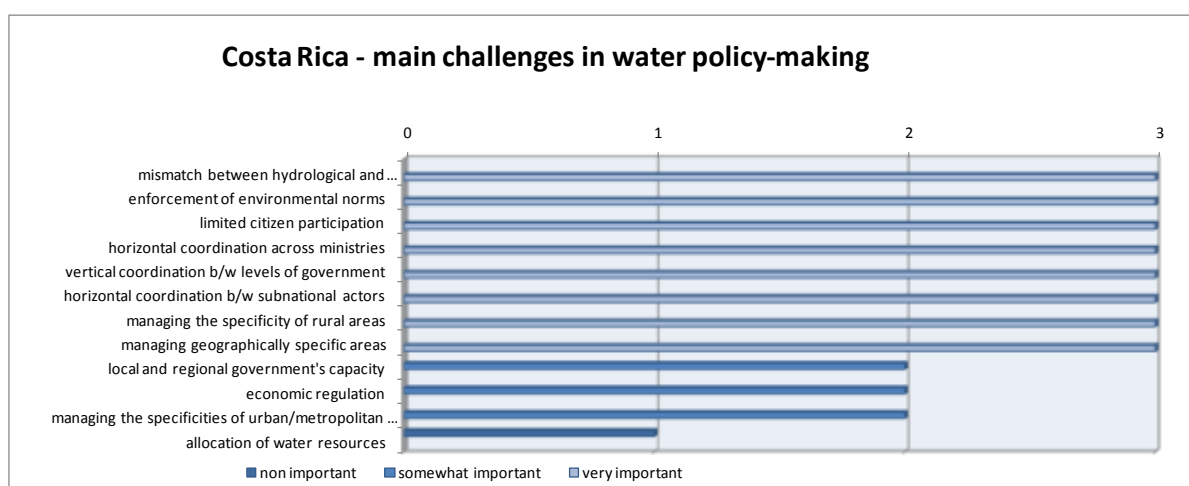
Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration	X		
Inter-municipal specific body			
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)		X	
Historical rules and traditions	X		
Specific mechanisms for conflict resolution	X		
Informal co-operation around projects	X		
Joint financing	X		
Metropolitan or regional water district	X		
Other (specify)			



*b. Tools for capacity building at sub-national level*

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)	X			Hydroelectricity
Financial incentives (specify from whom and for what)	X			
Performance indicators and targets holding local governments accountable	X			
Citizens' participation	X			
Involvement of civil society organisations	X			
Databases (sharing information)	X			
Historical arrangements (water courts)	X			
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			
Specific performance monitoring mechanisms for staff (teams or individuals)	X			
Other (specify)				

*5. Final assessment of remaining challenges*



Cuba

# CUBA

## 1. Institutional mapping of water policy roles and responsibilities at central government level : allocation of roles across ministries and public agencies

### A. Design and implementation of water policies

Areas	Water resources	Water services			Wastewater Treatment
		Water supply			
Roles		Domestic	Agriculture	Industry	
Allocation of uses	INRH	INRH	INRH	INRH	INRH
Quality of standards	INRH	EAA	EAA	EAA	EAA
Compliance of service delivery commitment	INRH	EAA	EAA	EAA	EAA
Economic regulation (tariffs, etc.)	INRH Ministry of Finance and Pricing (MFP)				
Environmental regulation (enforcement of norms, etc.)	INRH Ministry of Science, Technology and the Environment (CITMA) Ministry of Public Health (MINSAP)				
Others (specify)					

### B. Institutional mapping for quality standards and regulation

Areas	Water resources	Water services			Wastewater treatment
		Water supply			
Roles		Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)	National Institute of Natural Resources (INRH)	Aqueduct and Sewer System Company (EAH)	Water use /exploitation Company	EAA EAH	EAA
Policy-making and implementation	INRH				
Information, monitoring & evaluation	INRH	EAA	EAH	EAA EAH	EAA
Stakeholders' engagement (citizens' awareness, etc.)	INRH	INRH Provinces	Ministry of Agriculture (MINAG)	Ministry of Basic Industry (MINBAS)	INRH Provinces
Others (specify)					

## 2. Co-ordination of water policy making across ministries and public agencies at central government level

### A. Obstacles to horizontal co-ordination in water policy making

### B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water	X		INRH <a href="http://www.hidroweb.hidro.cu">www.hidroweb.hidro.cu</a>
A line ministry		X	
A central agency for water related issues		X	
An inter-ministerial body (Committee, commission)	X		Water Resources National Council (CNCH) Drought Governmental Group Civil Defense Natural Disaster work group (EMN – DC)
An inter-agency programme		X	
A co-ordination group of experts	X		Advisory Technical Council - INRH
An inter-ministerial mechanism for addressing territorial water concerns			Ministries Council, CNCH, EMN-DC

## 3. Institutional mapping of water policy roles and responsibilities at sub-national level : allocation of roles across local and regional authorities

### A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

Actors at sub-national level	Water resources	Water services			
		Water supply			Wastewater treatment
		Domestic	Agriculture	Industry	
Municipalities	INRH Companies	EAA	EAH	EAA-EAH	
Regions (provinces, states in federal countries, autonomous regions, cantons)	INRH's provincial delegations	EAA	EAH	EAA-EAH	
Inter-municipal bodies					
Water specific bodies					
River basin organisations	River Basin Territorial Council (CTCH)				
Other (specify)					

## B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Allocation of uses		INRH delegations				
Quality standards		INRH delegations and MINSAP provincial delegations	EAA	EAH	EAS - EAH	EAA
Compliance of service delivery commitment						
Economic regulation (tariffs etc.)						
Environmental regulation (enforcement of norms etc.)		INRH delegations, CIMTA delegations, MINSAP				
Control at sub-national level of national regulations' enforcement		INRH delegations				
Other (specify)						

### 4. Co-ordination of water policy making between levels of government and across local actors

#### A. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies	X		
Regulations for sharing roles between actors	X		
Co-ordination agency or commission		X	
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)	X		
Intermediate bodies or actors (e.g. state territorial representatives)	X		
Financial transfers or incentives	X		
Performance indicators	X		
Shared databases	X		
Sectoral conferences between central and sub-national water players	X		
Multi-sectoral conferences	X		
Consultation of private stakeholders (profit and non-profit actors)	X		
Other (specify)			

#### B. Specific focus on selected mechanisms

##### a. Tools to manage the interface between actors at sub-national level

Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration	X		
Inter-municipal specific body	X		
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)	X		
Historical rules and traditions		X	
Specific mechanisms for conflict resolution	X		
Informal co-operation around projects	X		
Joint financing	X		
Metropolitan or regional water district	X		
Other (specify)			

*b. Tools for capacity building at sub-national level*

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)		X		
Financial incentives (specify from whom and for what)		X		
Performance indicators and targets holding local governments accountable	X			
Citizens' participation	X			
Involvement of civil society organisations	X			
Databases (sharing information)	X			
Historical arrangements (water courts)		X		
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			
Specific performance monitoring mechanisms for staff (teams or individuals)	X			
Other (specify)				

*Dominican Republic*

# DOMINICAN REPUBLIC

## Acronyms

MARN	Ministry of Environment and Natural Resources
INDRHI	National Institute of Water Resources
INAPA	National Institute of Potable Water and Sewer Systems - Established by law no. 5994 in 1962
MS	Ministry of Public Health and Social Security
CAPS	Drinking Water and Sanitation Corporations: = CAASD; CORAASAN; CORAAMOCA; CORAAPLATA; COAAROM
CAASD	Santo Domingo Aqueducts and Sewer Systems Corporation, established by law no. 498 in 1973
CORAASAN	Santiago Aqueducts and Sewer Systems Corporation, established by law no. 582 in 1977
CORAAMOCA	Moca Aqueducts and Sewer Systems Corporation, established by law no. 89 in 1997
CORAAPLATA	Puerto Plata Aqueducts and Sewer Systems Corporation, established by law no. 142 in 1997
COAAROM	Romana Aqueducts and Sewer Systems Corporation, established by law no. 385 in 1999

### 1. Institutional mapping of water policy roles and responsibilities at central government level : allocation of roles across ministries and public agencies

#### A. Design and implementation of water policies

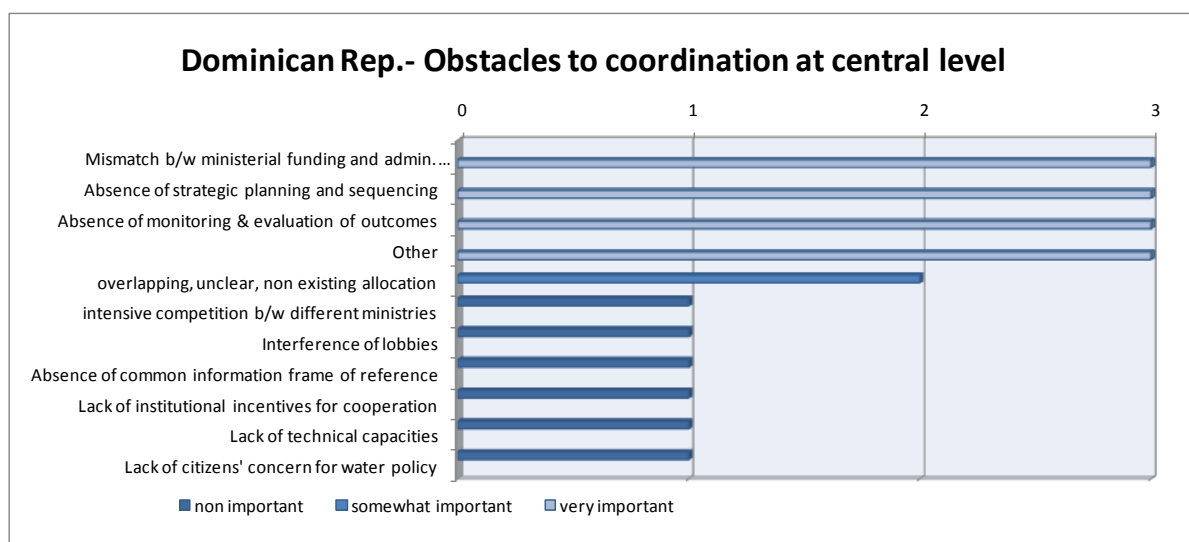
Areas	Water resources	Water services			Wasterwater Treatment
		Water supply			
Roles		Domestic	Agriculture	Industry	
Allocation of uses	INDRHI	INDRHI	INDRHI	INDRHI	INDRHI
Quality of standards	Ministry of Environment, Natural Resources  Ministry of Public Health and Social Security	Ministry of Environment, Natural Resources  Ministry of Public Health and Social Security	Ministry of Environment, Natural Resources  Ministry of Public Health and Social Security		Ministry of Environment, Natural Resources  Ministry of Public Health and Social Security
Compliance of service delivery commitment	INDRHI	INAPA	INDRHI		INAPA
Economic regulation (tariffs, etc.)	INDRHI	INAPA, Drinking Water and Sanitation Corporations (CAASD, CORAASAN, CORAAPLATA, COAAROM)	INDRHI and Irrigation Users Boards	INAPA, INDRHI	INAPA, Drinking Water and Sanitation Corporations (CAASD, CORAASAN, CORAAPLATA, COAAROM)
Environmental regulation (enforcement of norms, etc.)	Ministry of Environment, Natural Resources	Ministry of Environment, Natural Resources  Ministry of Public Health and Social Security	Ministry of Environment, Natural Resources	Ministry of Environment, Natural Resources  Ministry of Public Health and Social Security	Ministry of Environment, Natural Resources  Ministry of Public Health and Social Security
Others (specify)	INDRHI	INDRHI	INDRHI	INDRHI	

## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)	Ministry of Environment and Natural Resources INDRHI	Ministry of Public Health and Social Assistance INAPA Ministry of Environment and Natural Resources	INDRHI	Ministry of Public Health and Social Assistance INAPA Ministry of Environment and Natural Resources	Ministry of Public Health and Social Assistance INAPA	
Policy-making and implementation	Ministry of Environment and Natural Resources INDRHI	Ministry of Public Health and Social Assistance INAPA	INDRHI	Ministry of Public Health and Social Assistance INAPA Ministry of Environment and Natural Resources		
Information, monitoring & evaluation	INDRHI		INDRHI			
Stakeholders engagement (citizens' awareness, etc.)	INDRHI		INDRHI			
Others (specify)	INDRHI	INDRHI	INDRHI	INDRHI		

## 2. Co-ordination of water policy making across ministries and public agencies at central government level

### A. Obstacles to horizontal co-ordination in water policy making



## B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water		X	
A line ministry	X		Ministry of Environment and Natural Resources <a href="http://www.medioambiente.gov.do">www.medioambiente.gov.do</a>
A central agency for water related issues	X		National Institute of Water Resources (INDRHI) <a href="http://www.indrhi.gov.do">www.indrhi.gov.do</a> Eng. Francisco T. Rodriguez, Exec. Director
An inter-ministerial body (Committee, commission)	X		Dam Management Committee, presided by INDRHI (no legal status nor legal mandate)
An inter-agency programme	X		
A co-ordination group of experts		X	
An inter-ministerial mechanism for addressing territorial water concerns		X	

### 3. Institutional mapping of water policy roles and responsibilities at sub-national level: allocation of roles across local and regional authorities

#### A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

***(Not Available) – Note of respondents:***

“These boxes have not been filled. We interpreted that tasks or responsibilities contained in the table above correspond to a form of regional government or sub-national or regional official delegation, with responsibility for the formulation and implementation.”

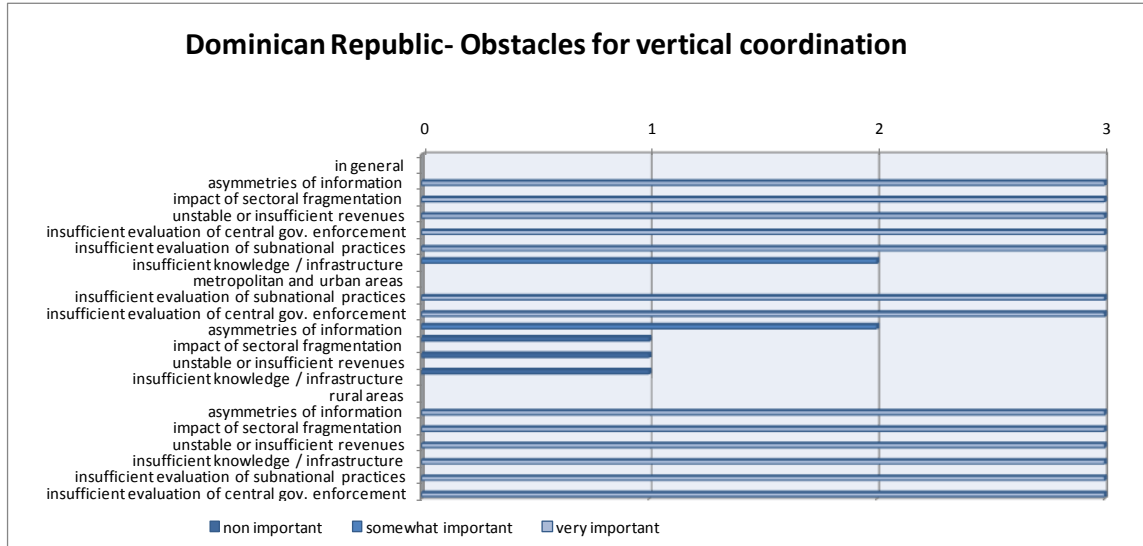
#### B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

***(Not Available) – There are no roles in water sector at local or regional level.***



4. Co-ordination of water policy making between levels of government and across local actors

A. Obstacles to vertical co-ordination in water policymaking



B. Obstacles to capacity building and co-ordination at territorial level

C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies		X	
Regulations for sharing roles between actors		X	
Co-ordination agency or commission		X	
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)		X	
Intermediate bodies or actors (e.g. state territorial representatives)		X	
Financial transfers or incentives		X	
Performance indicators		X	
Shared databases		X	
Sectoral conferences between central and sub-national water players		X	
Multi-sectoral conferences		X	
Consultation of private stakeholders (profit and non-profit actors)	X		Exclusively in the case of irrigation area managed by INDRHI
Other (specify)			

## D. Specific focus on selected mechanisms

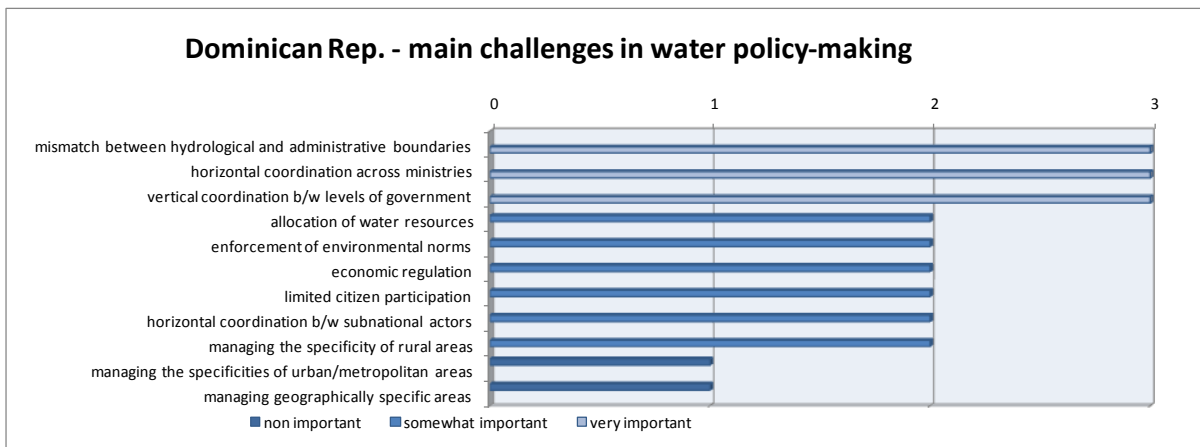
### a. Tools to manage the interface between actors at sub-national level

Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration	X		
Inter-municipal specific body		X	
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)		X	
Historical rules and traditions		X	
Specific mechanisms for conflict resolution	X		Irrigation Committee
Informal co-operation around projects	X		In some cases in rural areas, small scale investment projects
Joint financing	X		In some cases in rural areas, small scale investment projects
Metropolitan or regional water district		X	Irrigation district (not water district)
Other (specify)			

### b. Tools for capacity building at sub-national level

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)	X			Administration contract for water meters installation, and billing and charges defaults with a (foreign) private company for the Santo Domingo aqueduct
Financial incentives (specify from whom and for what)		X		
Performance indicators and targets holding local governments accountable		X		
Citizens' participation	X			Irrigation Committee
Involvement of civil society organisations	X			Irrigation Committee
Databases (sharing information)	X			Between INDRHI and the National Office of Meteorology
Historical arrangements (water courts)		X		
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			
Specific performance monitoring mechanisms for staff (teams or individuals)		X		
Other (specify)				

5. Final assessment of remaining challenges



# EL SALVADOR

## Acronyms

MAG	Ministry of Agriculture and Livestock
MH	Ministry of Treasury

### 1. Institutional mapping of water policy roles and responsibilities at central government level: allocation of roles across ministries and public agencies

#### A. Design and implementation of water policies

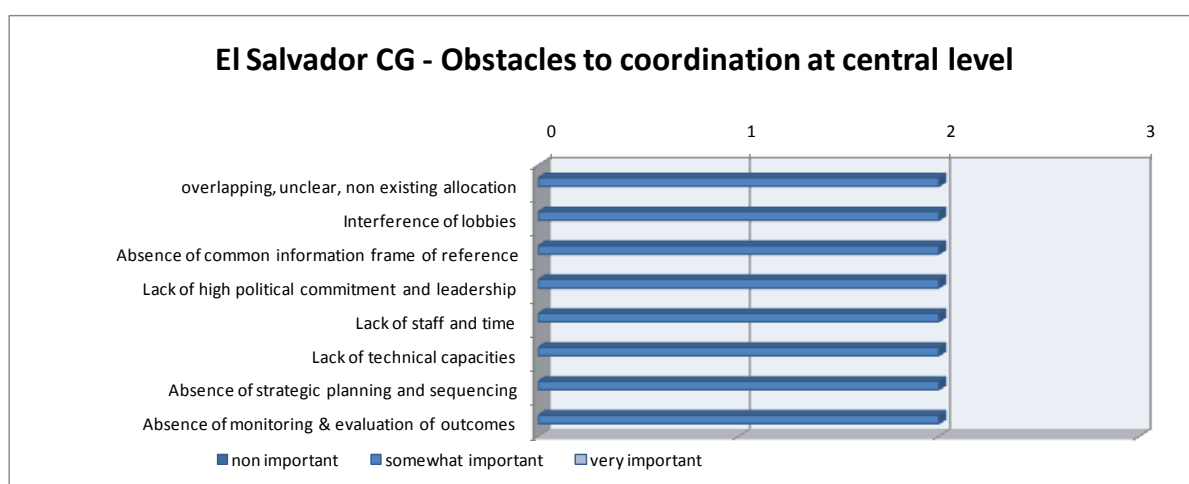
Roles	Areas	Water services			
		Water supply			Wastewater Treatment
	Water resources	Domestic	Agriculture	Industry	
Allocation of uses	GOES		MAG		
Quality of standards	MARN	ANDA	MARN	MARN	ANDA
Compliance of service delivery commitment	GOES, MARN, ANDA MAG Local governments	ANDA	MAG		
Economic regulation (tariffs, etc.)	Ministry of Treasury (MH), Legislative assembly, GOES	ANDA	MAG MH Legislative Assembly, GOES		ANDA, MH, Legislative Assembly, GOES
Environmental regulation (enforcement of norms, etc.)	MARN, Basin Court		MAG MARN		ANDA MARN
Others (specify)					

## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			
			Water supply		Wastewater treatment	
			Domestic	Agriculture		Industry
Strategy, priority setting & planning (including infrastructure)		GOES	ANDA	MAG		ANDA
Policy-making and implementation		GOES	ANDA	MAG		ANDA
Information, monitoring & evaluation		GOES	ANDA	MAG		
Stakeholders' engagement (citizens' awareness, etc.)		GOES	ANDA			
Others (specify)		ALCA DIAS	ANDA DIAS			

### 2. Co-ordination of water policy making across ministries and public agencies at central government level

#### A. Obstacles to horizontal co-ordination in water policy making



#### B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water		X	
A line ministry	X		MARN, MAG, ANDA
A central agency for water related issues			
An inter-ministerial body (Committee, commission)	X		CEPRI
An inter-agency programme			
A co-ordination group of experts			
An inter-ministerial mechanism for addressing territorial water concerns			

3. Institutional mapping of water policy roles and responsibilities at sub-national level : allocation of roles across local and regional authorities

A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

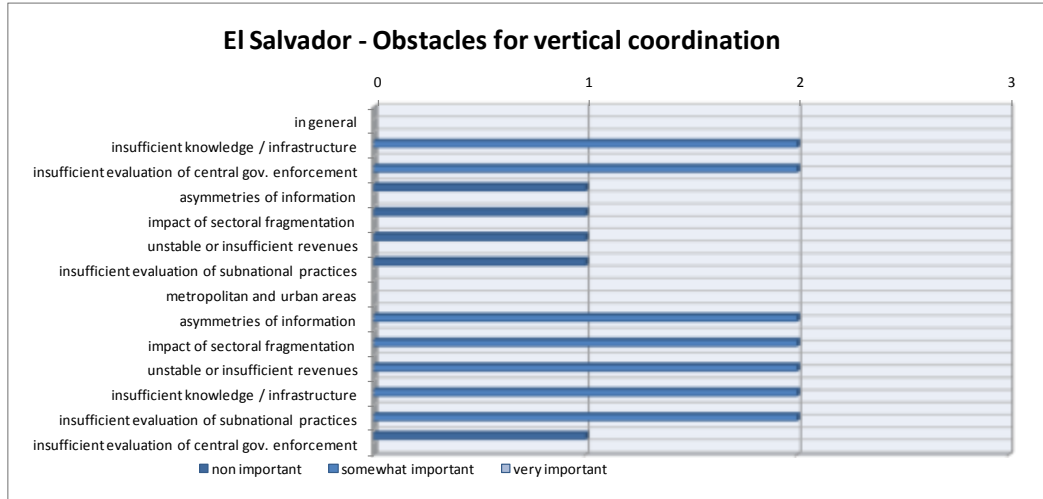
Actors at sub-national level	Water resources	Water services			
		Water supply			Wastewater treatment
		Domestic	Agriculture	Industry	
Municipalities		X			Not in El Salvador as it is a unitary country
Regions (provinces, states in federal countries, autonomous regions, cantons)					
Inter-municipal bodies		Only two projects exist designating a semi-public company for 3 municipalities, Chinameca in the North and San Vicente			
Water specific bodies		CARE, CRS, AIDE who finance municipal level projects			
River basin organisations		Lempa fund			
Other (specify)					

B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

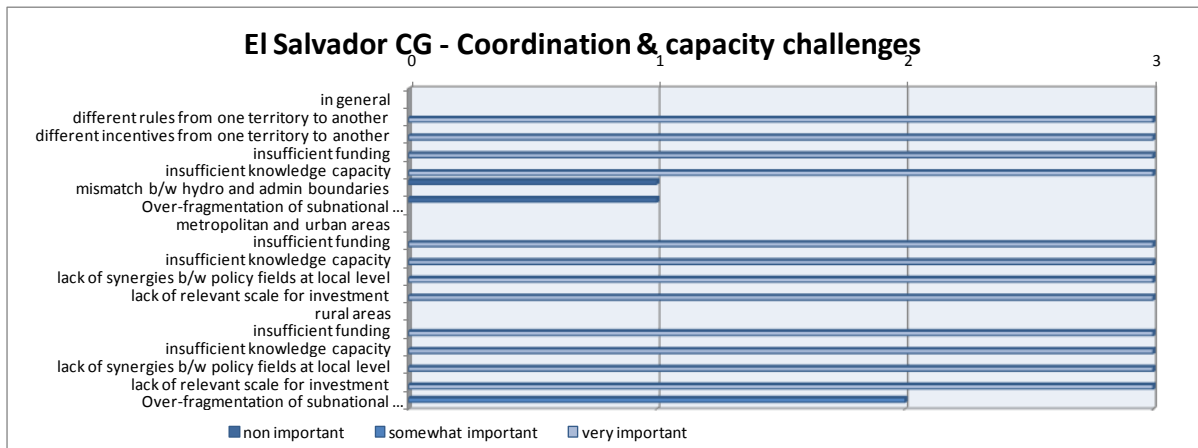
Roles	Water resources	Water services			
		Water supply			Wastewater treatment
		Domestic	Agriculture	Industry	
Allocation of uses	ANDA and Irrigation law	ANDA	MAG authorizes permits	ANDA in urban areas	ANDA
Quality standards	Environment law, Irrigation law, Decree 50, ANDA law	ANDA	Irrigation Law	Environment Law	ANDA
Compliance of service delivery commitment	ANDA	ANDA	MAG		ANDA
Economic regulation (tariffs etc.)	Submitted by ANDA, MAG approved by the Ministry of Treasury then in front of the Legislative Assembly for final approval	ANDA	MAG		ANDA
Environmental regulation (enforcement of norms etc.)	Ministry of Environment	ANDA			
Control at sub-national level of national regulations' enforcement	Ministry of Environment	ANDA			
Other (specify)	Basin Court				

4. Co-ordination of water policy making between levels of government and across local actors

A. Obstacles to vertical co-ordination in water policymaking



B. Obstacles to capacity building and co-ordination at territorial level



### C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies			
Regulations for sharing roles between actors	X		This layout is common for several governmental institutions' laws: MARN, MAG, ANDA
Co-ordination agency or commission			
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)	X		In most cases, more than anything, they are cooperation agreements between governmental institutions for technical and financial support to implement the established mechanisms
Intermediate bodies or actors (e.g. state territorial representatives)			
Financial transfers or incentives			
Performance indicators			
Shared databases			
Sectoral conferences between central and sub-national water players			
Multi-sectoral conferences			
Consultation of private stakeholders (profit and non-profit actors)			
Other (specify)			

### D. Specific focus on selected mechanisms

#### *a. Tools to manage the interface between actors at sub-national level*

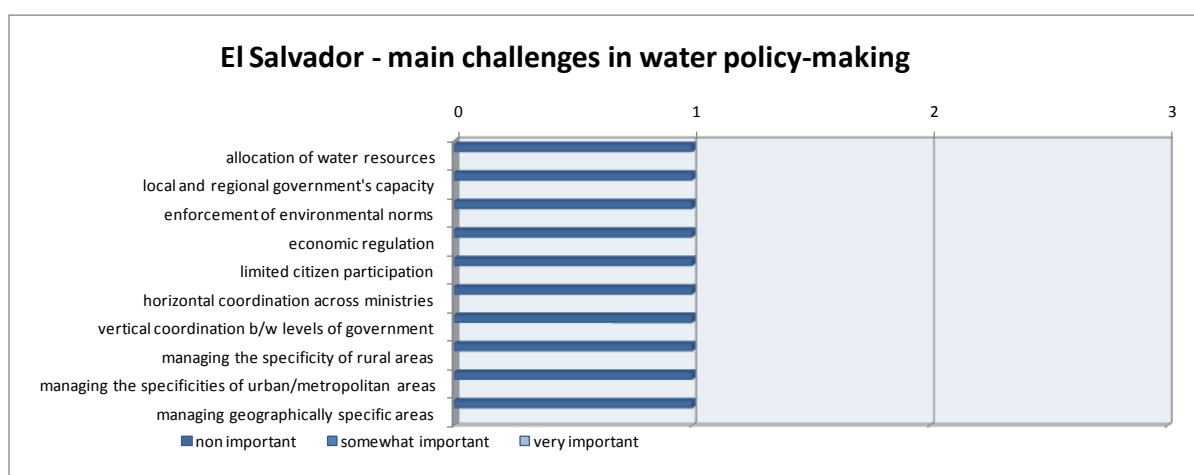
Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration	X		
Inter-municipal specific body	X		
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)	X		Within the National General Budget
Historical rules and traditions	X		Cultural methods used through generations have promoted the sustainable use of water Mediation
Specific mechanisms for conflict resolution	X		
Informal co-operation around projects	X		
Joint financing	X		Government/NGOs
Metropolitan or regional water district	X		
Other (specify)			



*b. Tools for capacity building at sub-national level*

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)				No available data
Financial incentives (specify from whom and for what)				No available data
Performance indicators and targets holding local governments accountable				No available data
Citizens' participation	X			For cleaning tasks, compensated with work, money
Involvement of civil society organisations	X			For cleaning tasks, compensated with work, money
Databases (sharing information)	X			For cleaning tasks, compensated with work, money
Historical arrangements (water courts)				No available data
Other (specify)	X			Concerning irrigation MAG has made mitigation efforts to resolve conflicts
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			Several legislation and new projects fora
Specific performance monitoring mechanisms for staff (teams or individuals)				No available data
Other (specify)				

*5. Final assessment of remaining challenges*



Guatemala

# GUATEMALA

## Acronyms

MSPAS	Ministry of Public Health and Social Security
MARN	Ministry of Environment and Natural Resources
GEA	Water Specific Office

*1. Institutional mapping of water policy roles and responsibilities at central government level : allocation of roles across ministries and public agencies*

A. Design and implementation of water policies

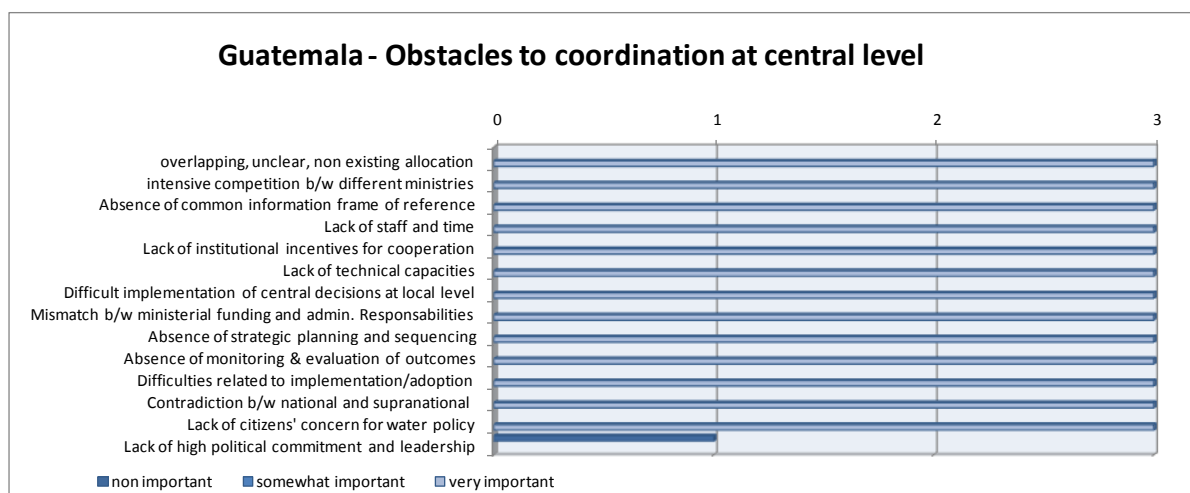
Roles	Areas	Water resources	Water services			Wasterwater Treatment
			Water supply			
			Domestic	Agriculture	Industry	
Allocation of uses		No institution				
Quality of standards			MSPAS and MARN			MASPS, MARN
Compliance of service delivery commitment			Municipalities			Municipalities
Economic regulation (tariffs, etc.)			Municipalities			Municipalities
Environmental regulation (enforcement of norms, etc.)			MARN	MARN	MARN	MARN
Others (specify)						

## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			
			Water supply			Wastewater treatment
			Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)		GEA	GEA	GEA	GEA	
Policy-making and implementation		Policy-making: GES, Implementation: governing ministries	Ministry of Health		Ministry of Health	
Information, monitoring & evaluation		Governing ministries			MSPAS (drinking water) MARN (wastewater)	
Stakeholders engagement (citizens' awareness, etc.)		At the national level: GEA At the local level: governing ministries			National level: GEA Local level: MSPAS	
Others (specify)						

## 2. Co-ordination of water policy making across ministries and public agencies at central government level

### A. Obstacles to horizontal co-ordination in water policy making



## B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water		X	
A line ministry		X	
A central agency for water related issues		X	
An inter-ministerial body (Committee, commission)	X		
An inter-agency programme	X		Small River Basins National Commission
A co-ordination group of experts	X		Drinking Water and Sanitation, "Water, road to peace" Presidential Programme <a href="mailto:Jorge.molina@seglepan.gob.gt">Jorge.molina@seglepan.gob.gt</a>
An inter-ministerial mechanism for addressing territorial water concerns	X		For emergency cases, Lago Atitlan and semiarid areas.

### 3. Institutional mapping of water policy roles and responsibilities at sub-national level : allocation of roles across local and regional authorities

#### A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

Actors at sub-national level	Areas	Water resources	Water services			
			Water supply			Wastewater treatment
			Domestic	Agriculture	Industry	
Municipalities			Municipalities			Municipalities
Regions (provinces, states in federal countries, autonomous regions, cantons)						
Inter-municipal bodies						
Water specific bodies						
River basin organisations						
Other (specify)						

#### B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

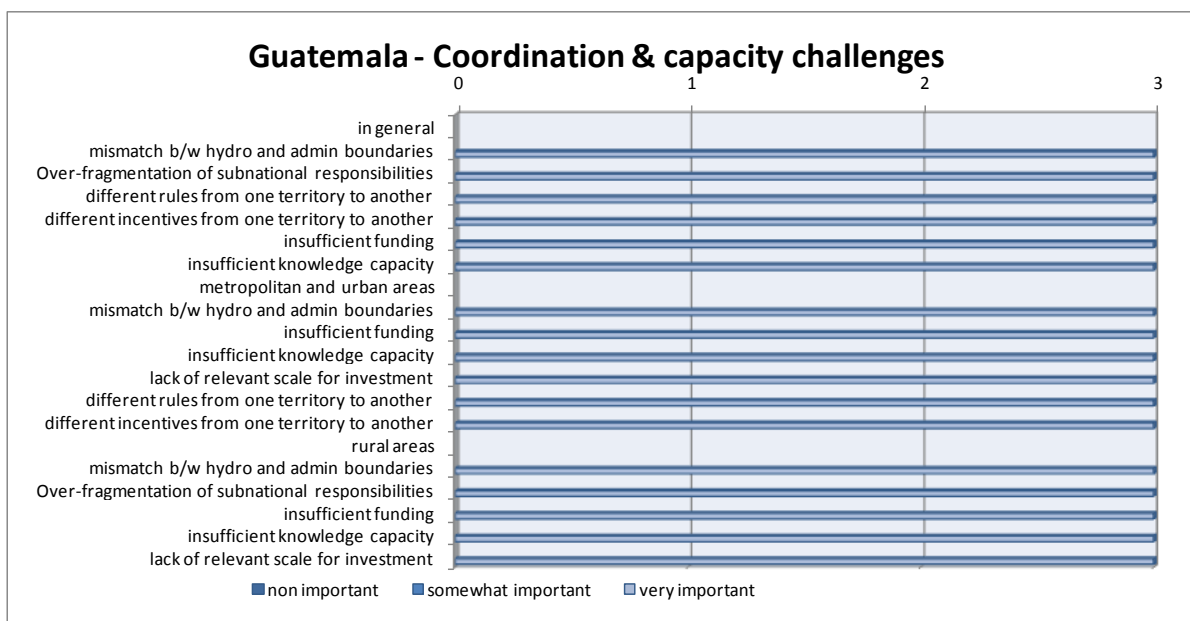
Roles	Areas	Water resources	Water services			
			Water supply			Wastewater treatment
			Domestic	Agriculture	Industry	
Allocation of rules			Municipalities			Municipalities
Quality standards			Municipalities			Municipalities
Compliance of service delivery commitment			Municipalities			Municipalities
Economic regulation (tariffs etc.)			Municipalities			Municipalities
Environmental regulation (enforcement of norms etc.)			Ministry of Environment MARN			Ministry of Environment MARN
Control at sub-national level of national regulations' enforcement			Ministry of Environment MARN			Ministry of Environment MARN
Other (specify)						

4. Co-ordination of water policy making between levels of government and across local actors

A. Obstacles to vertical co-ordination in water policymaking

*No available data*

B. Obstacles to capacity building and co-ordination at territorial level



C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies			
Regulations for sharing roles between actors			
Co-ordination agency or commission			
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)	X		On particular issues, small basins management between MARN and the Ministry of Agriculture
Intermediate bodies or actors (e.g. state territorial representatives)			
Financial transfers or incentives			
Performance indicators			
Shared databases			
Sectoral conferences between central and sub-national water players			
Multi-sectoral conferences			
Consultation of private stakeholders (profit and non-profit actors)			
Other (specify)			APS National Plan case and the Presidential Programme

## D. Specific focus on selected mechanisms

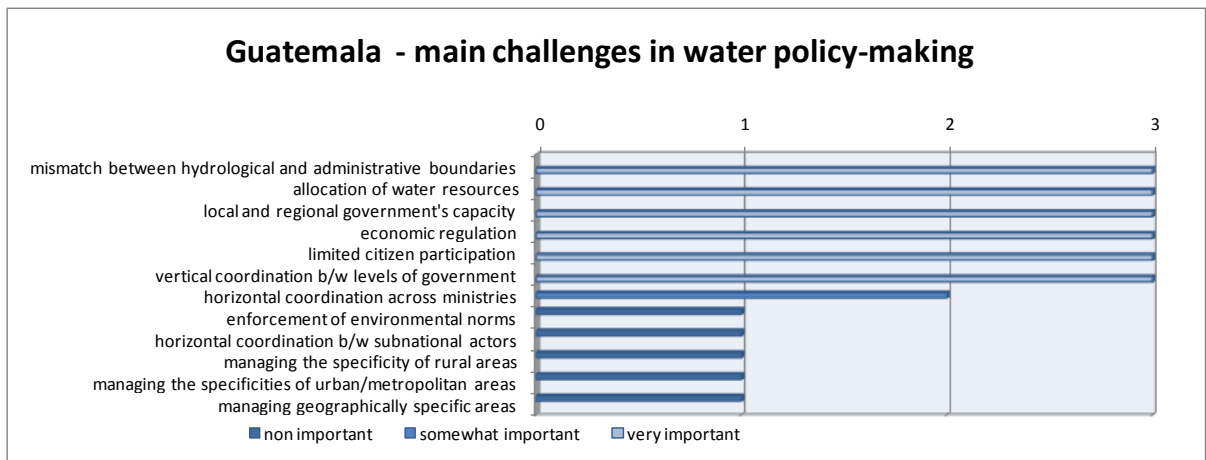
### *a. Tools to manage the interface between actors at sub-national level*

Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration	X		For public services and in one case, for basin management
Inter-municipal specific body			
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)		X	
Historical rules and traditions		X	
Specific mechanisms for conflict resolution	X		In some areas
Informal co-operation around projects		X	
Joint financing		X	
Metropolitan or regional water district		X	
Other (specify)			

### *b. Tools for capacity building at sub-national level*

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)		X		
Financial incentives (specify from whom and for what)		X		
Performance indicators and targets holding local governments accountable		X		
Citizens' participation	X			In rural areas, to promote then administer rural aqueducts
Involvement of civil society organisations		X		
Databases (sharing information)		X		
Historical arrangements (water courts)	X			In some indigenous communities' territories
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			For government, NGOs but without joint programmes
Specific performance monitoring mechanisms for staff (teams or individuals)		X		
Other (specify)				

5. Final assessment of remaining challenges



*Honduras*

# HONDURAS

## *Acronyms*

SERNA/DGRH	Secretary of Natural Resources and the Environment / General Office of Water Resources
SERNA/DECA	Secretary of Natural Resources and the Environment / Environmental Evaluation and Control Office
SERNA/CESCCO	Secretary of Natural Resources and the Environment / Studies and Pollutants control Centre
SANAA	Autonomous Service of Aqueducts and Sewer Systems
SAG	Secretary of Agriculture and Livestock
SIC	Secretary of Industry and Trade
SSAL	Secretary of Health

*1. Institutional mapping of water policy roles and responsibilities at central government level : allocation of roles across ministries and public agencies*

### A. Design and implementation of water policies

Areas	Water resources	Water services			Wastewater Treatment
		Water supply			
Roles		Domestic	Agriculture	Industry	
Allocation of uses	SERNA/DGRH	SERNA/DGRH	SERNA/DGRH	SERNA/DGRH	SANAA
Quality of standards	SERNA/DGRH	Secretary of Health			SANAA
Compliance of service delivery commitment	SERNA/DGRH				SANAA
Economic regulation (tariffs, etc.)	SERNA/DGRH	Joint Municipalities of Water	SAG Irrigation districts	Municipalities	SANAA
Environmental regulation (enforcement of norms, etc. )	SERNA/DGRH	SERNA/DECA	SERNA/DECA	SERNA/DECA	SANAA
Others (specify)					

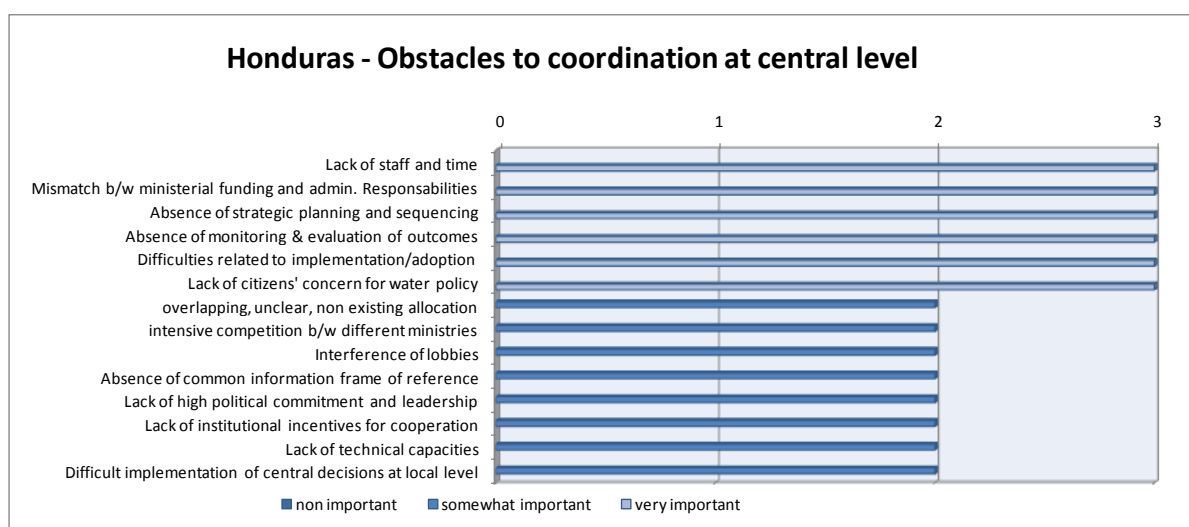


## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)	SERNA/DGRH	SERNA/DGRH	SERNA/DGRH	SERNA/DGRH	SANAA	
Policy-making and implementation	SERNA/DGRH	SERNA/DGRH	SERNA/DGRH	SERNA/DGRH	SANAA	
Information, monitoring & evaluation	SERNA/DGRH SERNA/DECA SERNA/CESCO	SERNA/DGRH SANAA	SERNA/DGRH SAG	SERNA/DGRH Secretary of Industry and Trade	SANAA	
Stakeholders' engagement (citizens' awareness, etc.)	SERNA/DGRH	SERNA/DGRH SANAA	SERNA/DGRH SAG	SERNA/DGRH Secretary of Industry and Trade	SANAA	
Others (specify)						

### 2. Co-ordination of water policy making across ministries and public agencies at central government level

#### A. Obstacles to horizontal co-ordination in water policy making



#### B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water		X	
A line ministry	X		SERNA
A central agency for water related issues		X	Examined in a recently approved legislation waiting to be confirmed
An inter-ministerial body (Committee, commission)		X	Examined in a recently approved legislation waiting to be confirmed
An inter-agency programme		X	
A co-ordination group of experts	X		Inter-institutional technical group
An inter-ministerial mechanism for addressing territorial water concerns	X		Climate Change Committee recently created
Others (specify)	X		River Basin National website at the local level

3. Institutional mapping of water policy roles and responsibilities at sub-national level : allocation of roles across local and regional authorities

A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

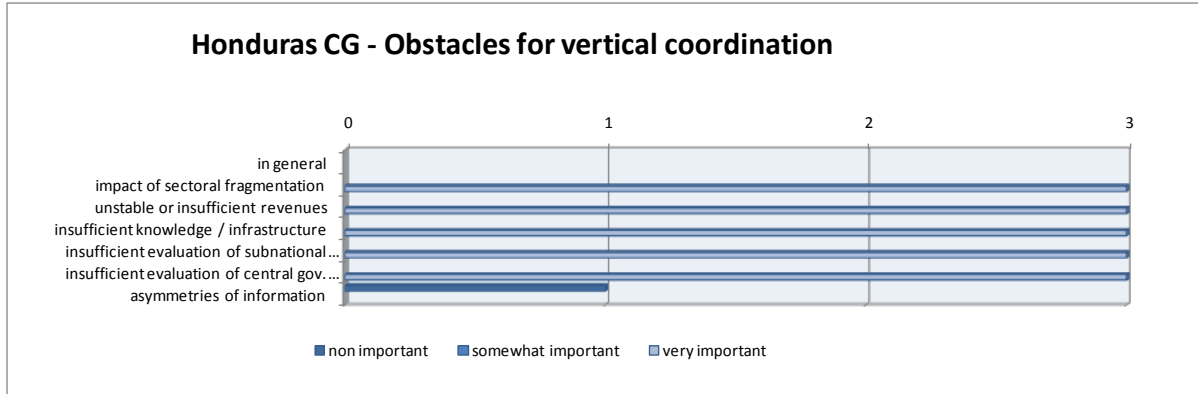
Actors at sub-national level	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Municipalities		X	X	X	X	
Regions (provinces, states in federal countries, autonomous regions, cantons)						
Inter-municipal bodies		X	X	X	X	
Water specific bodies		X	X	X	X	
River basin organisations						
Other (specify)						

B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Allocation of uses		Water specific bodies (SERNA)	Water specific bodies (SERNA)	Water specific bodies (SERNA)	Water specific bodies (SERNA)	
Quality standards		Water specific bodies (Secretary of Health)	Water specific bodies (SANAA, San Pedro Waters, etc)	Water specific bodies (SAG) Municipalities	Municipalities	
Compliance of service delivery commitment		Water specific bodies (SERNA)	Water specific bodies (SANAA, San Pedro Waters, etc)	Water specific bodies (SAG) Municipalities	Municipalities	
Economic regulation (tariffs etc.)		Water specific bodies (SERNA)	Water specific bodies (SANAA, San Pedro Waters, etc)	Water specific bodies (SAG) Municipalities	Municipalities	
Environmental regulation (enforcement of norms etc.)		Water specific bodies (SERNA)	Water specific bodies (SERNA)	Water specific bodies (SAG) Municipalities	Municipalities	
Control at sub-national level of national regulations' enforcement		Water specific bodies (SERNA)	Water specific bodies (SERNA, Secretary of Health)	Water specific bodies (SAG) Municipalities	Municipalities	
Other (specify)						

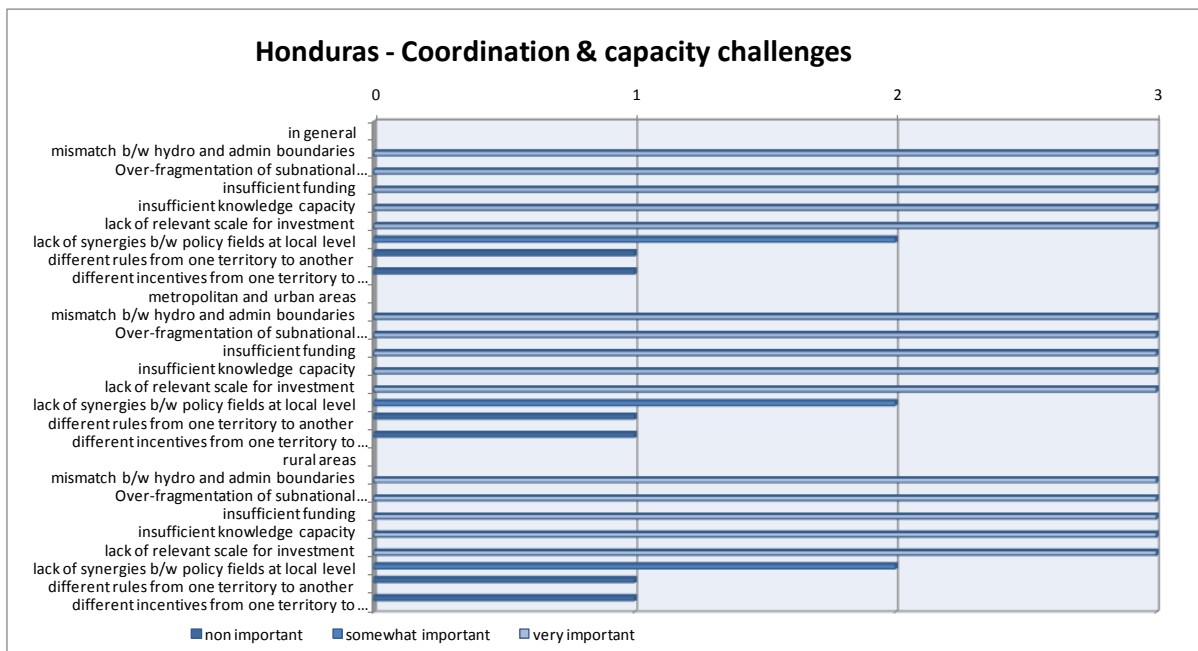
4. Co-ordination of water policy making between levels of government and across local actors

A. Obstacles to vertical co-ordination in water policymaking



Note: Obstacles for vertical co-ordination on metropolitan, urban and rural areas are not available. There are not enough data.

B. Obstacles to capacity building and co-ordination at territorial level



### C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies	X		Regional agencies
Regulations for sharing roles between actors		X	
Co-ordination agency or commission		X	
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)		X	
Intermediate bodies or actors (e.g. state territorial representatives)		X	Regional councils are being implemented
Financial transfers or incentives		X	
Performance indicators		X	
Shared databases		X	
Sectoral conferences between central and sub-national water players	X		River Basin Councils
Multi-sectoral conferences		X	
Consultation of private stakeholders (profit and non-profit actors)		X	
Other (specify)			

### D. Specific focus on selected mechanisms

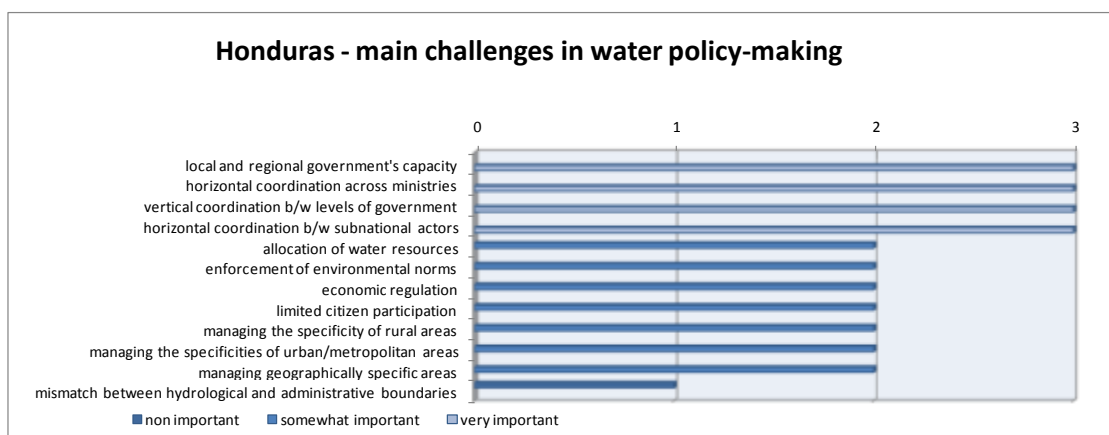
#### *a. Tools to manage the interface between actors at sub-national level*

Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration	X		
Inter-municipal specific body			
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)		X	
Historical rules and traditions		X	
Specific mechanisms for conflict resolution	X		
Informal co-operation around projects	X		
Joint financing		X	
Metropolitan or regional water district	X		
Other (specify)			

*b. Tools for capacity building at sub-national level*

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)	X			Administration concession for water
Financial incentives (specify from whom and for what)		X		
Performance indicators and targets holding local governments accountable		X		
Citizens' participation	X			River Basin Councils
Involvement of civil society organisations	X			
Databases (sharing information)		X		
Historical arrangements (water courts)	X			
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			
Specific performance monitoring mechanisms for staff (teams or individuals)		X		
Other (specify)				

*5. Final assessment of remaining challenges*



Mexico

# MEXICO

## Acronyms

Conagua	National Commission of Water
Profepa	Environmental Protection Federal Attorney Office
Sagarpa	Secretary of Agriculture, Livestock, Rural Development, Fishing and Food supply
SE	Secretary of Economy
Semamat	Secretary of Environment and Natural Resources
SS	Secretary of Health

### 1. Institutional mapping of water policy roles and responsibilities at central government level : allocation of roles across ministries and public agencies

#### A. Design and implementation of water policies

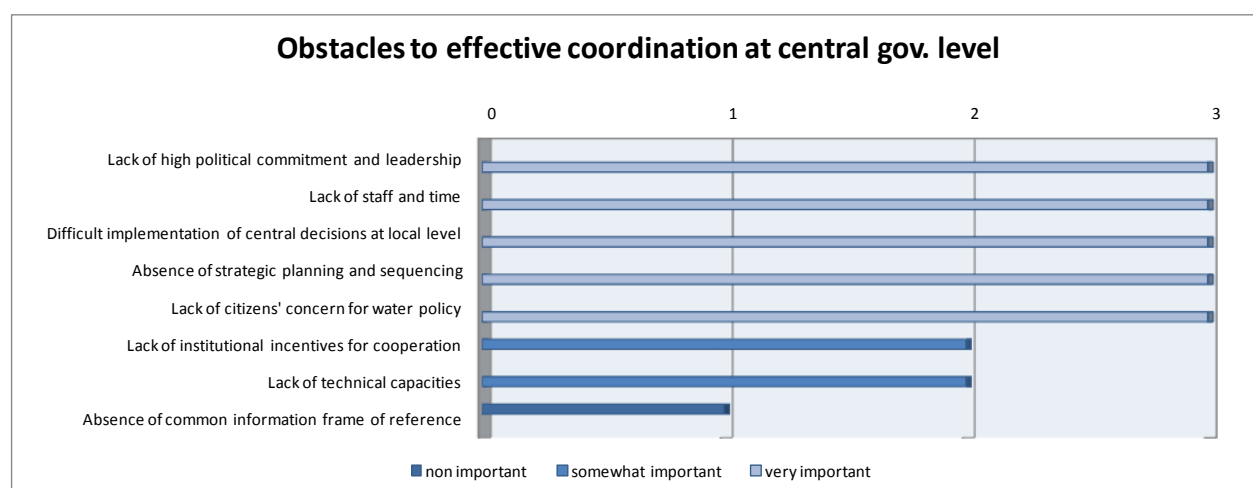
Roles	Areas Water resources	Water services			Wasterwater Treatment
		Water supply			
		Domestic	Agriculture	Industry	
Allocation of uses	Conagua	Conagua		Conagua	Conagua
Quality of standards	Semamat	SS			Semamat
Compliance of service delivery commitment		Conagua			Semamat
Economic regulation (tariffs, etc.) Environmental regulation (enforcement of norms, etc. )	Conagua Semamat, Profepa				Semamat, Profepa
Others (specify)					

## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			
			Water supply			Wastewater treatment
			Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)	Conagua, Sagarpa, Semarnat	Conagua, SS		Conagua	Conagua, Semarnat	
Policy-making and implementation	Conagua, Sagarpa, Semarnat	Conagua, SS		Conagua	Conagua, Semarnat	
Information, monitoring & evaluation	Conagua	Conagua, SS		Conagua	Conagua, Sagarpa, Semarnat	
Stakeholders' engagement (citizens' awareness, etc.)	Conagua, Sagarpa	Conagua, SS		Conagua, SE	Conagua, Semarnat	
Others (specify)						

### 2. Co-ordination of water policy making across ministries and public agencies at central government level

#### A. Obstacles to horizontal co-ordination in water policy making



#### B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water		X	No Ministry of Water exists as such
A line ministry	X		Semarnat, <a href="http://www.semarnat.gob.mx">www.semarnat.gob.mx</a> ,
A central agency for water related issues	X		Conagua is a Semarnat's decentralized agency <a href="http://www.conagua.gob.mx">www.conagua.gob.mx</a> ,
An inter-ministerial body (Committee, commission)	X		Conagua's Technical Council (Semarnat, Sedesol, Sagarpa, SS, SHCP, SE, Sener, SFP, IMTA, Conafor).
An inter-agency programme			Conagua's Technical Council (Semarnat, Sedesol, Sagarpa, SS, SHCP, SE, Sener, SFP, IMTA, Conafor).
A co-ordination group of experts			National Programme on Water
An inter-ministerial mechanism for addressing territorial water concerns	X		Water Utilities Management's technical committee (Conagua, CFE, IMTA, UNAM).
Interministerial mechanisms to face water territorial challenges?	X		General Office of Natural Disaster Fund - FUNDEN (Segob, SHCP, Conagua)

3. Institutional mapping of water policy roles and responsibilities at sub-national level : allocation of roles across local and regional authorities

A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

Actors at sub-national level	Water resources	Water services			
		Water supply			Wastewater treatment
		Domestic	Agriculture	Industry	
Municipalities	X	X		X	
Regions (provinces, states in federal countries, autonomous regions, cantons)	X	X		X	
Inter-municipal bodies	X	X		X	
Water specific bodies					
River basin organisations	X	X		X	
Other (specify)					

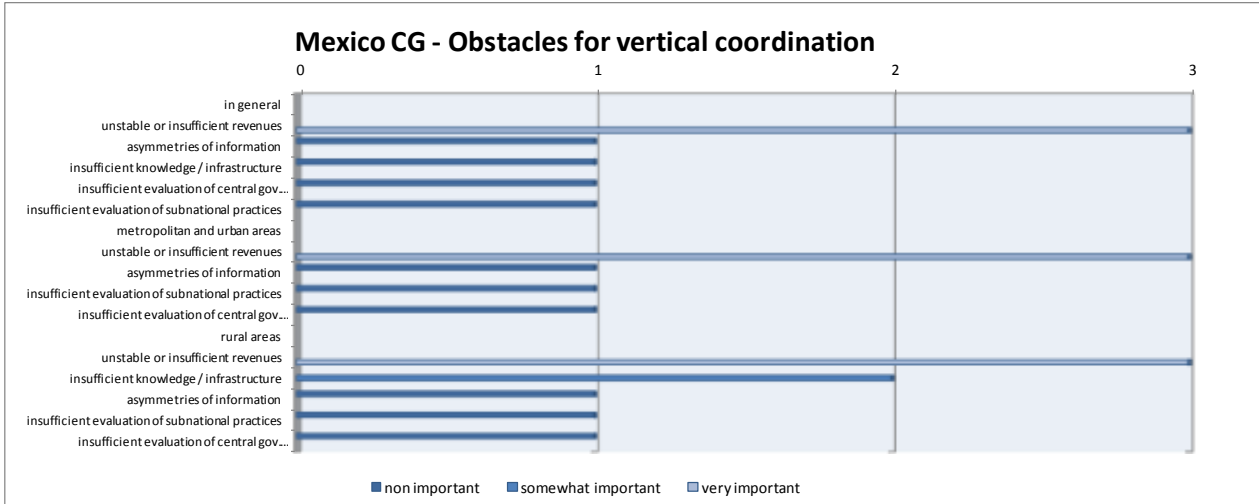
B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

Roles	Water resources	Water services			
		Water supply			Wastewater treatment
		Domestic	Agriculture	Industry	
Allocation of uses		Municipalities		Municipalities	
Quality standards		Region (States)		Region (States)	
Compliance of service delivery commitment					
Economic regulation (tariffs etc.)		Municipalities Region (States)		Municipalities Region (States)	
Environmental regulation (enforcement of norms etc.)		Region (States)		Region (States)	
Control at sub-national level of national regulations' enforcement		Region (States)		Region (States)	
Other (specify)					

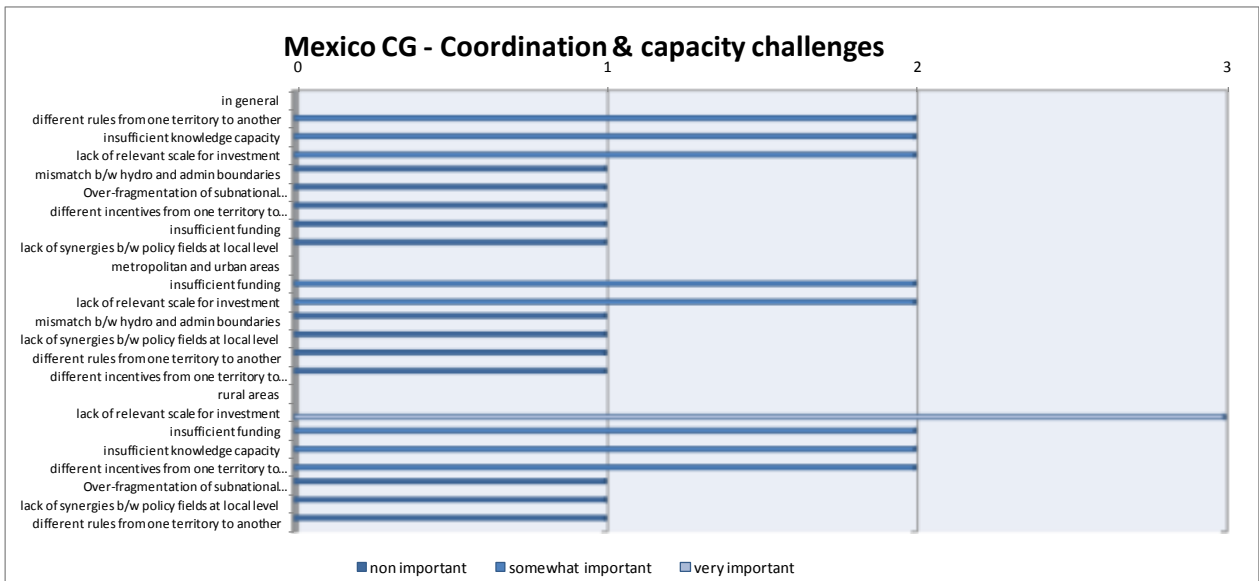


4. Co-ordination of water policy making between levels of government and across local actors

A. Obstacles to vertical co-ordination in water policymaking



B. Obstacles to capacity building and co-ordination at territorial level



### C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies	X		River Basin Councils <a href="http://www.consejosdecuenca.org.mx">www.consejosdecuenca.org.mx</a>
Regulations for sharing roles between actors	X		National Water law and regulation River Basin Councils' Organisation and Management Rules
Co-ordination agency or commission	X		Conagua <a href="http://www.conagua.gob.mx">www.conagua.gob.mx</a>
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)	X		Annual Co-ordination agreements between State government and Federal government
Intermediate bodies or actors (e.g. state territorial representatives)	X		River Basin Organisations and Conagua Local Offices In River Basin Councils, holders of federative bodies territorially engaged in the river basin have a voice and a vote <a href="http://www.consejosdecuenca.org.mx">www.consejosdecuenca.org.mx</a>
Financial transfers or incentives	X		Federal resources are channelled through Conagua programmes
Performance indicators	X		National Water Programme studies a series of basic performance indicators at the national level
Shared databases	X		National Waters law asks for the implementation of a National System for quantity, quality, water uses and similar regional systems, currently being created
Sectoral conferences between central and sub-national water players	X		The majority of these conferences are organized by associations: AMH; <a href="http://www.amh.org.mx">www.amh.org.mx</a> ANEAS: <a href="http://www.anes.com.mx">www.anes.com.mx</a>
Multi-sectoral conferences	X		The majority is organized by CICM <a href="http://www.cicm.org.mx">www.cicm.org.mx</a>
Consultation of private stakeholders (profit and non-profit actors)	X		The National Waters law considers the Water Consulting Council, an independent consulting organisation for people, public or private, from the water sector, studying or sensitive to water issues and management that raise awareness <a href="http://www.aqua.org.mx/sitio/index.html">http://www.aqua.org.mx/sitio/index.html</a>
Other (specify)			

### D. Specific focus on selected mechanisms

#### a. Tools to manage the interface between actors at sub-national level

Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration	X		ANEAS – <a href="http://www.aneas.com.mx">www.aneas.com.mx</a>
Inter-municipal specific body	X		For example, INTERAPAS <a href="http://www.interapas.com">www.interapas.com</a>
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)		X	National Waters law and regulations
Historical rules and traditions		X	
Specific mechanisms for conflict resolution	X		
Informal co-operation around projects	X		TEQUIO
Joint financing			For example: El Realito project
Metropolitan or regional water district	X		Example of Mexico City D.F. SACM <a href="http://www.sacm.df.gob.mx">www.sacm.df.gob.mx</a>
Other (specify)			

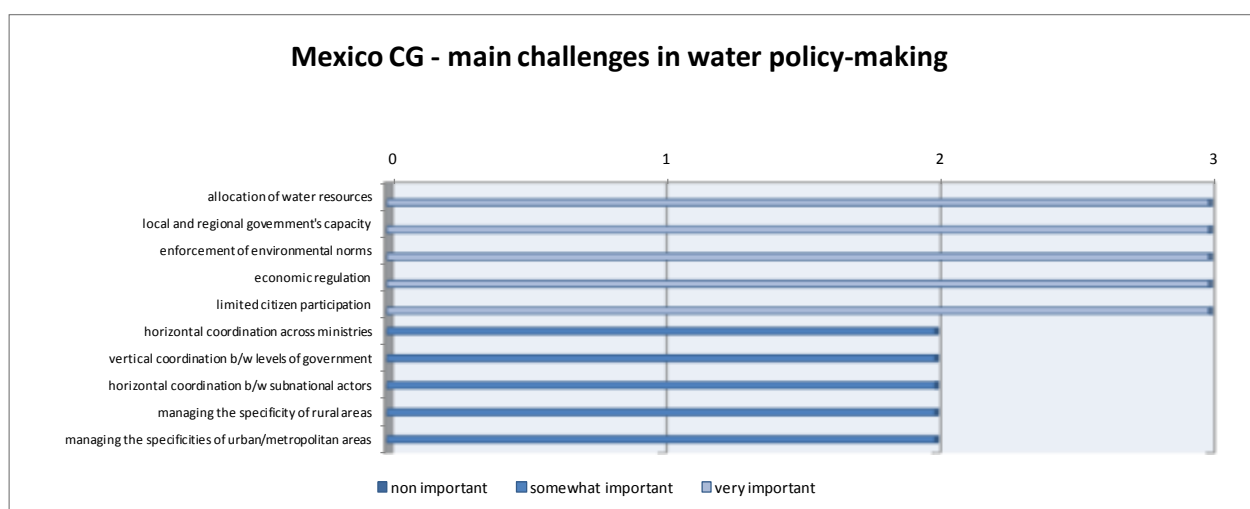
\*El TEQUIO is an collective work organisation which gather members of a community to work together in designing or building a community utility, such as a school, a well, a fence, a road, etc. In the State of Oaxaca, el tequio is acknowledged in the State law and the state government has to maintain it.

\*\* Conagua and the governments of San Luis Potosi and Guanajuato states developed a Project to build a dam which controls 2 m<sup>3</sup>/s and supply the suburban area of San Luis Potosi, SLP, and Celaya Gto in drinking water. Federal and state governments contributed in financing the dam. The federal government also financed the private Project for the corresponding aqueduct.

*b. Tools for capacity building at sub-national level*

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)	X			The Promagua is a Conagua programme functioning with additional resources. The private sector's participation modalities can be a partial or legal service provision contract, the establishment of a semi-public company or a concession
Financial incentives (specify from whom and for what)	X			
Performance indicators and targets holding local governments accountable	X			According to federal programmes' operation rules, supports characteristics depend on the physical and commercial performance of the service providers.
Citizens' participation	X			River Basin Council <a href="http://www.consejosdecuenca.org.mx">www.consejosdecuenca.org.mx</a>
Involvement of civil society organisations	X			River Basin Council <a href="http://www.consejosdecuenca.org.mx">www.consejosdecuenca.org.mx</a>
Databases (sharing information)	X			Conagua annually edits a "Drinking Water, Sewer System and Sanitation Sectors Situation" report ANEAS: <a href="http://www.aneas.com.mx">www.aneas.com.mx</a>
Historical arrangements (water courts)		X		
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			AMH – <a href="http://www.amh.org.mx">www.amh.org.mx</a> ANEAS – <a href="http://www.aneas.com.mx">www.aneas.com.mx</a> CEMCAS – <a href="http://www.cemcas.com.mx">www.cemcas.com.mx</a> IMTA – <a href="http://www.imta.gob.mx">www.imta.gob.mx</a>
Specific performance monitoring mechanisms for staff (teams or individuals)	X			ANEAS uses a technical norms system of capacities training and certification ("CONOCER") for the service provider 'technical workers, usually certified by Operation Organisations <a href="http://www.aneas.com.mx">www.aneas.com.mx</a> <a href="http://www.conoce.gob.mx">www.conoce.gob.mx</a>
Other (specify)				

*5. Final assessment of remaining challenges*



Nicaragua

# NICARAGUA

## Acronyms

MARENA	Ministry of Environment and Natural Resources
ANA	National Authority of Water
INAA	Aqueducts and Sewer Systems National Institute
ENACAL	Aqueduct and Sezer systems National Company
MAGFOR	Ministry of Agriculture and Forests
MINSAs	Ministry of Health

### 1. Institutional mapping of water policy roles and responsibilities at central government level: allocation of roles across ministries and public agencies

#### A. Design and implementation of water policies

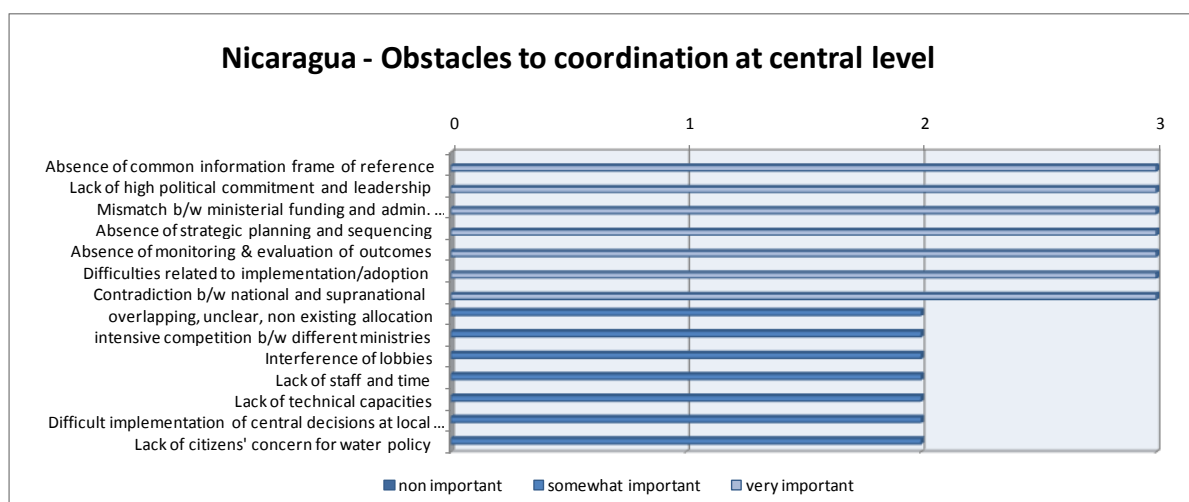
Roles	Areas	Water resources	Water services			Wasterwater Treatment
			Water supply			
			Domestic	Agriculture	Industry	
Allocation of uses		MARENA MAGFOR INAA ENACAL	ENACAL	MAGFOR	MARENA ENACAL	MINSAs ENACAL MARENA
Quality of standards		MARENA INAA	INAA, MARENA	MAGFOR MARENA	MARENA	Municipalities' Mayor Offices MINSAs ENACAL
Compliance of service delivery commitment		MARENA MAGFOR ENACAL	INAA, ENACAL, Municipalities' Mayor Offices	MAGFOR ENACAL		Municipalities' Mayor Offices MINSAs ENACAL
Economic regulation (tariffs, etc.)		INAA ENACAL Municipalities Offices	INAA	MAGFOR Municipalities' Mayor Offices INAA	MARENA Municipalities' Mayor Offices INAA	Municipalities' Mayor Offices MINSAs ENACAL
Environmental regulation (enforcement of norms, etc.)		MARENA	MARENA, INAA	MARENA	MARENA	MARENA MINSAs
Others (specify)						

## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			
			Water supply			Wastewater treatment
			Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)		MARENA ANA INAA ENACAL	MARENA INAA ENACAL	MAGFOR MARENA Municipalities	INAA, ENACAL, Municipalities' Mayor Offices	
Policy-making and implementation		ANA MARENA	MARENA INAA ENACAL	MAGFOR	MARENA INAA ENACAL	
Information, monitoring & evaluation		MARENA ANA INAA ENACAL MAGFOR	INAA ENACAL	MAGFOR	INAA ENACAL	
Stakeholders' engagement (citizens' awareness, etc.)		ANA MARENA INAA ENACAL MAGFOR Municipalities' Mayor Offices Water users	MARENA ANA INAA ENACAL MAGFOR Municipalities' Mayor Offices	MARENA ANA ENACAL MAGFOR Municipalities' Mayor Offices Water users	MARENA ANA INAA ENACAL MAGFOR Municipalities' Mayor Offices Water users	
Others (specify)						

## 2. Co-ordination of water policy making across ministries and public agencies at central government level

### A. Obstacles to horizontal co-ordination in water policy making



## B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water			MARENA
A line ministry	X		INAA
A central agency for water related issues			
An inter-ministerial body (Committee, commission)	X		National Council for water resources (CNRG) presided by MARENA
An inter-agency programme	X		Sustainable Development Commission for the San Juan River Basin
A co-ordination group of experts			
An inter-ministerial mechanism for addressing territorial water concerns			

### 3. Institutional mapping of water policy roles and responsibilities at sub-national level: allocation of roles across local and regional authorities

#### A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

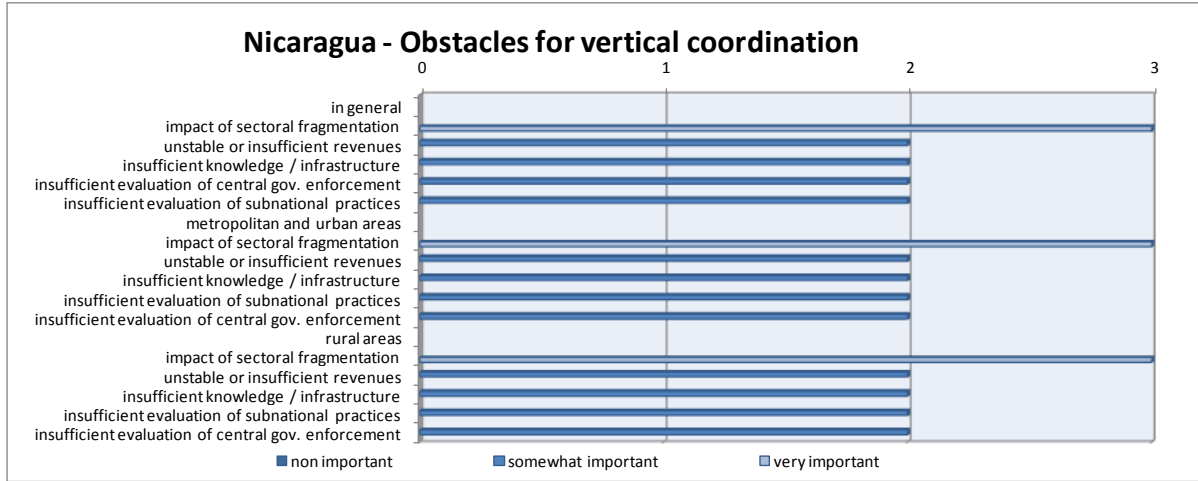
Actors at sub-national level	Water resources	Water services			
		Water supply			Wastewater treatment
		Domestic	Agriculture	Industry	
Municipalities	X	X	X	X	X
Regions (provinces, states in federal countries, autonomous regions, cantons)	X	X	X	X	X
Inter-municipal bodies	X		X		
Water specific bodies					
River basin organisations	X	X	X	X	
Other (specify)					

#### B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

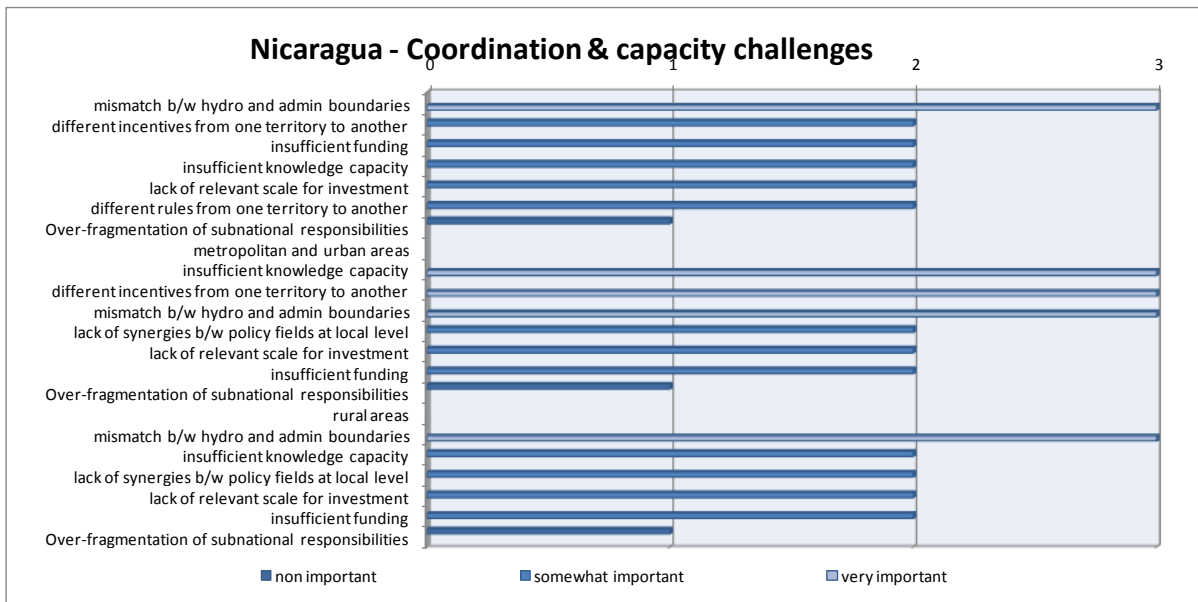
Roles	Water resources	Water services			
		Water supply			Wastewater treatment
		Domestic	Agriculture	Industry	
Allocation of rules	MARENA Municipalities	ENACAL, INAA, Municipalities	MARENA, Municipalities, MAGFOR	MARENA, Municipalities	MINSAs, MARENA, Municipalities, ENACAL
Quality standards	MARENA MINSAs	MINSAs, MARENA, Municipalities, ENACAL	MARENA, Municipalities, MAGFOR		MINSAs, MARENA, Municipalities, ENACAL
Compliance of service delivery commitment		ENACAL, INAA, Municipalities	MARENA, Municipalities, MAGFOR		Municipalities, ENACAL, INAA
Economic regulation (tariffs etc.)		ENACAL, INAA, Municipalities	MARENA, Municipalities, MAGFOR		Municipalities, ENACAL, INAA
Environmental regulation (enforcement of norms etc.)		ENACAL, INAA	MARENA, Municipalities		MINSAs
Control at sub-national level of national regulations' enforcement		ENACAL, INAA	MARENA, Municipalities, MAGFOR		MINSAs, MARENA, Municipalities
Other (specify)					

4. Co-ordination of water policy making between levels of government and across local actors

A. Obstacles to vertical co-ordination in water policymaking



B. Obstacles to capacity building and co-ordination at territorial level



### C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies	X		
Regulations for sharing roles between actors			
Co-ordination agency or commission			
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)			
Intermediate bodies or actors (e.g. state territorial representatives)			
Financial transfers or incentives			
Performance indicators			
Shared databases			
Sectoral conferences between central and sub-national water players			
Multi-sectoral conferences			
Consultation of private stakeholders (profit and non-profit actors)			
Other (specify)			

### D. Specific focus on selected mechanisms

#### *a. Tools to manage the interface between actors at sub-national level*

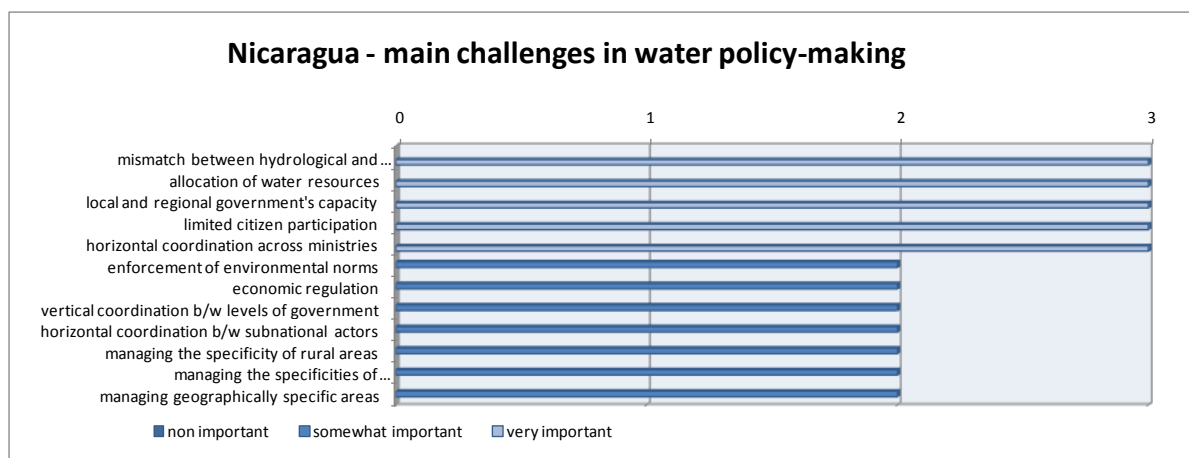
Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration	X		Municipalities associations, such as the Municipality of Boaco's association. They develop projects on adequate use of water resources, with the support of outside cooperation
Inter-municipal specific body	X		Cooperation with specific Dutch sister cities on issues such as the adequate use of river basins and water resources
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)			
Historical rules and traditions			
Specific mechanisms for conflict resolution		X	
Informal co-operation around projects			
Joint financing	X		
Metropolitan or regional water district			
Other (specify)			



*b. Tools for capacity building at sub-national level*

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<i>Broad governance mechanisms</i>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)		X		Support from the Tropical Agriculture Centre to the municipalities of Somoto and San Lucas for the adequate management of the Aguascaliente river sub-basin.  Participation in meetings and trainings, development of environmental and natural resources activities  Norms and regulation institutions for water resources participate with citizens to protect and improve the quality and quantity of water in vulnerable areas
Financial incentives (specify from whom and for what)		X		
Performance indicators and targets holding local governments accountable	X			
Citizens' participation	X			
Involvement of civil society organisations	X			
Databases (sharing information)		X		
Historical arrangements (water courts)		X		
Other (specify)				
<i>Management mechanisms</i>				
Training – Workshops - Conferences	X			
Specific performance monitoring mechanisms for staff (teams or individuals)		X		
Other (specify)				

*5. Final assessment of remaining challenges*



*Panamá*

# PANAMA

## Acronyms

ANAM	Environment National Authority
MINSAs	Ministry of Health (populations under 1,500 inhabitants)
IDAAN	National Aqueducts and Sewer Systems Institute (population above 1,500 inhabitants)
MIDA	Ministry of Agricultural Development
ASEP	Public Services Authority
MEF	Ministry of Economy and Finance

### 1. Institutional mapping of water policy roles and responsibilities at central government level : allocation of roles across ministries and public agencies

#### A. Design and implementation of water policies

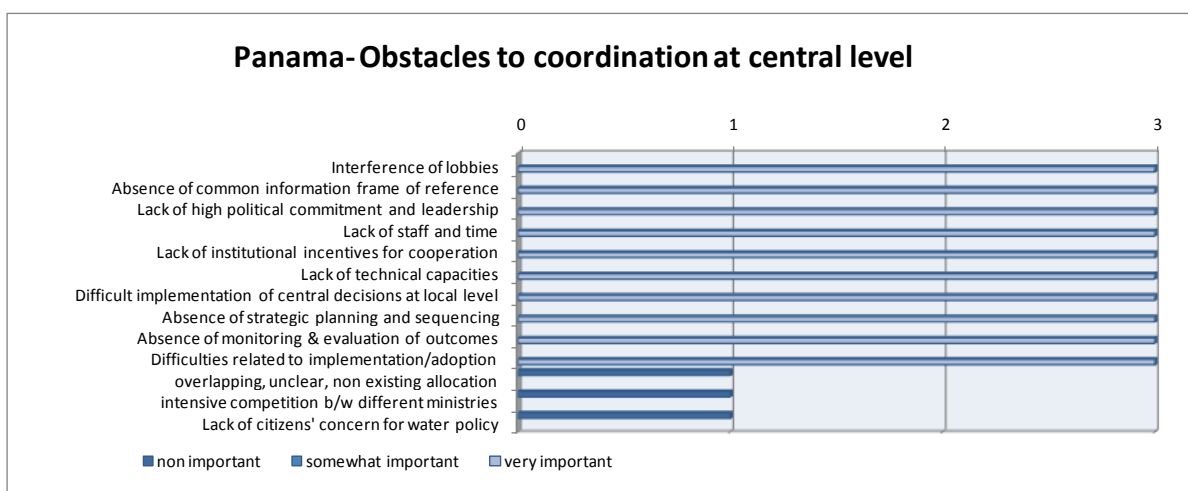
Roles	Areas	Water resources	Water services			Wasterwater Treatment
			Water supply			
			Domestic	Agriculture	Industry	
Allocation of uses		ANAM	IDAAN, MINSAs, ANAM	ANAM, MIDA	ANAM, IDAAN	MINSAs/IDAAN
Quality of standards		MICI ANAM	IDAAN, MINSAs	ANAM, MIDA	ANAM, IDAAN	MINSAs/IDAAN
Compliance of service delivery commitment		IDAAN Public Services Authority(ASEP)	IDAAN, MINSAs	ANAM, MIDA	ANAM, IDAAN	MINSAs/IDAAN
Economic regulation (tariffs, etc.)		Ministry of Economy and Finance ANAM IDAAN	IDAAN, ANAM	ANAM	ANAM, IDAAN	IDAAN
Environmental regulation (enforcement of norms, etc.)		ANAM	ANAM	ANAM	ANAM	ANAM
Others (specify)						

## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)			IDAAN, MINSAs	MIDA – ANAM	ANAM, IDAAN	IDAAN, MINSAs, ANAM
Policy-making and implementation		ANAM, MINSAs	MINSAs	MIDA	ANAM	IDAAN, MINSAs, ANAM
Information, monitoring & evaluation		ANAM	MINSAs, ANAM	ANAM	ANAM	ANAM, MINSAs
Stakeholders' engagement (citizens' awareness, etc.)		ANAM	ANAM, MINSAs, IDAAN	MIDA, ANAM	ANAM	MINSAs, ANAM, IDAAN
Others (specify)						

## 2. Co-ordination of water policy making across ministries and public agencies at central government level

### A. Obstacles to horizontal co-ordination in water policy making



## B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water			
A line ministry			MINSA ( <a href="http://www.minsa.gob.pa">www.minsa.gob.pa</a> ), MIDA ( <a href="http://www.mida.gob.pa">www.mida.gob.pa</a> ) – Ing. Hector Perez Ministry of Economy and finance ( <a href="http://www.mef.gob.pa">www.mef.gob.pa</a> ) IDAAN ( <a href="http://www.idaan.gob.pa">www.idaan.gob.pa</a> ) – Lic. Lourdes Gudino ANAM ( <a href="http://www.anam.gob.pa">www.anam.gob.pa</a> )
A central agency for water related issues			
An inter-ministerial body (Committee, commission)			Ministry of Presidency Sustainable Development National Council (CONADES – <a href="http://www.conades.gob.pa">www.conades.gob.pa</a> ) Social Investment Fund (FIS – <a href="http://www.fis.gob.pa">www.fis.gob.pa</a> )
An inter-agency programme			Industrial and Technical Norms Commission of Panama (COPANIT)
A co-ordination group of experts			
An inter-ministerial mechanism for addressing territorial water concerns			Water Programme National Committee (CONAPHI Panama – <a href="http://www.anam.gob.pa">www.anam.gob.pa</a> )

### 3. Institutional mapping of water policy roles and responsibilities at sub-national level : allocation of roles across local and regional authorities

#### A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

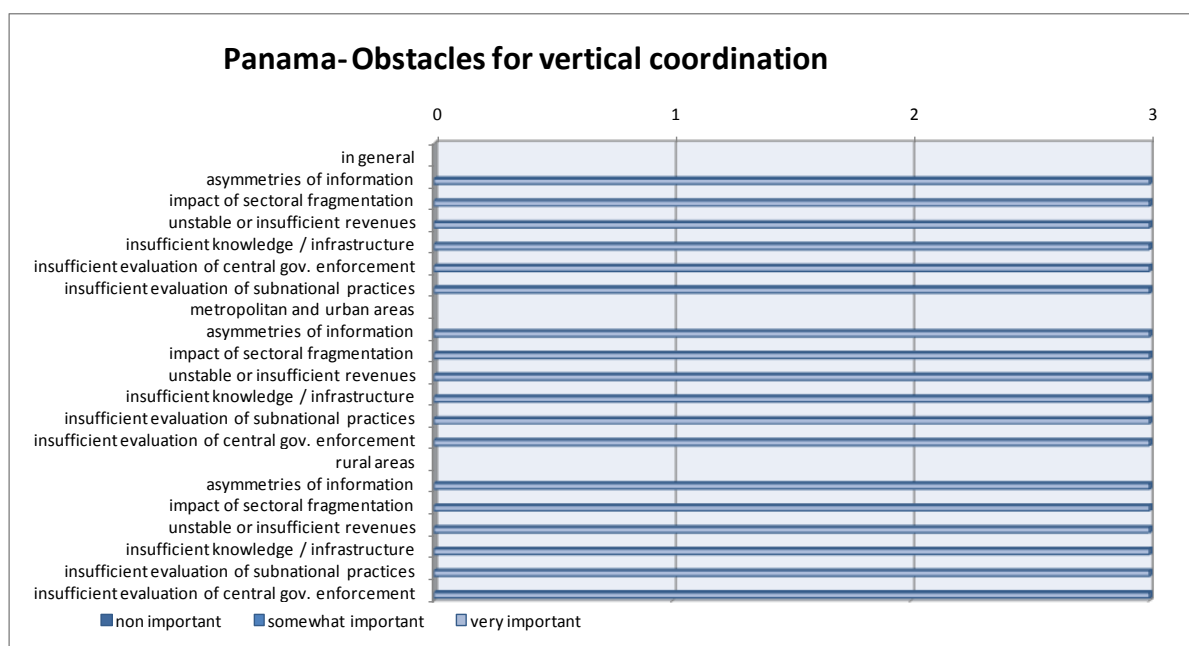
Actors at sub-national level	Water resources	Water services			Wastewater treatment
		Water supply			
		Domestic	Agriculture	Industry	
Municipalities		X			
Regions (provinces, states in federal countries, autonomous regions, cantons)					
Inter-municipal bodies					
Water specific bodies					
River basin organisations					
Other (specify)		Water Committees	Irrigation Joint-Administration		

## B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

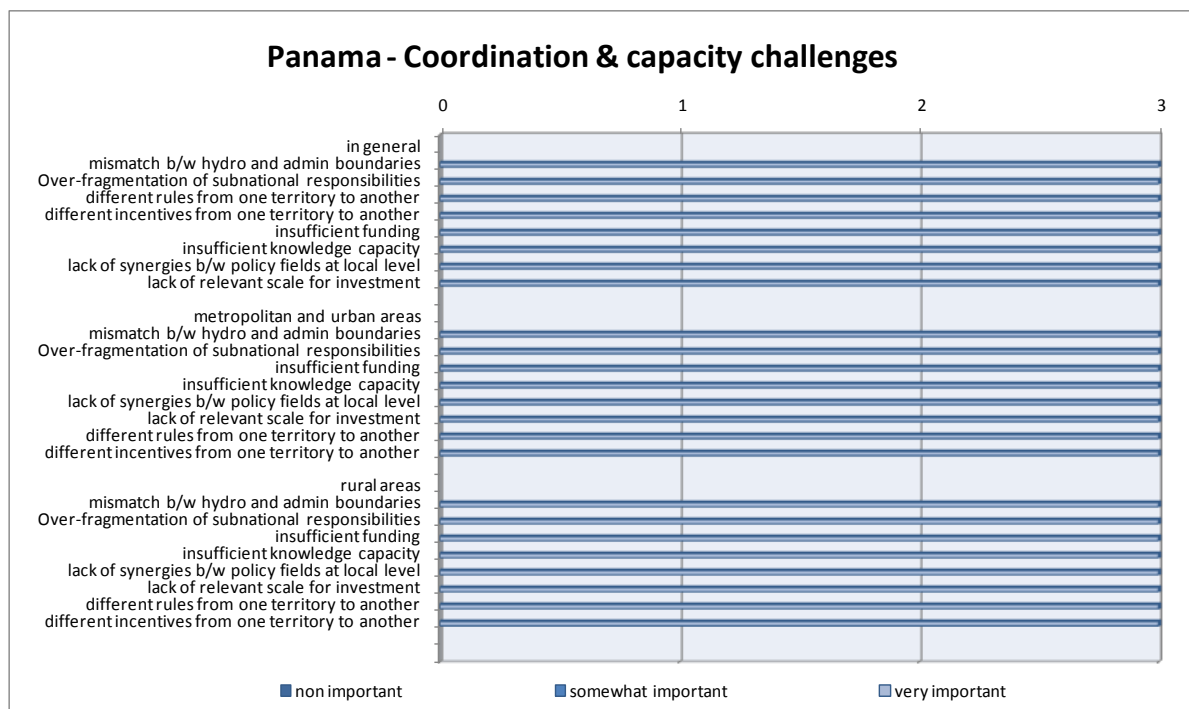
Roles	Areas	Water resources	Water services			
			Water supply			Wastewater treatment
			Domestic	Agriculture	Industry	
Allocation of uses			Water Committee Rural Aqueducts Joint-Administration	Irrigation Boards	IDAAN ANAM	MINSA, IDAAN
Quality standards						MINSA, IDAAN
Compliance of service delivery commitment						MINSA, IDAAN
Economic regulation (tariffs etc.)		ANAM, MEF, IDAAN	ANAM, MEF, IDAAN	ANAM	ANAM	MEF
Environmental regulation (enforcement of norms etc.)		ANAM	ANAM, MINSA	ANAM, MIDA, MINSA, ARAP	ANAM, MICI	ANAM
Control at sub-national level of national regulations' enforcement		ANAM	ANAM, ASEP	ANAM	ANAM	ANAM, MINSA
Other (specify)		ASEP				

### 4. Co-ordination of water policy making between levels of government and across local actors

#### A. Obstacles to vertical co-ordination in water policymaking



## B. Obstacles to capacity building and co-ordination at territorial level



## C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies		X	Currently, Law 44 establishes the river basin organisation
Regulations for sharing roles between actors	X		<a href="http://www.asep.gob.pa">www.asep.gob.pa</a> <a href="http://www.mida.gob.pa">www.mida.gob.pa</a> <a href="http://www.minsa.gob.pa">www.minsa.gob.pa</a> <a href="http://www.anam.gob.pa">www.anam.gob.pa</a> <a href="http://www.idaan.gob.pa">www.idaan.gob.pa</a>
Co-ordination agency or commission		X	No Co-ordination organ with voices and votes
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)		X	Contracts exist at the regional level
Intermediate bodies or actors (e.g. state territorial representatives)	X		Water administration is not developed at the local level
Financial transfers or incentives		X	
Performance indicators			Environmental Indicators Surveys from MIDA, MINSA, IDAAN establish the potable water supply/coverage for at the national level
Shared databases	X		Each institution has its database but they are not shared
Sectoral conferences between central and sub-national water players	X		Annual reunions in the water sector, but no significant outcomes
Multi-sectoral conferences	X		Especially concerning energy
Consultation of private stakeholders (profit and non-profit actors)	X		Interesting but not developed yet
Other (specify)			

## D. Specific focus on selected mechanisms

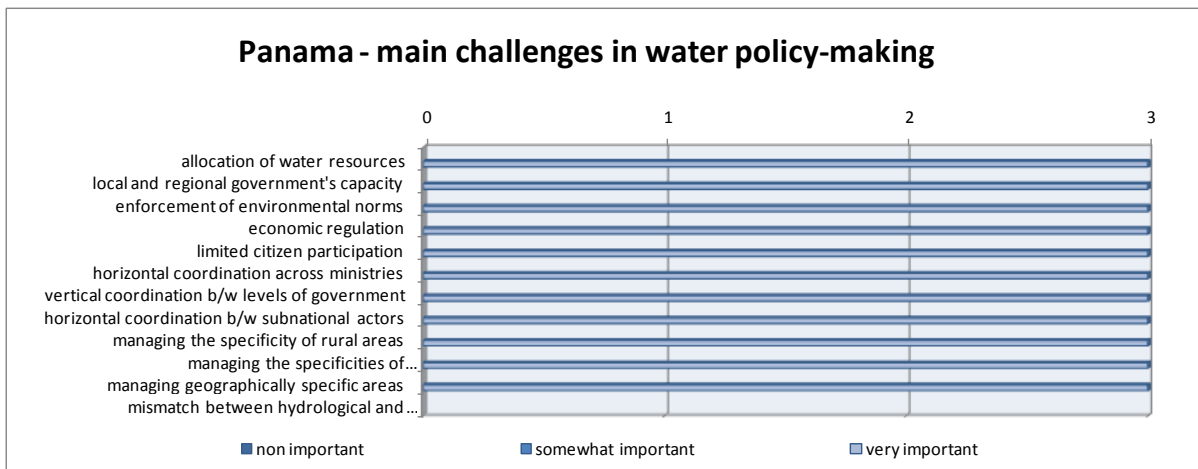
### a. Tools to manage the interface between actors at sub-national level

Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration		X	
Inter-municipal specific body		X	
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)		X	
Historical rules and traditions		X	
Specific mechanisms for conflict resolution	X		<a href="http://www.anam.gob.pa">www.anam.gob.pa</a>
Informal co-operation around projects	X		<a href="http://www.mef.gob.pa">www.mef.gob.pa</a>
Joint financing		X	
Metropolitan or regional water district	X		<a href="http://www.anam.gob.pa">www.anam.gob.pa</a>
Other (specify)			

### b. Tools for capacity building at sub-national level

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)	X			Clean production system in 200 companies Biogas system in the pig industry (test farms) Water concession database (ANAM – <a href="http://www.anam.gob.pa">www.anam.gob.pa</a> )
Financial incentives (specify from whom and for what)				
Performance indicators and targets holding local governments accountable	X			Human Development Indicator (HDI) – <a href="http://www.mef.gob.pa">www.mef.gob.pa</a> Report GEO 2009 – Panama Environmental Indicators of Panama Water quality monitoring report 2008-2009 <a href="http://www.anam.gob.pa">www.anam.gob.pa</a>
Citizens' participation				Irrigation Organisation (MIDA) Rural Aqueducts Joint Administrations' organisation (MINSAs)
Involvement of civil society organisations				ANCON, MARVIVA, ALIANZA por el AGUA
Databases (sharing information)				Not formally established
Historical arrangements (water courts)				
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences	X			Capacity-strengthening courses and workshops on water resources for institutional and technical workers
Specific performance monitoring mechanisms for staff (teams or individuals)				
Other (specify)				

5. Final assessment of remaining challenges





Peru

# PERU

## Acronyms

ANA	National Authority of Water
MINAG	Ministry of Agriculture
MINAM	Ministry of Environment
MVCYS	Ministry of Housing, Construction and Sanitation
SUNASS	Sanitation Services National Superintendant
JNUDRP	National Board of Irrigation Districts' Users
SIN	National Society of Industries
SNMPE	National Society of Mining, Gas and Energy EPS: <i>Empresas Prestadoras de Servicios Municipales</i>
JASS	Sanitation Services Administrative Committees

### 1. Institutional mapping of water policy roles and responsibilities at central government level : allocation of roles across ministries and public agencies

#### A. Design and implementation of water policies

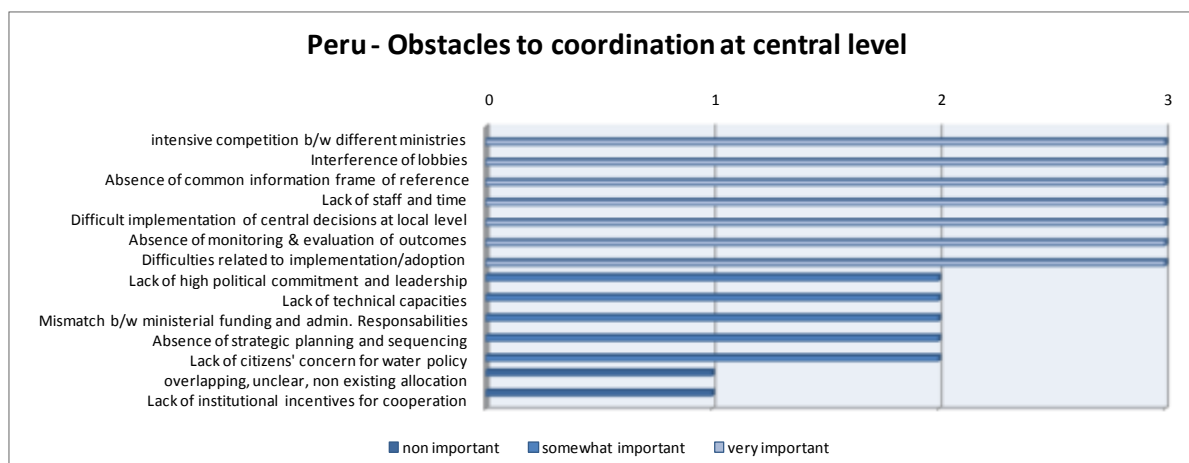
Roles	Areas	Water resources	Water services			Wastewater Treatment
			Water supply			
			Domestic	Agriculture	Industry	
Allocation of uses	ANA	ANA	ANA	ANA	ANA	ANA
Quality standards	MINAM	MINAM, MINSA	MINAM, MINAG	ANA, MINAM, MINAG	ANA, MINAM, PRODUCE	ANA, MVCYS, MINAM
Compliance of service delivery commitment	ANA	SUNASS	MINAG	PRODUCE	PRODUCE	MVCYS
Economic regulation (tariffs, etc.)	ANA	MINSA, SUNASS	ANA	ANA	ANA	ANA
Environmental regulation (enforcement of norms etc.)	MINAM	MINSA, MINAM	MINAG, MINAM	PRODUCE, MINAM	PRODUCE, MINAM	MVCYS, MINAM

## B. Institutional mapping for quality standards and regulation

Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Strategy, priority setting & planning (including infrastructure)		ANA MINAG MVCYS	MINSA, MVCYS, SUNASS, EPS, Municipalities, JASS	MINAG	PRODUCE	MVCYS, EPS, Municipalities, JASS, SUNASS
Policy-making and implementation		ANA MINAG MVCYS	ANA, MINSA, SUNASS, VIVIENDA	ANA, MINAG	ANA, PRODUCE	ANA, MVCYS, SUNASS
Information, monitoring & evaluation		ANA MINAG MVCYS	MINSA, SUNASS, MVCYS	MINAG	PRODUCE	SUNASS, MVCYS
Stakeholders' engagement (citizens' awareness, etc.)		ANA, SNMPE, JNUDRP, SIN		JNUDRP	SIN, SNMPE	EPS, JASS
Others (specify)						

## 2. Co-ordination of water policy making across ministries and public agencies at central government level

### A. Obstacles to horizontal co-ordination in water policy making



### B. Existing mechanisms for co-ordinating the action across ministries and public agencies

Existing co-ordination mechanism across ministries/public agencies	Yes	No	Details (Name, website, contact detail, description, examples etc.)
A ministry of water		X	
A line ministry	X		Ministry of Agriculture ( <a href="http://www.minag.gob.pe">www.minag.gob.pe</a> )
A central agency for water related issues	X		ANA ( <a href="http://www.ana.gob.pe">www.ana.gob.pe</a> )
An inter-ministerial body (Committee, commission)	X		ANA, National Water Resources Management System
An inter-agency programme		X	
A co-ordination group of experts		X	
An inter-ministerial mechanism for addressing territorial water concerns	X		Ministries Council's Presidency (PCM)
Other (specify)	X		National Water Resources Information System

3. Institutional mapping of water policy roles and responsibilities at sub-national level : allocation of roles across local and regional authorities

A. Allocation of roles and responsibilities in water policy design and implementation at territorial level

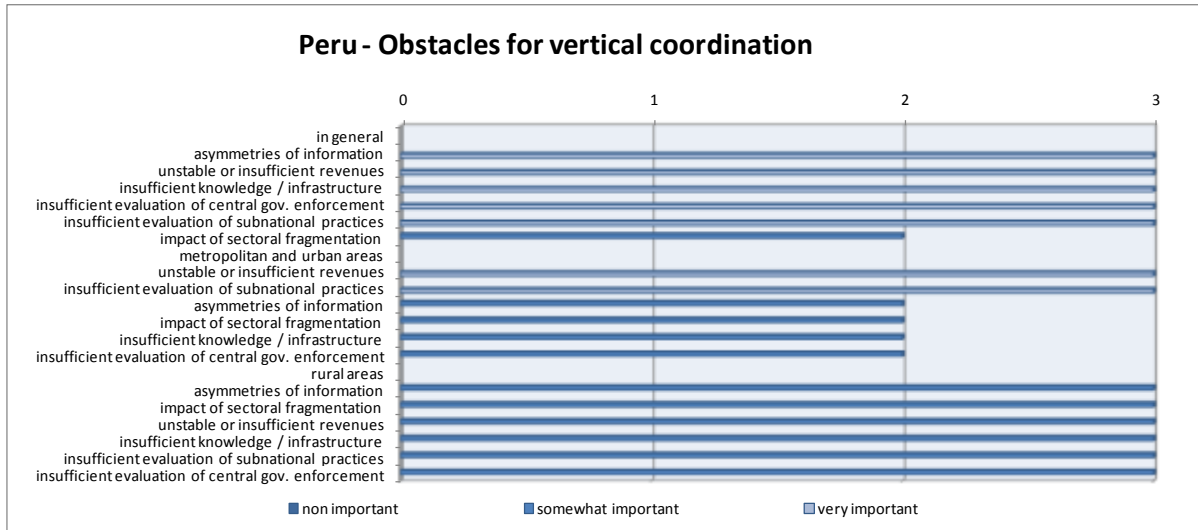
Actors at sub-national level	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Municipalities		X	X			X
Regions (provinces, states in federal countries, autonomous regions, cantons)		X		X	X	X
Inter-municipal bodies						
Water specific bodies		X	X	X	X	X
River basin organisations		X	X	X	X	X
Other (specify)		Administrative Authority for Water (AAA)		X (partially)		

B. Allocation of roles and responsibilities in water regulation (rule production and enforcement)

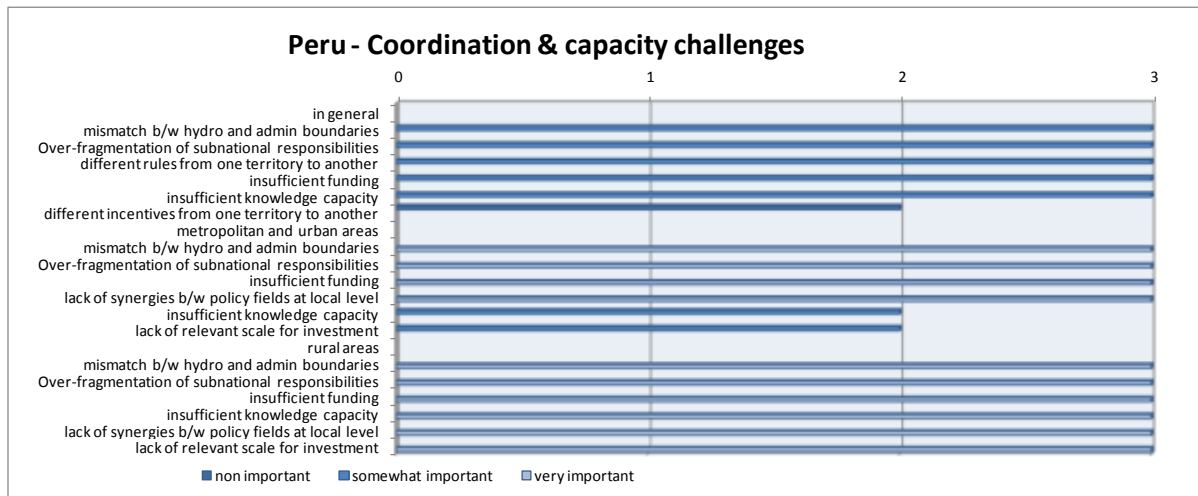
Roles	Areas	Water resources	Water services			Wastewater treatment
			Water supply			
			Domestic	Agriculture	Industry	
Allocation of uses		AAA	AAA	AAA	AAA	AAA
Quality standards		AAA	AAA	AAA	AAA	AAA
Compliance of service delivery commitment		AAA	Municipalities Regional Government	Regional government	Regional government	Regional government
Economic regulation (tariffs etc.)		AAA	Municipalities SUNASS	AAA		Municipalities SUNASS
Environmental regulation (enforcement of norms etc.)		AAA	Regional government	Regional government	Regional government	Regional government
Control at sub-national level of national regulations' enforcement		AAA	AAA	AAA	AAA	AAA
Other (specify)						

4. Co-ordination of water policy making between levels of government and across local actors

A. Obstacles to vertical co-ordination in water policymaking



B. Obstacles to capacity building and co-ordination at territorial level



### C. Existing mechanisms for co-ordinating water policy between levels of government and at territorial level

Existing mechanisms for vertical co-ordination and territorial effectiveness in water policy	Yes	No	Details (contact information, website)
River basin organisations / agencies	X		In each river basin, a ANA office has been established
Regulations for sharing roles between actors	X		In progress (recently implemented)
Co-ordination agency or commission		X	
Contractual arrangements (between central and local governments, central and regional governments, regional and local governments)		X	
Intermediate bodies or actors (e.g. state territorial representatives)	X		National Water Resources Management System
Financial transfers or incentives		X	
Performance indicators	X		In progress (recently implemented)
Shared databases	X		In progress (recently implemented)
Sectoral conferences between central and sub-national water players	X		In progress (recently implemented)
Multi-sectoral conferences		X	
Consultation of private stakeholders (profit and non-profit actors)	X		Co-ordination for the design of norms regulating actors
Other (specify)			

### D. Specific focus on selected mechanisms

#### *a. Tools to manage the interface between actors at sub-national level*

Existing mechanisms for co-ordination across different water actors at sub-national level	Yes	No	Details (name, example, contact information, website, capacity issues addressed etc.)
Inter-municipal collaboration		X	
Inter-municipal specific body		X	
Specific incentives from central/regional government (in terms of rules, rewards and sanction mechanisms, budget allocation etc.)			
Historical rules and traditions			
Specific mechanisms for conflict resolution			
Informal co-operation around projects			
Joint financing	X		For water and sanitation projects
Metropolitan or regional water district		X	
Other (specify)	X		Capacity-building for Users Committee concerning new legislations, responsibilities and tasks for water resources management  Water rights agreements and Control and Mediation Framework for water AGUA <a href="http://www.psi.gob.pe/">http://www.psi.gob.pe/</a>

*b. Tools for capacity building at sub-national level*

Type of mechanisms	Yes	No	N/A	Details (name, example, contact information, website, capacity issues addressed etc.)
<b>Broad governance mechanisms</b>				
Collaboration with the private sector (know-how transfer, concession contract, BOTs etc.)	X			Agreement for carrying out Support a Support Programme for El Platana electricity company in the Yauyos, Lima province
Financial incentives (specify from whom and for what)				Indicator or defined according to the Ministry of Economy and Finance guideline
Performance indicators and targets holding local governments accountable				
Citizens' participation				Platform established to promote water management (IPROGA)
Involvement of civil society organisations	X			
Databases (sharing information)				Water users' organisations coordinate in regulation design
Historical arrangements (water courts)				National Water Resource Information system
Other (specify)				
<b>Management mechanisms</b>				
Training – Workshops - Conferences				Irrigation sector programme
Specific performance monitoring mechanisms for staff (teams or individuals)				Regulation design Workshop to complete the water Resources law regarding users organisations and water infrastructure operators
Other (specify)				

*5. Final assessment of remaining challenges*

