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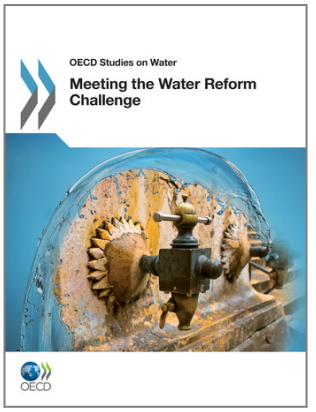
OECD Studies on Water. Meeting the Water Reform Challenge

Summary in English



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- The need to reform water policies is as urgent as ever. Yet governments around the world face significant challenges in managing their water resources effectively. The problems are multiple and complex: billions of people are still without access to safe water and adequate sanitation; competition for water is increasing among the different uses and users; and major investment is required to maintain and improve water infrastructure in OECD and non-OECD countries. Population growth, urbanisation, and better lifestyles are key drivers of these challenges, while increasing spatial and temporal water variability resulting from climate change will exacerbate these pressures. Despite progress on many fronts, in 2008 an estimated 884 million people remained without access to an improved water source, and an estimated 2.6 billion people without access to sanitation.
- Making reform happen in the water sector requires governments to ensure the incentives are aligned for all stakeholders. Governments must put in place the conditions to ensure that the actions of all stakeholders – different categories of users, multiple responsible authorities, financiers and various service providers – contribute to the long-term objectives of environmental sustainability and enhancing social welfare. It also often means generating sufficient information and support for policy change by making the case for reform.
- Reform in the water sector can take a range of forms, from wholesale and fundamental changes to the way that water policies are designed and implemented (such as in Australia and in Mexico) to relatively marginal refinements of existing policies. Understanding the political economy of reform means taking into account how decisions are made and in whose interest; how reform is promoted or obstructed and why. Learning from the experience of past and on-going water reforms can help to illuminate wider lessons that can increase the prospect of success for future water reforms.
- This report proposes a three-pronged approach to making water reform happen in terms of sustainable financing, effective governance, and coherence between water and other sectoral policies.

Framing the challenges

The ***OECD Environmental Outlook to 2050*** projects the trends and highlights the dangers faced if the business-as-usual approach to environmental resources continues. Increasingly rapid urbanisation, population growth and rising incomes means that the future will be characterised by increasing pressure on water resources and a continuing need to further improve access to safe drinking water and sanitation.

Freshwater availability will be further strained in many regions, with nearly half the world's population projected to be living in river basins experiencing severe water stress. Water demand is projected to grow by 55% due to growing demand from manufacturing (+400%), thermal electricity generation (+140%) and domestic use (+130%) (see figure http://dx.doi.org/10.1787/888932571171.) In the face of these competing demands, there will be little scope for increasing water for irrigation.

The combined effects of these pressures could mean water shortages that would hinder the growth of many economic activities. Groundwater depletion may become the greatest threat to agriculture and urban water supplies. Nutrient pollution from point sources (urban wastewater) and "diffuse sources" (mainly from agriculture) is projected to worsen (See figures http://dx.doi.org/10.1787/888932571209 and http://dx.doi.org/10.1787/888932571247).

Most regions, except Sub-Saharan Africa, are likely to meet the Millennium Development Goal (MDG) of halving, by 2015, the 1990 level of the population without sustainable access to safe water, at least as measured by access to an "improved" water supply. However, 200 million people will remain without access to water by 2050 (see figure http://dx.doi.org/10.1787/888932571361). Of critical importance is the fact that access to an "improved" water source does not necessarily mean access to "safe" water fit for human consumption. It is expected that the MDG for sanitation will not be met by 2015, and by 2050, 1.4 billion people are still projected to be without access to sanitation (see figure http://dx.doi.org/10.1787/888932571380).

The ***Environmental Outlook to 2050*** underscores the need for more ambitious policies and new ways of looking at the water challenges. Water needs to be an essential driver of green growth. Investments in infrastructure and operation of water-related services can provide high returns for both the economy and the environment. Economic and social development can be retarded by lack of water infrastructure and inadequate service provision. There is also a crucial need to develop water information systems to support more efficient and effective delivery of sustainable water resource management and policies.

Meeting the water financing challenge

Sustainable financing lies at the heart of many of the solutions to improved water management. Aligning incentives through the use of tariffs and water prices is a key feature, as is securing private sources of funding. The need for sound governance arrangements to underpin the financial sustainability of the sector is equally essential.

Understanding the benefits of improved water and sanitation helps to make the case for reforms to ensure financial sustainability. Access to clean drinking water and sanitation reduces health risks and frees-up time for education and other productive activities. Safe wastewater disposal helps to improve the quality of surface waters with benefits for the environment and for economic sectors that depend on water (e.g. fishing, agriculture, tourism). Such benefits usually outstrip the costs. In developing countries, WHO estimated that achieving the MDGs for water and sanitation could generate a benefit to cost ratio of 7 to 1.

The investment needs in OECD, transition and developing economies differ, but all remain significant. Despite a high initial asset base, OECD countries confront huge costs of modernising and upgrading their systems. This could cost 0.35%-1.2% of GDP a year over the next 20 years. In EECCA countries (Eastern Europe, Caucasus and Central Asia), much of the existing infrastructure is old and over-sized and ill-suited to economic and demographic realities. It is estimated that around EUR 7 billion would be required annually for operation, maintenance and capital investments. But the need for investment is perhaps the most urgent in developing countries. It is estimated that the annual investment to meet the MDG target is USD 18 billion, although this is dwarfed by the estimated annual cost of maintaining existing services of USD 54 billion.

Closing the financial gap requires mobilising financing from a variety of sources, and may include reducing costs.Increasing the basic sources of finance can fill the financing gap, i.e. tariffs, taxes and transfers (commonly referred to as the "3Ts"). Mobilising repayable finance can bridge the financing gap.

As is now well-recognised, the 3Ts are the ultimate sources of finance for water and sanitation services (WSS). The 3Ts can also be used to leverage, and eventually repay or compensate, other funding sources, principally loans, bonds and equity. Each country is likely to adopt a different mix of the 3Ts to meet their financing needs. Most countries have used public transfers (either from their own government or from external sources) to fund the development of WSS, particularly for capital expenditure. As countries develop and WSS become more mature, there tends to be a shift towards more use of commercial finance.

The private sector has a significant role to play in helping to mobilise financing for the water sector. Formal and informal WSS operators, private financial institutions, and private companies can all help by improving overall sector efficiency and improving the sector's creditworthiness and ability to attract financing; financing investment costs; and managing and enabling the capital programmes of public authorities.

The financing challenge goes beyond ensuring the financial sustainability of the water services sector and encompasses the financing of water resources management. Identifying benefits and beneficiaries, distinguishing between public and private costs, and applying a range of instruments based on the user pays (or beneficiary pays) principle is key to meeting this financial challenge.

Ultimately, it is essential for governments to take a strategic approach to financing water investments and services. Strategic financial planning must be carried out by governments to set realistic objectives for the WSS sector, checked against available resources, and agreed in a multi-stakeholder policy dialogue. Strategic financial planning provides a structure for a policy dialogue to take place. The OECD (in in collaboration with other international organisations) has developed a series of tools with a view to improve the performance of utilities.

Meeting the water governance challenge

Water is essentially a local issue and involves a plethora of stakeholders at 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, policy makers inevitably face obstacles to effectively designing and implementing water reforms. These obstacles are often rooted in misaligned objectives and poor management of interactions between stakeholders.

The trend towards the decentralisation of water policies has resulted in a complex relationship between public actors at all levels of government. OECD countries have allocated increasingly complex and resource-intensive functions to lower levels of government. Yet, sub-national actors do not always have financial resources required to meet these needs.

There is a need to identify good practices and develop pragmatic governance tools. The OECD has examined the multi-level characteristics of water governance in order to better understand *who* does *what*, at *which level* of government, and *how* in terms of water policy design, regulation and implementation. It also proposes a "reading template" to diagnose common multi-level governance bottlenecks. The OECD has proposed a tentative set of guidelines that are intended to serve as a tool for policy makers to diagnose and overcome multi-level governance challenges in the design and implementation of water policy. They are intended as a step towards more comprehensive guidelines that may be built on in the future, based on in-depth policy dialogues on water reform with countries.

Meeting the water coherence challenge

The nexus between water, energy, food and the environment presents significant challenges for water policy reform efforts. Ensuring that policies in these areas do not work against each other is essential if governments wish to meet the range of policy goals while not undermining the sustainability of the water resource base.

The importance of water in energy production and use is matched by the importance of energy in water. Water resource constraints are often met by energy-intensive solutions such as long-haul transfer and desalination. Many

countries address energy constraints with water-intensive options such as steam-cycle power plants or biofuels. An approach whereby water planners assume they have all the energy they need and energy planners assume they have all the water they need, is not likely to work effectively in the future.

Similarly, water and agriculture are inextricably linked, not least because agriculture accounts for around 70% of water use globally. Support provided to lower the costs of water supplied to agriculture can undermine efforts to achieve sustainable management of water. Agricultural support policies linked to production can also exacerbate off-farm pollution.

Policies across water, energy, agriculture and environment are often formulated without sufficient consideration of their inter-relationship or their unintended consequences. The silo nature of many governments' approaches to policy development in the different areas is the key contributor to this incoherence. Institutional arrangements need to be re-engineered to create a greater intersection of policy development, implementation and monitoring in these areas. But differences in the institutional arrangements add to the complexity.

Success in achieving greater coherence between energy, agriculture and water policies will ultimately depend on removing policy inconsistencies, especially where energy and agricultural support policies conflict with sustainable water management goals.

Options to enhance policy coherence include exploiting win-wins (such as taking steps to increase both water and energy efficiency), managing trade-offs where conflict cannot be avoided, and reconciling conflicts between sets of objectives. It will also require strong political commitment and leadership. Depending on national circumstances, pursuit of these options will require a significant re-calibrating of policy frameworks, including:

- Unravelling policy and institutional legacies and paying greater attention to current pricing and subsidy structures for agriculture, water and energy;
- Examining the potential for institutional re-organisation and co-ordinated planning;
- Enhancing data collection and analysis to create a strong evidence base for policy makers;
- Greater public consultation;
- Expanding the impact assessment of policy coherence through ex ante and ex post evaluations;
- Increased use of regulatory analysis requirements managed to improve co-ordination and facilitate a thorough examination of the optimal policy mix;
- Steps to improve coherence in implementation; and
- Communicating the benefits of policy coherence.

More coherent policy approaches are slowly beginning to take shape in a growing number of OECD countries. This is particularly evident with climate change as many countries have started to co-ordinate the previously separated policy domains. But much more needs to be done in both OECD and non-OECD countries.

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