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## Chapter

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The Report describes the costs of not investing in water resources development and management – the economic losses and the human suffering and underdevelopment. It also demonstrates the high rates of return generated by such investments.

Part 4 is about response options and how to choose among them. What options are available to decision-makers to respond to the challenges identified in the previous chapters? How can they select among these options? And what are some of the trade-offs in choosing certain options? What can transform competition into synergy?

We have many of the answers. Across the planet we have already shown that it can be done! But there is no one-size-fits-all solution. The best mix of responses to a country's development objectives and policy priorities to meet its water challenges depends on the availability of water in space and in time and the country's technical, financial, institutional and human capacities – its culture, political and regulatory frameworks, and markets.

Responses outside the water domain strongly affect the macro changes that influence how water is used and allocated. They also make water adaptation

measures more (or less) effective and less (or more) costly. The Report shows that decisions taken by external actors may have more impact on the state, use and management of water resources than decisions taken by managers within the water sector itself. The demand for and the provision of food and energy, the uneven ability to invest and a changing climate exert strong pressures on water. However, the most important decisions affecting water are often made without water as the primary concern, even though water may play an important role in addressing the issue. Policy decisions on health, food security and energy security, for example, can intensify or alleviate much of the pressure on water resources, affecting both supply and demand.

Key drivers of water use changes – as seen in previous chapters – include demographics, economic development and trade, consumption and climate. These drivers have powerful implications for the options available inside and outside the water domain and for how to mobilize decision-makers and other important actors.

Water resources are strongly affected by climate change and variability. The responses to the challenges posed by



climate change, through best practices and low-regret measures, are also specific to each country, especially for vulnerable hot spots such as low-lying islands, deltas, mountain areas and arid regions, where action is not only cost effective in the long term but also urgent.

Options within the water domain are distinct from those outside it. Leaders in the water domain can inform the processes outside their domain and implement decisions for the water domain; but it is the leaders in government, the private sector and civil society who determine the directions that will be taken.

Many countries face multiple challenges but have limited financial and natural resources and implementation capacities. Countries need to fully use synergy opportunities and to make trade-offs and difficult decisions on how to allocate among uses and users to protect their water resources. Improved water management depends on several interrelated factors, including accurate knowledge of the water-related problems to be addressed, their root causes and the management options available to address them; political will; stakeholder participation and cultural acceptance; transparency in management and decision-making;

effectiveness of institutional frameworks; and sustainable funding.

An appropriate set of approaches and strategies must be assembled for each country and situation, based on the biophysical characteristics of a water system as well as local, national and sometimes international characteristics and capacities for achieving sustainability of water resources.

The urgency to respond will be especially high for countries already facing severe water challenges and for countries that will face even more severe water challenges if current climate, demographic, socioeconomic and development trends continue.

Responses outside the water domain are paramount in influencing the macro changes in how water is used and allocated and in making adaptation in the water domain more effective, better integrated and less costly. Population growth, urbanization and climate change are forcing the water domain to adapt. Broader policy change and political action are required to change fundamental allocations and uses of water. Global market conditions and trade regimes affect crop prices and choices and thus also have serious implications for agricultural water use and demand.



Economic development can improve the water situation for many people, but it can also cause overexploitation of water and the environment.

Traditionally within the water sector the first response to lack of water has been increasing supply. The second response became managing demand, enhancing efficiency and reducing losses. The third response is more drastic and requires decisions outside the water sector on reallocating resources, which can exclude some sectors from further supply. Effective water management combines all three responses and involves all sectors. To achieve results, many actors need to be involved. More often than not this requires convincing fellow decision-makers with well documented arguments. Water professionals who understand the social, economic and political conditions outside the water sector that directly and indirectly affect how water is being used and governed can better inform and

participate in decision-making outside the water sector.

Chapter 14 looks at possible responses within the water domain, and chapter 15 looks at responses outside the water domain that affect how water is being used and allocated. The examples of response options are pragmatic and include responses by governments, private sector, civil society and consumers at various levels and scales. The options take into account geographic and hydroclimatic conditions, the level of economic development, water subsectors and the supply and demand side of the water resources equation within the broader socioeconomic framework.

Chapter 16 discusses the need for accelerated investments and informed decision-making through partnerships. It also considers the consequences of increasing uncertainty and how to prepare for decisions under such conditions.