Theme 2 Report

Advancing Human Development and the Millennium Development and the MDGs

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Introduction: bridging MDGs through water

This document briefly introduces Theme 2 and its related topics and provides some general perspectives from a thematic point of view. The substance of each topic, which is presented in the sessions, is further described in the respective topic documents and will not be elaborated in any detail here. The topic papers also present a set of key messages which will be at the core of the discussions in the individual sessions.

Clearly, reaching the Millennium Development Goals and going beyond them presents a formidable challenge. Climate change, ecosystem degradation, the food crisis, energy crisis, economic crisis all make the task more difficult. Over the recent decades, global crises have followed one after the other. Although there is a tendency to exaggerate the impact of each individual emergency, it is becoming increasingly clear that global challenges are progressively becoming more complex and interlinked. Water is directly or indirectly linked to many of these challenges. Water's connection to the MDGs and other development targets is quite obvious. Climate change adaptation and mitigation requires investments in water resources management and infrastructure. Global food and energy security cannot be achieved without considering the water component. The economic crisis can lead to either a decrease or an increase in water infrastructure investments, but its impacts remain unclear. Poverty cannot be solved without access to basic water and sanitation services, food and energy.

We need to move away from an increasing crisis management toward a process steered by more long-term development objectives. Although quick decisions may need to be taken, wrong decisions can make the situation worse. The water crisis has been on the agenda for many decades. Perhaps it is time to acknowledge that this is not a 'crisis', but rather a normal state of the situation that we

need to manage. There is already a tendency towards focusing on greater flexibility rather than finding a blue-print for solutions and on the need to foster a management culture which promotes adaptive capacity to deal with an increasingly volatile situation rather than only with crises. This is clearly relevant from the perspective of institutional development, but also with regard to infrastructure development, and the development of new financial mechanisms, legal instruments etc. Actions can and should build on past experiences but considering current changes, it will also require innovative thinking. This is nothing new.

Most challenges currently on the agenda can in one way or the other be linked to growing pressure from an increasing global population and economic growth. Although the population growth rate, which is currently at about 80 million people per year, is slowing down, it will still bring the global population to over 9 billion people by mid-century. This is a fundamental base-line reality associated with all development and environment challenges, be it climate change, natural resource depletion, access to food, water and sanitation, energy, infrastructure or employment. These challenges are all inter-connected. The processes of globalization is creating a playing field that in many ways looks very different from 60 years ago, when most of the current multi-lateral system was established, or even just a decade or two ago. Economic development and globalization are fundamental prerequisites for poverty eradication and for mobilizing necessary resources for investments, but the positive effects have very little meaning to people who do not profit from such benefits and as a result remain in poverty. At the same time, it is clear that hundreds of millions of people have been brought out of poverty over the last decades.

The Millennium Declaration which was signed by almost 150 countries in 2000, reaffirmed many previously identified development targets and provided a clear commitment from governments to foster improved health, poverty eradication, education, access to water and sanitation, access to food and securing environmental sustainability. The challenges posed by the water-related targets to the Millennium Development Goals (MDG) and other global agendas, such as the provision of basic energy supplies to all are phenomenal. Achieving universal access to drinking water and sanitation is less an issue of water resources issue than it is an issue of management, investments, institutional capacity and political priority setting. Nevertheless, the water sector needs to step up its efforts and argue for increased action and investments. In contrast, securing water for energy production and food will put an increasing strain on water resources and require major investments, both to secure the availability of water resources but also to increase efficiency in the concerned sectors. There are also emerging dark horses, such as bio-energy production, for which the water related implications and by extension the potential effects on MDG realisation remain uncertain.

In its essence, Theme 2 is a fully bridging *theme,* as it deals with the MDGs and other global development targets. The Theme is structured to focus on both the analysis of the problems and the potential solutions through management options. One entire topic focuses on the potential of improved multiple uses of water, as a way to increase efficiency by bridging uses and users and combating potential conflicts between the various water stakeholders.

Access to water Supply and Sanitation – the basics for development

Topic 2.1 addresses a fundamental development target: how to ensure that everyone in the world gains access to safe and sustainable water and sanitation services. Although the amount of water needed to secure basic access of drinking water and sanitation is comparatively small, the challenges in pure numbers are tremendous: almost 1 billion people still lack access to safe water and 2.5 billion to basic sanitation. To reach the 2015 sanitation target, for example, requires that almost 500,000 people per day gain access to improved sanitation. Water, sanitation and hygiene (WASH) are fundamental to achieving all the MDGs and the fact that the world is not on track to achieve the sanitation MDG in many countries, especially in Africa and East and South Asia, will have profound impacts on the world's ability to reach other development targets, including those related to poverty eradication. In addition, the low levels of service sustainability compound the crisis in this sector.

In the process of developing the sessions under topic 2.1, five priority entry points were identified to stimulate the dialogue:

1. How to Strengthen Sector Monitoring to Track Progress towards the MDGs and Beyond?
2. How to Accelerate WASH Sector Reform and Improve Governance?
3. How to Scale Up WASH?
4. How to Keep Sanitation High on the Agenda?
5. How to Create a Global Framework for Sector Action?

The process of developing the sessions has generated a number of fundamental recommendations that will be further discussed and refined. Four take-away messages from the topic are: (1) Getting the numbers right in WASH matters. The key is strengthening country-level monitoring, so local decision-makers make informed decisions. (2) Scaling up WASH requires institutional and governance reform, building systems that can work at the appropriate scale and staying the course; (3) Sanitation needs increased attention, with clear accountability for all responsible, specific budget allocations and stimulation of demand and behaviour change; and (4) Global agencies should adopt a common framework for WASH actions.

Power to develop – Power to change

Topic 2.2 looks at challenges related to water for energy and energy for water. In many developing countries, the lack of access to a basic energy supply remains a fundamental problem. In some regions, less than 10 percent of the population are connected to any kind of energy grid, which is a serious obstacle for development. This also means that energy is not available for water resources systems, such as pumps.

The topic will analyse the issues through a number of fundamental components including technology, sustainability and policy. Some key aspects that will be addressed are (1) the reduction of energy and water footprints through innovative technologies, and barriers to their progress; (2) sustainability in a water/energy context: what tools exist to measure performance, and how to further embed sustainability in future development? (3) policy, with emphasis on avoiding negative consequences through greater integration; (4) observations to bring forward recommendations for future action.

There is an abundance of global energy resources, and considering current challenges it is not possible to rule out any of the established energy technologies at this stage. It will be increasingly important to focus on how to optimize benefits through integrated systems that support water and development objectives.

As energy production becomes more water intensive and the use and reuse of water resources requires energy, the two sectors should no longer be considered separately. This interdependence is even more pressing since both sectors are affected by global issues such as climate change, growing population and sustaining economies. Moreover, the demands for water and energy tend to grow in parallel, and people deprived of clean water supply and sanitation services are often the same people that lack safe and modern energy services. This is a good example on the interlinkages and interdependencies between different development targets.

Climate change is a particularly challenging aspect in relation to the energy sector and it will have direct impacts through the potential increase of stresses on water resource availability and energy demand in many countries. Although water stress may become a serious obstacle in some regions, others will have to manage extreme hydrological events and an abundance of water.

Water to feed the world

Over the last century, global food production almost matched the demands of population growth and enhanced nutritional needs. However, inequity has remained a stumbling block in achieving the MDG goal. Despite a three-fold global population increase since the turn of the 1900s, global production levels were able to sustain the population, which now stands at 6.5 billion. Even when such indicators as the ratio of global cereal stocks to utilization were declining, the overall supply was matching the demand. From a global perspective, water has so far not been a limiting factor for agriculture and food production. From a regional and/or national level, however, the situation is quite different.

Global food security is becoming an increasingly challenging issue as some countries are already facing, and several others may soon face, increasing water scarcity. In other cases, countries may have to deal with increasing floods. The water implications are not yet well enough recognized when it comes to food security. As a whole, the number of chronically hungry people in emerging and the least developed countries started to increase from the late 1990s. By 2001–2003, the total number of undernourished people worldwide stood at 854 million. The recent rise in malnutrition (estimated at 40 million in 2008) has brought this figure to about 963 million people. And this, at least partly, could be attributed to rising food prices, and capacity of the poorest of the poor to pay for food.

The paper evolved for Topic 2.3 through a consultative process and identifies three areas of particular importance. These are:

- External factors, such as the impacts of bio-fuel (also called agro-fuel) products, the domination of hydropower in reservoir operation, climate changes, virtual water trade, changes in agricultural markets and the price of commodities and their strong influence on the agriculture activities. Such changes will require further adaptations in the development of water management measures to ensure global food production – almost doubling the present levels in 25 to 30 years - and to reduce the probability of a severe crisis in the coming years.

- Possible modernization of agricultural water management (technical, management, financial, environmental) at a large-scale, especially in emerging and least developed countries, to achieve the required increase in food production. In some cases, it could be to save water for other uses, and in others, to save money to develop further water resources.

- The demand for increased production cannot be met with the existing structure and anticipated trends in irrigated and rain-fed food production. These need to change significantly, at national,

regional and global levels. The optimal mix of small-scale and large-scale water management systems under prevailing and expected future conditions may have to be identified, and this could be dependant on the scale of the systems and/ or local, national or regional demands. Specific efforts will be required to prevent mismanagement of water and the way the system is planned and operated for conveying water from the source to the fields.

The sessions for topic 2.3 have been developed considering the following key questions:

- *Key question I.* How to achieve the required food production to meet the growing demand?
- *Key question II.* How can food market measures boost rural development and poverty alleviation?
- *Key question III.* Water for bio-energy or food?
- *Key question IV.* How can better water management reduce poverty and hunger?

The sharp increase of food prices in 2007 and the increasing volatility in food prices and or their availability are partly driven by resources-related issues and partly by market-related issues. There are many reasons to be concerned if social tensions are exacerbated due to dramatically changing prices. The question of rapid reversibility from non-food production to food production will emerge as an important feature for food security. The water implications of such changes need to be carefully considered. This demonstrates the need to have flexible systems that can respond to dramatic shifts and emphasizes the importance of investment in irrigated agriculture. The 2008 World Development Report notes that 75 percent of the world's poor live in rural areas in emerging and least developed countries. At the same time, only about 4 percent of official development assistance goes to agriculture, although it has been increasing over the last few years. Thus, investments in water for agriculture are not only for increasing food production but are a prerequisite for economic development and poverty eradication.

Water has many uses and functions – and these need to be serviced

Topic 2.4 addresses multiple uses and functions of water services and in doing so deals with a set of potential solutions to water challenges related to the MDGs. Historically people, communities, and water managers have been deliberately using man-made delivery systems or natural water systems for more than a single use. In many rural and urban areas, domestic water networks are used for small-scale productive activities. Similarly, irrigation systems often provide large amounts of water within their command areas, which facilitates water access for many other uses through recharge of

surface streams and groundwater. Lastly aquatic systems (wetlands, including rice-based systems) provide many critical productive and ecosystem services to nearby populations. Under appropriate stakeholder management processes, the practice of multiple uses and functions can be sustainable and very efficient for the community.

People use water services for a range of purposes, from domestic uses, to productive uses in agriculture, industry, as well as for environmental services at different scales. Preliminary estimates indicate that it is probable that over 1 billion people could be currently included as benefiting from these types of low-cost water services. Yet, in the planning, design and management of water services, these multiple uses and functions (MUSF) are often not considered. This may lead to sub-optimal use and benefits of the water services. It may deny users of water supply systems the opportunity to use water productively, or, it may result in expensive investments in parallel systems for different uses. Therefore, the MUSF approach for water services has been advocated.

Although the MUSF approaches offers high potential to reach “more MDG per drop”, compared with traditional single-use sectoral approaches, they also pose their own management requirements. Some of these are similar to single-use approaches; others are specific to MUSF. At the same time, a multi-services approach can help overcome management challenges present in single-use services and contribute to more sustainable water services by sharing cost among numerous stakeholders and anticipating use that people will try to make of their system. It is clear that MUSF should be an inherent element of the Integrated Water Resource Management (IWRM) approach, which requires strengthening governance of multiple services, both in terms of sharing decision-making responsibility and costs and benefits.

The corresponding MUSF arrangements need to be built upon existing ones. For instance, management agencies of large irrigation systems are often the only water services providers, particularly during dry periods. Sound governance of these systems should be ensured to encompass the principles of IWRM and to recognize the needs of all stakeholders.

However, a first step will be to characterise different types of multiple use and functions of water services in different settings, and assess their benefits and costs. To convert the high potential of current multiple-use practices into a wider application, further institutional and policy changes will be needed. Above all, it will require innovative approaches for overcoming existing barriers between sectors. On the one hand, there may be need for a comprehensive policy approach for implementing and managing multi-services systems. Such policies will need to be country-specific, and will

therefore require a progressive learning approach on MUFS potential and constraints that leads towards a broader vision and a strategy. On the other hand, the bottom-up process of institutional change from within sector stakeholders should be encouraged to get reform processes started.

Some fundamental Theme-level challenges

Each Topic will present both a set of questions that needs to be addressed but also possible key messages on how we can make further progress. From the Theme-level point of view, the aspect of integration is perhaps the most important factor. There is increasing recognition that development targets cannot be reach by a one-by-one approach. They are all interlinked and can support or counteract each other. Economic development is fundamental for poverty eradication, for mobilizing resources for investments etc. However, it is also a key driver for environmental degradation is if it not sustainably managed. For this reason, taking an integrated approach to development policies is necessary.

This paper does not present specific recommendations. The process will be carried out during the Forum. It is too early to make a set of the “most important” recommendations at this stage. There are already many international agreements, policy documents, declarations presenting hundreds of recommendations on how we could make further progress. They are all relevant. Perhaps, one single recommendation could be: speed up implementation!

We have, however, decided to highlight a few areas below which we would hope could be further integrated in the session and topic discussions.

Addressing conflicting goals remains a challenge

A major challenge with the global development targets in general, and the MDGs in particular, is the that with current technologies and development patterns, achieving one or many of these targets will implicitly create problems in achieving others. The most obvious example is the increasing competition between different sectors. Another example is the conflicts associated with meeting MDG7 as a whole – achieving environmental sustainability. These conflicts are difficult to address as they require multi-sectoral approaches. Partly, the problem is that the water sector has a rather

small direct impact or influence on decision-making in other key sectors, such as agriculture, energy and industry. Despite that, not addressing the challenge of conflicting goals is not an option.

Perhaps one of the major first steps in moving towards a sustainable solution to challenges related to increasing competition is to rank water needs, considering both water quantity and quality. It is clear that water supply and sanitation followed by water for food are the main water priorities. Water for energy is also a fundamental prerequisite for any kind of sustainable development. This forum is certainly one of the first to address the critical needs to bridge water for food and water for energy. Finally, bridging all sectors through MUSF is a lesson that should be retained. The understanding and management of conflicts, but also of opportunities for sharing investment, will be essential for improved policy and decision-making at all scales.

Options to reach water related MDGs vary in nature. Some are related to local production, whereas others are more related to distribution and trade of goods and services. Efficiency in systems to distribute goods and services is a key aspect of defining solutions to fundamental development challenges. For example, food security is not primarily a global production problem, but rather an issue related to transport, storage, redistribution, etc. For other water services, only local production of services is relevant as water cannot be easily economically transported.

Adaptive capacity and flexibility must increase

Considering recent events, such as the food and energy crisis and current economic turmoil, it will be increasingly important to consider, and adapt to, rapidly changing economic and social realities. Globalisation and development, the rapid spread of information technology and the changing power/role of governments (at all levels) and multilateral systems are all examples of structures and processes that will have direct and indirect impacts on water issues. As the world changes, new stakeholders will become critical for addressing water-related challenges, while other may lose power or influence. This may imply changes in decision-making structures. Governments may need to focus more on providing viable frameworks for new decision-making structures and self-regulation and less on more traditional command and control instruments (economic and legal instruments). Policy-making processes will not be less important, but may need to be reformulated and need to consider more closely the areas and levels most effective for policy interventions and the potentially increasing role of non-governmental stakeholders and intermediaries.

Addressing more long-term development and environmental objectives also needs to go beyond technical and managerial aspects. The water sector tends to be constrained by some narrow-mindedness, focusing too much on sectoral technical aspects and forgetting more long-term sustainability issues. Considering rapidly changing realities, a key issue will be increased flexibility: flexibility of institutions and governance structures, flexibility of the political system and flexibility in technological and management solutions.

There needs to be an increased focus on building overall resilience to cope with development challenges in the context of environmental and economic changes. Sustained policy guidance is required to move from simply coping with impacts and managing risks to making judicious investments in adaptation and building long-term resilience. Ultimately, achieving improved resilience towards global changes, including climate change, needs to underpin all planning and decision-making, especially in relation to the MDGs. In particular, long-term and large-scale investments in water infrastructure and institutions need to be further assessed in terms of their resilience.

Move beyond the sector

Solutions designed to reach the MDGs will need to increasingly be sought outside the water sector and its related disciplines. Macro-economic policies (notably those influencing social structures, market conditions and international trade), infrastructure development, and spatial planning will likely have the greatest impacts on demand for water and the capacity to adapt to changes. Consequently, there are clear limitations to the adaptation measures that can be designed and implemented within the water sector.

In light of this, it will be essential to encourage more integrated or 'joined-up' policy processes to obtain appropriately scaled responses to global changes. But incorporating the varied interests of agriculture, water and energy sectors, as well as policy makers influencing actors in market development, trade and infrastructure will be a challenge. For this reason, a focus on the development of integrated management and decision-making tools is necessary. This may require a fundamental assessment of existing economic and legal planning instruments and more operational local/national management frameworks.

Move beyond 2015:

Eradicating thirst and hunger! Securing sanitation and health! Why should we be satisfied with only going half way?

All issues addressed under Theme II represent long-term challenges, but for hundreds of millions of people these issues are a reality right now. Adopting an optimistic, but still realistic, approach is essential. However, even if we were to achieve the MDGs by 2015, there would still be considerable challenges to deal with. We need to start looking beyond 2015. The 5th World Water Forum can serve as an important platform for such deliberations.

One disadvantage of the MDGs is that they have pushed a sectoral approach instead of promoting synergies. The case of water is eloquent in that regard. Water-related MDGs should be tackled within a consistent strategic frame. They very much depend on scarce natural resources, which often put them in competition with each other or other development and environment goals. Governance changes are needed to bring about synergies rather than conflicts within the water sector and in order to address adequately priorities set at different levels. Integrated Water Resources Management provides such a framework at both a political and a watershed level. MUSF also does this, but from a more local perspective. Investing in water for food and energy, including more efficient management of existing infrastructure, is likely to generate productivity gains that can provide additional resources for other uses.

As so often stated, the concept of sustainable development implies that we should not pass on our problems to future generations. Access to food, energy, water and sanitation are obvious problems today, but solutions do exist and it is the responsibility of the current generation to deal with them. Climate change is perhaps a more daunting problem as the uncertainty remains high, but we are not without options for action. Of course, there are many stumble blocks that need to be overcome; financial and technical issues, capacity and institutional constraints etc, but most solutions related to current water problems do not require rocket science.

It is necessary to discuss and eventually reach political agreements on long-term strategies and actions. It is also necessary to ensure that progress can be sustained. After 2015, changes can be expected in the mechanisms to finance the water sector: how are we going to adapt to these? In addition, addressing new development issues will be critical. The Theme has already done so by including energy issues, which are currently not part of the MDGs.

2015 is around the corner! Are we prepared?