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The Role of Water in EU Development Policy

Introduction

Water is the essence of and the precondition for human life as well as an indispensable resource for the economy. More than two thirds of the surface of Earth is covered by water, however about 97 % of global water resources is composed of saline oceans water, and only 3% of freshwater. The majority, about 69 % of all the Earth's water resources is locked up in glaciers and icecaps; merely about 1% is in forms useable for humans. Freshwater is found in lakes, rivers, streams, ponds and in the range of 30 % in the ground. Rivers and lakes that provide surface water (1,386 million cubic kilometers) for human use constitute only about 0.007 % of the world's total water stock of about 333 million cubic miles, yet for human use rivers are the primary source of supply.

Global warming implies increased demand for water; the „blue gold” is becoming more and more scarce. As population growth continues to accelerate, additional pressure is being placed on energy production. Since fossil energy sources are limited, renewable sources need to be further explored and exploited, water being one of the most reliable of them. It is undoubted, that water will play a significant role in human and economic development in the near future. Although water embodies enormous economic potential, it is a finite and vulnerable resource that has to be managed carefully and with responsibility. Sustainable water resources management is one of the major challenges our world will be facing in the coming decades, which renders special attention to water in the context of development cooperation especially timely and of utmost importance. To be able to tackle this challenge, a more coherent approach towards water needs to be pursued by future EU development policy.

The World Economic Forum mentions the water-food-energy nexus as one of the major global risks in its report 2011¹, stating that:

¹ Global risks 2011, Sixth Edition , World Economic Forum, 2011

"A rapidly rising global population and growing prosperity are putting unsustainable pressures on resources. Demand for water, food and energy is expected to rise by 30-50% in the next two decades, while economic disparities incentivize short-term responses in production and consumption that undermine long-term sustainability. Shortages could cause social and political instability, geopolitical conflict and irreparable environmental damage. Any strategy that focuses on one part of the water-food-energy nexus without considering its interconnections risks serious unintended consequences."

1. Purpose and objectives

The Hungarian Presidency considers water to be an essential building block of the productive and social sectors that have a close connection with sustainable development and growth. Sustainable management of water resources and the provision of water and sanitation services are amongst the most efficient ways of addressing objectives by EU development policy of reducing poverty and achieving the Millennium Development Goals. Furthermore, the linkages between water and energy, agriculture, health, rural development, urban settlements and environmental protection are all paramount to the EU's interactions with developing countries.

The initiative by the Hungarian Presidency to raise the profile of water within EU development policy builds on efforts pursued by the trio EU Presidency and Hungary remains hopeful of fruitful follow-up by subsequent Presidencies.

In line with the integrated approach of the trio on sustainability of water resources, and based on substantial consultations with EU Member States, the European Commission and key actors in civil society and academia, this issues paper provides input to a policy debate on how the EU can:

- Better integrate water and sanitation into future European development policy;
- Strengthen result-oriented implementation of existing and future EU development policy in the area of water resources management as a catalyst for pro-poor growth;
- Increase international recognition of the importance of water in sustainable development, in particular with regard to the Rio+20 Conference in 2012.

The aim of this initiative is to trigger an exchange of views in the Council of the European Union on water and EU development policy during the Hungarian Presidency term. The results of exchanges among EU Member States will inform discussions at the Foreign Affairs Council (FAC) on 24 May 2011. Subsequently, the Presidency intends to finalize a Presidency Summary on Water in EU Development Policy, the key messages of which will be fed into the Environment Council Conclusions on EU water policy expected to be adopted in June 2011.

The Presidency also wishes to contribute to discussions on the importance of water resources for sustainable development and inclusive growth in the context of the Rio+20 Conference preparations and other relevant forums during the months ahead such as inter alia the Conference on "The Water, Energy and Food Security Nexus – Water Resources in the Green Economy" (November, 2011 - Bonn) and the 6th World Water Forum (March, 2012 – Marseille).

In light of today's global challenges of population growth, rapid urbanization, climate change and rising food prices crucially impacting on water use and reliance, re-launching existing partnerships and reinvigorating on-going initiatives are needed in increasing the EU's ability to deliver the results that address the sustainability needs of tomorrow. The medium term objective of the Presidency process is therefore to reinforce the EU's policy and implementation framework with regard to the crucial role that water plays in developing countries.

2. Water as a central issue to sustainable development in a changing world

Water is one of the most valuable resources on Earth, with immeasurable human, ecological and economic value. Adequate sanitation, clean drinking water and proper hygiene underpin all aspects of social and economic development. Sanitation and hygiene are essential elements of health, education and social programs and are of crucial importance for improving the lives of the poor and vulnerable. Not only is drinking water essential for human life; water is needed for the preservation of biodiversity and sustainability of ecosystem services and at the same time for agriculture, food production, industrial use, and energy generation.

Contributing to improved food and energy security, maternal and child health, education and gender equality, water is a central issue to sustainable development. Given dynamics at the rapidly changing international scene, the relative importance of sustainable water management for development and peace and security is ever increasing.

2.1. International context of sustainable development and inclusive growth

The 1992 Summit in Rio de Janeiro agreed on a common interpretation of sustainable development, which "*meets the needs of the present without compromising the ability of future generations to meet their own needs*". This concept requires ensuring social progress and economic growth at the same time while protecting biodiversity and the global environment. The fundamental drive for green economy² is therefore to achieve an economic development model that can secure sustainable development, improve the quality of human lives, and can stand up against poverty and unsustainable use of ecosystem services.

The goals and objectives of the 2002 Declaration and Plan of Implementation stemming from the World Summit on Sustainable Development (Rio+10) in Johannesburg embedded the poverty reduction objectives of the Millennium Development Goals (MDGs) and endorsed prioritizing water and sanitation in national sustainable development strategies and poverty reduction strategies. However, implementation of the collective commitments on minimizing the degradation of water resources and integrate sanitation into water resources management strategies need further improvements. Despite the targets agreed in Johannesburg to "*Develop integrated water resources management and water efficiency plans (IWRM) by 2005, with support to developing countries, through actions at all levels*", the vast majority of countries have not yet implemented such plans.

² A green economy is a system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being and social equity over the long term, while not exposing future generations to significant environmental risks and ecological scarcities – working definition by the United Nations Environment Programme (UNEP) (2010).

The EU sets out the objectives of moving towards a green economy in its EU2020 strategy implying sustainable, resource-efficient and low carbon economic development. In order to join efforts at the international level and greening economies with the goal of achieving global growth, economic and social development has to be inclusive regarding developing countries and has to be translated into pro-poor solutions. Partnership with the developing world should be further strengthened to enable inclusive growth also for the poor segments of societies in developing countries.

The mandate of the Rio+20 conference is to renew political commitments to long term sustainability, with a specific focus on the role of green economy in sustainable development and poverty eradication, and also on the institutional framework. The run up to Rio+20 offers the right momentum to make the ambition of reinforcing the EU's policy and implementation framework on water and development a reality and more effectively assist developing countries in achieving inclusive growth and sustainable development.

2.2 The connection between water and inclusive growth - at different levels of development

“Water has always played a key role in economic development, and economic development has always been accompanied by water development.” (3rd World Water Development Report, 2009)³

History shows a strong link between water resources development and economic development achieving social and human development. There are abundant examples of how water has been a fundamental element in economic development and how development has demanded increased usage of water.

In all industrialized countries, early and large investments have been made in water-related infrastructure and in the human capacity required to operate and maintain these investments. The flows of almost all major rivers are regulated and managed, storing water for multiple uses, reducing peak flows, increasing low flows and protecting water quality. The risk of water-related disasters and resulting damage has been reduced, the reliability of water services for production has been increased and negative impacts on human lives such as spread of diseases reduced. In most of the developed countries, the water infrastructure platform is mature and therefore constitutes a fair basis for economic and social development. The emphasis is placed on water management and infrastructure operations, both to maximize the returns on infrastructure investment and to respond to shifting societal priorities, where increasingly high values are placed on environmental assets. Investments in institutions and hydraulic infrastructure clearly have been a pre-condition to harnessing hydrology for the sustained and broad-based development and growth already achieved. Maintaining and replacing the installed infrastructure base poses however burden on future generations, while ‘green economy’ opportunities seek to introduce more efficient infrastructure solutions, and in some cases, to restore environmental assets that were lost during the period of rapid industrialization.

³ Chapter 6. ‘Water’s many benefits’. World Water Assessment Programme 2009. The United Nations World Water Development Report 3: Water in a changing world. Paris: UNESCO and London: Earthscan.

In economies that are still **in the phase of industrialising**, important investments have already taken place in water infrastructure. In some of these countries, substantial water investments have been made to promote growth (such as in hydropower and irrigation infrastructure), but those economies still remain vulnerable to catastrophic impacts (such as those caused by floods and droughts). In yet other cases, financing has been available to build infrastructure, but institutional and human capacity is inadequate or has not sufficiently adapted to manage water resources and new infrastructure effectively. These varied circumstances underscore the imperative of balancing and sequencing investment in the institutions and infrastructure required to manage water resources effectively. While it is generally accepted that countries initially place a premium on physical capital investments, human capacity and institutions can take much longer to build and adapt. Getting this balance right is crucial for leveraging growth. The damage cost of environmental degradation related to water in the Middle East and North Africa (MENA) has been estimated to be of the order of US\$ 9 billion per year, or 2.1 to 7.4% of the range of MENA countries GDP, (3rd UN World Water Development Report)⁴.

In lesser developed economies (developing countries), climate seasonality and variability, as well as rainfall extremes are even more striking. The capacity, institutions and infrastructure needed to manage and mitigate these key challenges are generally inadequate. Catastrophic hydrological events such as droughts and floods can have dramatic social and economic impacts with tragic losses of life and declines in annual GDP often exceeding 10%. As a consequence of widespread expectations that these unmitigated catastrophes will recur, risk-averse behaviour and disincentives to investment become pervasive. Such behaviour can seriously undermine economy-wide investment and growth even in years of good rainfall. In many of the world's poorest countries, climate variability is high, water-related investments are relatively limited, and there is often a strong correlation between rainfall variability and GDP performance. Where economic performance is closely linked to rainfall and run-off, growth has become hostage to hydrology⁵.

3. Challenges and opportunities for sustainable water resources management in inclusive growth for developing countries

The gap between water supply and demand is increasing. According to the most recent UN estimates one-third of the world's population could be affected by water scarcity by 2025 and by 2050 almost half of the world economy. Besides the potential of exploiting water for growth, economic development strategies must take account of the need for sustainability of reliance on water resources, and accommodate the interrelated environmental constraints as well as meet the aspiration of countries and individuals for social and human development.

The biggest challenge in delivering development in water resources management for many developing countries is putting in place the appropriate storage infrastructure and institutional platform that will serve growth and contribute to reduce poverty. The New Partnership for African Development (NEPAD) viewed the growth rates needed as at least

⁴ Chapter 1. 'Getting out of the box – linking water to decisions for sustainable development'. World Water Assessment Programme 2009. The United Nations World Water Development Report 3: Water in a changing world. Paris: UNESCO and London: Earthscan.

⁵ Section 2.2 is adapted from the report "Water for Growth and Development" David Grey and Claudia W. Sadoff in Thematic Documents of the IV World Water Forum, 2006

7%. Yet, because many of its economies are extremely vulnerable to hydrological variability, Africa loses 5% of GDP to poor coverage of water and sanitation, 2% to power outages, between 5 - 25% to droughts and floods in affected countries, and a further 5% to the future impacts of climate change. Only 7% of Africa's hydropower has been developed and there is a growing gap between demand and supply in electrification. Africa's agricultural water management is woefully deficient, this being one of the main reasons why Africa has a food import bill of over US\$17 billion (Africa Regional Position Paper, 5th World Water Forum, Istanbul⁶).

In Central Asia, water had not been a limiting factor for growth under past arrangements for regional benefit sharing under the Soviet Union. However, water use is now being developed within a different regional framework with independent states promoting significant water development tracks unilaterally putting more stress on the shared water resource. Tajikistan, Kyrgyzstan and Afghanistan constitute the water tower of the Aral Sea Basin countries. All countries are striving to develop their hydropower potential, given that only about 8 % of the hydropower potential of the region has yet been developed⁷.

“There is a re-emerging consensus that water resources development and management are essential to generate wealth, mitigate risks, and alleviate poverty; that fighting poverty demands that many developing countries will need to make large investments in water infrastructure at all levels; and that this development must be undertaken building on the lessons of experience, with much greater attention to institutional development, to the environment and to a more equitable sharing of benefits and costs.” (OECD, 2011)⁸

In light of the above, water resources development and management remain at the heart of the struggle for growth, sustainable development and poverty reduction. This has been the case in all industrialized countries, most of which invested early and significantly in water infrastructure, institutions and management capacity. It still remains the case in many developing countries today, where investments in water development and management are still an urgent priority.

3.1 Competing demands and policy trade-offs

Water is a natural resource that will typically serve the greater benefit of societies as a whole. This explains why governments sometimes subsidize those uses of water that have a high social value, but produce little income. It is therefore a challenge to identify the right balance between water treated as a social good and water treated as an economic good – a balance that is generally only achieved through political processes.

The politics of water management to promote pro-poor growth relies on an understanding of the impacts of water use across sectors. Water policies and reforms and infrastructure investments in one sector rather than another will have very different consequences for growth and poverty alleviation. For example, irrigation and household water supply and sanitation services have traditionally been seen as pro-poor, whereas investing in

⁶ Africa Regional Paper: Bridging divides in Africa's Water Security: An Agenda to Implement Existing Political Commitments. AMCOW (2009) 5th World Water Forum.

⁷ Regional Water Intelligence Report – Central Asia. SIWI, 2010.

⁸ Chapter 10, Water Security and Pro-Poor Growth. Natural Resources and Pro-Poor Growth: the economics and politics. OECD, 2008

hydropower and industrial water supply has traditionally been seen as a strategy for economic diversification and growth. Clearly these are broad generalizations, but inter-sectoral water resource allocations will affect the structure of economies, patterns of development and growth with associated equity and gender implications, and the environment.

The allocation of water between the agriculture, energy, industry and services sectors will enable or constrain their relative growth, and give rise to very different economies over the medium term, with differing welfare impacts both in terms of overall growth and the distribution of this growing wealth. Moreover, it is quite often the case that the allocation of water and water investments between sectors is the result of political economy rather than deliberate development policy, allowing the “capture” of water resources by powerful interests in ways that hinder opportunities for more effective resource management.

More than three quarters of energy demand in Africa over the next 20 years will be generated in Africa’s cities and towns where the fast-growing, energy intensive industrial and service sectors that generate over 75% of GDP are located. This concentration of demand for the benefits of water is not dissimilar to industrialized nations. In the EU, 82% of GDP is produced in 36% of its area. Different regions within countries possess markedly different potentials for growth and poverty reduction. This concentration of economic growth will inevitably concentrate water demand. Demand cannot always be matched by local availability, so regional markets and benefit sharing become vital components of river basin management. While such concentration is supportive of growth, the negative risks that accompany the positive benefits of concentration require some counterbalancing action in economically disadvantaged areas, if conflict is not to ensue.

The trade-offs and balances between these different uses of water - in the midst of increasing demand for all types of human benefits derived from water - are major challenges. In many instances policies across agriculture, energy, environment, climate change and water are formulated without sufficient consideration of the inter-linkages.

Despite the targets agreed at the World Summit on Sustainable Development in Johannesburg in 2002 to “*Develop integrated water resources management and water efficiency plans (IWRM) by 2005, with support to developing countries, through actions at all levels*”, the vast majority of countries have not yet implemented such plans. An analysis by the UN for the 16th Conference on Sustainable Development in 2008 on the status of implementation of these commitments concludes that out of a total of 104 countries (77 developing; 27 developed), 37% of developed countries have national IWRM plans in place and partially implemented; 22% have them fully implemented. In developing countries 22% have national IWRM plans in place and partially implemented; only a further 3% have these plans fully implemented.

3.2 Water in the productive sectors

Today, 36% of the global population - approximately 2.4 billion people - live in water-scarce regions and 22% of the world’s GDP (\$9.4 trillion at 2000 prices) is produced in water-short areas. Moreover, 39% of current global grain production is not sustainable in terms of water use⁹. In order to provide adequate food and energy supplies for a growing world

⁹ “Finding the Blue Path to Sustainable Economy” a joint report by IFPRI and Veolia, 2011

population, the global economy needs to grow, and inclusive growth requires ever increasing water efficiency, which greatly depend on how societies manage water resources and water productivity. Specific emphasis on local natural resources such as water and exploitation of local opportunities related to water infrastructure can significantly contribute to maintaining decent conditions of human life and insuring safe livelihoods for rural populations.

Improved water supply and sanitation can in many ways contribute to growth¹⁰. This has been measured in several ways:

- *Faster growth in countries with better water access.* The GDP of low-income countries with improved access to safe water and sanitation grew on average at 3.7% per year, whereas the GDP of countries with limited access grew at only 0.1% per year.
- *Time savings.* The largest potential gain of investments in improved water management is found in convenience time saving. Water collection and sanitation access time saved due to improved access has been found to amount to USD 64 billion.
- *Reduced cost of disease and death.* Meeting the MDG target on water and sanitation could save the health sector annually USD 7 billion. There can be an additional saving of USD 340 million from treatment costs. People can benefit from fewer days lost to illness.

3.2.1. Water and agriculture

The agricultural sector currently accounts for 70% of water resources exploitation worldwide, water scarcity and irregularity is however among the biggest threats to agricultural production and global food security. Since the largest share of world water use in agriculture is devoted to irrigation, raising irrigation efficiency is indispensable to raising water productivity (i.e. "crop per drop"). Irrigated land currently produces 40% of the world's food on 17% of the world's agricultural land. More effective water management while expanding the irrigated area can have benefits in terms of increased production of crops for local, regional and export markets.

While the number of hungry people in the world has increased, paradoxically support to agriculture has decreased. In the 1970s, to avert the risk of hunger and mass famine in Asia and Latin America, the world spent 17% of official development assistance (ODA) on building irrigation schemes, rural roads, storage facilities, seed production systems and fertilizer plants, which underpinned the Green Revolution. Unfortunately, agriculture's share in total ODA fell to 3.8% in 2006, and presently it stands at around 5%¹¹. Partly as a response to the significant decrease in support from the international community, more than half of Africa's countries had signed the Comprehensive Africa Agriculture Development Programme (CAADP) Compacts by the end of 2010, setting down political commitments and national plans to boost agricultural production by 6% annually, each with significant water management plans, and to commit 10% of government spending to agriculture.

¹⁰ Chapter 10, Water Security and Pro-Poor Growth. Natural Resources and Pro-Poor Growth: the economics and politics. OECD, 2008

¹¹ "How to Feed the World in 2050". FAO Director-General's Statement, October, 2009

Projections show that providing food supplies for a world population of 9.1 billion people in 2050 would require raising overall food production by some 70% by 2050¹². Food production in developing countries would need to almost double with significant increases in the production of several key commodities, notably cereals and meat. 90% of the growth in crop production globally (80 % in developing countries) is expected to come from higher yields and increased cropping intensity, with the remainder coming from land expansion¹³. The vast majority of that land expansion in developing countries would take place in sub-Saharan Africa and Latin America. Land equipped for irrigation would expand by some 32 million ha (11%), while harvested irrigated land would expand by 17%. While current irrigation is minimal in many sub-Saharan African countries - and water resource use for all purposes across the continent is less than 4% - the pressure on renewable water resources from irrigation would remain severe and could even increase slightly in several countries in the Near East/North Africa and South Asia.

Water used for irrigated agriculture can be a powerful means of reducing food costs among the poor. However, irrigation impact studies focusing only on the benefits at farm level underestimate the overall livelihood impacts of irrigation development. Backward and forward linkages of irrigation in other economic activities can be substantial, as irrigated agriculture can support economic development in rural areas. This may stimulate employment and development of supporting agro-food industries and other off-farm activities, particularly for small interventions that upgrade the current rain-fed farming practices. Concentration of production by irrigation could slow the rapid land degradation and land expansion that has fuelled subsistence farming for decades, potentially stemming deforestation for land clearance, with positive carbon mitigation. Proper irrigation methods help saving water, reduce the environmental footprint and prevent soil salinization. However, rainwater harvesting is one of the alternatives for drinking and irrigation water supply in water shortage areas.

For the majority of the 2.5 billion people living in low-income countries, agriculture is the most important sector of employment, and by far the largest user of water. Any growth and poverty reducing strategy must therefore take into consideration factors related to food production, coupled with effective water resources management. Overall development policy has a key role in supporting sustainable and diversified agriculture in partner countries. Rural employment in the agricultural sector can significantly contribute to the fair income generation of rural communities and provide for a general security of food supplies.

3.2.2. The water and energy nexus

The International Energy Agency forecasts that the world economy will demand at least 40% more energy by 2030 compared to today (World Economic Forum 2011). It is estimated that 77% of the requisite energy infrastructure has yet to be built¹⁴. Adaptation and mitigation to climate change show that there is a very strong inter-linkage between water and energy. Water is a source of renewable energy, but energy is also required for the production and distribution of clean water.

¹² "How to Feed the World in 2050" FAO, 2009

¹³ "Global agriculture towards 2050" FAO, 2009

¹⁴ Global risks 2011, Sixth Edition. World Economic Forum, 2011

The water supply and sanitation sector is a large consumer of energy. For example, in some developing countries half of the electricity consumption goes to pumping water. Furthermore, most new technologies to produce drinking water, such as desalination, require large amounts of energy. Hydropower plays a key role in minimizing greenhouse gas emissions and investments in hydropower generation have recently sharply risen, in response to rising fossil energy prices and efforts to reduce carbon emissions. Currently accounting for 19% of the total global electricity production mostly from large dams, development of the world's economically feasible hydropower potential could reduce greenhouse gases emissions by about 13%. Hydro-electricity is the key power source for the 26 sub-Saharan countries; still only 7% of the hydropower potential is exploited in Africa, compared to 75% in Europe. If pursued to its full economic potential, regional trade could reduce the annual costs of power system operation and development in sub-Saharan Africa by 2 billion USD per year (about 5 % of total power system costs). This comes largely from substituting hydropower for thermal power, substantially reducing operating costs. By increasing the share of hydropower, regional trade would save 70 million tons of carbon emissions a year.

Many of the rivers large enough to support power generation are transboundary. Hydropower can play an important role in energy trade and regional power pools, but investment strategies in water have to be looked at in a frame of sound management of transboundary waters in order not to provoke conflicts and further jeopardize peace and security. The cooperative management of transboundary basins can often aggregate benefits from common water use that are larger than if water is managed at country level only. The development of multipurpose schemes for energy generation, irrigation and flood control provide benefits that can be distributed at regional level.

However, infrastructure must be developed with appropriate attention to social and environmental impacts. The main negative impacts of large dam construction include displacement of local population and ecosystems degradation. Special measures are needed to ensure that the poor do not suffer the social and environmental costs of large-scale water infrastructure. There are also several instances where upstream dams have disrupted the downstream livelihoods of poor communities depending on fisheries. For communities that are remote from the national power network, off-grid small (micro or mini) hydropower plants, with a smaller environment impact, could be a solution. Providing access to electricity to 1.4 billion people in developing countries will to a large extent (60%) depend on mini-grid and off-grid solutions, where mini and micro hydro power could play an essential role.

The EU has set targets for replacing fossil fuels with biofuels in the transport sector. However, large-scale cultivation of biofuel crops requires additional water. The water footprint (defined as the total annual volume of fresh water used to produce goods and services for consumption) of biofuels is large when compared to other forms of energy. Hence, the choice of location and specific crop for such production will determine its sustainability.

Integrated approaches that incorporate cross-sectoral considerations for storage, flood and drought management, irrigation, energy generation, water provision for human consumption and industrial use, as well as for the sustainability of biological diversity and ecosystem services will need to be reinforced.

3.3 Other crucial dimensions affecting water and development

In addition to the direct contribution to growth in the productive sectors, other dimensions are also crucial for the role of water in inclusive growth and sustainable development, namely the improvement of access to safe water and sanitation, the linkages between water management and climate change, and the contribution of integrated management of shared water resources to peace and security.

The EU attaches considerable importance to the promotion of the international recognition of the right to water and sanitation and recognizes the adoption of the resolution on the human right to safe drinking water and basic sanitation by the UN General Assembly in July 2010 and by the Human Rights Council in September 2010 reaffirming that States have obligations in relation to these rights. The recognition of this human right provides for a legal framework, which clearly defines rights and obligations, and promotes pro-poor and non-discriminatory service provision. This rights based approach also contributes to the empowerment of individuals by turning them from passive recipients to active agents of change.

3.3.1 Water and human development

Access to water and sanitation is crucial to reduce the burden of ill-health and to meet the Millennium Development Goals (MDG). The impact of investments in these areas is high on economic growth and social development, which is of primary relevance in the context of green economy discussions as well as potential for green jobs through local private sector action. For every 1 USD invested in sanitation, 9 USD is returned in increased economic development (WaterAid).

Safe access to clean water, proper disposal of waste water as well as sanitation and hygiene are important prerequisites for public health. Diseases of poor water quality still cause half of the malnourishment in our world. Unsafe water causes 1.5 million deaths each year, mostly of children under 5, and is responsible for 30% of total deaths in that age group. WHO estimates that 9% of the global burden of disease worldwide could be prevented through improvements related to water, sanitation and hygiene¹⁵. Clean water and sanitation are amongst the most powerful preventative measures for child mortality. Moreover, half of all hospital beds are occupied by people suffering from water related diseases. Appropriate management and provision would save millions of lives and prevent enormous suffering. It would also release resources in the health systems to be spent on curing other illnesses.

Inadequate access to water and sanitation deprives billions of people, especially women and girls, of opportunities, dignity, safety and wellbeing. It is estimated that in the world's poorest countries, women and girls spend 40 billion hours every year carrying water from distant sources. On the way to water pumps and wells, women and girls are often exposed to violence and rape. Poor access hampers democratic participation and economic development as well as hindering children, especially girls, from attending school and causes drop out. Improving the access to water supply and sanitation would have a substantial positive effect on girls' and women's life in developing countries.

¹⁵ Benefits of Investing in Water and Sanitation, An OECD Perspective: OECD, 2011

The 7th MDG seeks to halve, by 2015, the number of people without sustainable access to drinking water and basic sanitation. Its achievement is instrumental to attaining other MDGs, and in laying a foundation for growth. While overall progress towards the achievement of the MDG target for access to safe drinking water by 2015 is on track – including in 17 countries in Sub-Saharan Africa - the world lags far behind on the sanitation target. Only 4 sub-Saharan countries are on-track to meet the sanitation target, and in total it is predicted that over 1 billion people will be affected by the missed sanitation target by 2015¹⁶. A major challenge with respect to increasing access to drinking water and sanitation in the coming years will be to more effectively target fragile states that are most off-track with meeting the MDGs.

Meeting the MDG target on water supply and sanitation has also been estimated to gain 322 million working days per year, and the annual global value of adult working days that could be gained as a result of less illness has been found to amount to 750 million USD.

In Sub-Saharan Africa, the estimated health and time-saving benefits of meeting the MDG goal are as much as 3.5 billion USD, or about 11 times as high as the associated costs. From these figures, it is clear that the economic benefits of improved water supply far outweigh the investment costs. Returns range from 3 USD to 34 USD for every dollar invested, depending on region and technologies employed¹⁷.

It is clear that fulfilling existing commitments in order to achieve the MDGs on water and sanitation will also contribute to economic growth. Access to water and sanitation increases resilience to climate change; sanitation mitigates the human health impacts of climate change.

3.3.2 Water and Climate Change

Climate change, global population growth and economic development are putting an increasing pressure on the demand for existing water resources both in terms of quality and quantity. The direct effects of climate change are already being felt, the current gap between water demand and supply is increasing, which already forces countries to draw water from non-replenishable ground water aquifers. Further impacts in the coming decades will be most evident through additional changes in the water cycle. Addressing climate change is therefore to a very large extent linked to proper water resources management, overcoming water resources shortages and linking climate resilience to development.

Developing countries have a larger share of their economies directly dependent on natural resources and are particularly vulnerable to climate change. The livelihoods of rural communities in the developing world often rely directly on the provision of aquatic ecosystem services. Adaptation to climate change is of primary concern for developing countries, especially for those, who did not contribute to the increase of global greenhouse gas emissions significantly or at all, and do not dispose of sufficient resources to stand up against its adverse effects. Many developing countries are strongly advocating for the prioritisation of adaptation in climate related official development assistance and also in the context of specific climate financing.

¹⁶ A snap-shot of drinking water and sanitation in MDG region sub-saharan Africa – 2010 update. WHO/UNICEF (2010)

¹⁷ Chapter 10, Water Security and Pro-Poor Growth. Natural Resources and Pro-Poor Growth: the economics and politics. OECD, 2008

Taking into account the urgent needs of developing countries, and especially of those who are particularly vulnerable to climate change, Parties to the UNFCCC have agreed in Copenhagen, in 2009 to jointly mobilize USD100 billion per year by 2020 for the purposes of long term climate financing (Copenhagen Accord). This pledge has been confirmed with the Cancún negotiations outcome in December 2010, and decision has been taken on the creation of a new Green Climate Fund for managing disbursement of long term climate funds. In line with recent reports on the financing needs of developing countries and options for resource mobilization, including the report of the UN Secretary General's High Level Advisory Group on Climate Change Financing, scaled-up, new and additional, predictable and adequate funding should be provided for long term climate financing from a wide variety of sources, including public and private sources, bilateral and multilateral channels, involving alternative and innovative solutions. This can be perceived as an outstanding opportunity for sectors mostly linked to water, such as agriculture, food production and energy generation, in attracting more investment for integrated water resources management systems and boosting climate adaptive water strategies.

Increased efforts will be needed to manage both water demand and supply so as to close the gap and to meet the additional challenges imposed by climate change. Adequately addressing water resources management in national development strategies that contribute to countries' urgent adaptation to and mitigation of climate change is crucial in making societies more climate resilient and achieving poverty reduction in the progress towards the MDG's. This shall imply increasing efforts in scaling up finance for getting the appropriate water infrastructure in place that enables addressing future climate variability and changes in the water regimes. Supporting the development of necessary capacities and sharing knowhow should help developing countries getting programs in place for adaptive water management. So far the water sector has unfortunately received only limited attention in the international climate negotiations. To meet the global challenge of climate change, the management of the world's water resources must move to the top of the development agenda.

3.3.3 Water - Peace and Security

Many nations are already experiencing tension over shared and limited water resources and allocation of water between different users will become increasingly contentious. The fact that many major rivers, lakes and underground aquifers cross national boundaries is a growing source of potential conflict. When the action of one state results in a declining supply for any other, there is heightened potential for an intra-basin clash over the distribution of water.

There are many examples where conflict is linked to water. For example, while the causes of conflict in Darfur are complex, analysis shows that water scarcity and loss of fertile land are important underlying factors. In the Middle East water is of major value to the economy of each individual nation, and the joint management of the available and shared water resources will have consequences far broader than the narrow water sector. In Africa 93% of the water resources are shared across borders and there are totally 63 transboundary river basins, of which a very small part has established mechanisms for cross-border management. The Nile is shared by ten countries and the future development and stability of these countries will depend on the equitable sharing of the water resources and its benefits. The EU plays an important role in supporting cooperation among the Nile countries.

Central Asia's water resources are of critical importance to the region's economy, people and environment. Due to the arid regional climate, irrigation water is an indispensable precondition for agricultural production, and water is also important for energy production. The complexity of cross-border water, energy and environmental resource sharing and the management of these ecosystem services is exceptional in Central Asia.

However, even if in many cases water is a contributing factor to conflict, experience also shows that water management could be utilized as an entry point to proactively increase stability in unstable regions and that shared water resources may provide an avenue for dialogue between nations. Cooperation efforts over the last two decades in South-Eastern Europe, where 90 % of water resources are shared, demonstrated that sharing of resources can shift to ecosystems' benefits and can provide valuable experience to other regions.

Support for water security is particularly vital in situations where those suffering are the poorest segments of the population. Water resources can become a catalyst for enhancing dialogue, exploring shared interest and broaden cooperation among groups with divided interest. This includes promotion of a dialogue on basin-wide cooperation in such areas as information-sharing, capacity building and technology transfers, as well as support to improved governance structures to secure best possible use of water. Support should build on the EU's own experience in water management.

4. Strengths and weaknesses in existing EU development policy related to water

The **EU Consensus on Development** agreed by the Council, the European Commission and the European Parliament in December 2005 recognized water as a priority area of EU development cooperation. Conflict prevention and peace building, which are political priorities for the EU, also depend on sustainable and equitable management of shared natural resources, such as water.¹⁸

The current policy of the European Union in the areas of water and sanitation in development cooperation is guided by the European Commission Communication on "Water management in developing countries policy and priorities for EU development cooperation"¹⁹ and the Council Resolution on "Water management in developing countries - Policy and priorities for EU Development Cooperation"²⁰, both dating back to 2002. Next to these, an important EU policy feature is the possessed experience of the cross-border cooperation for management of transboundary water sources through the implementation of the **EU Water Framework Directive**. The **EU Integrated Water Resources Management approach** identifies the following priority areas for development policy:

- Ensure a supply of sufficient, good quality drinking water, adequate sanitation and hygiene to every human being, especially to the poorest and with a clear focus on the needs of women and children, with the general objective of reducing poverty and improving people's health, quality of life and livelihood opportunities;

¹⁸EU Security Strategy, Brussels, 23 November 2003 (page 3)

¹⁹COM (2002) 132 final

²⁰(8951/02)

- Develop sustainable and equitable transboundary water resources management taking into account all relevant interests, integrating the competing needs of the various users and facilitating South-South cooperation;
- Implement cross-sectorial coordination to ensure equitable, sustainable and appropriate distribution of water between users of different kinds.

To respond to the need for an increased focus on water in development policies and to contribute to global initiatives, the EU launched the **EU Water Initiative (EUWI)** in 2002 at the occasion of the World Summit on Sustainable Development in Johannesburg. The EUWI is based on a multi-stakeholder approach and provides a dialogue platform for governments, regional organisations, local authorities, water operators, CSO & business with the aim to increase and streamline support to integrated water management in developing countries. It reinforces the strategic dialogue with partner countries at the global and regional level, including for Africa, Latin American, Mediterranean, Eastern European, Caucasus and Central Asian countries. EUWI has the mandate to contribute to development policy objectives by reinforcing political commitment to action; raising the profile of water and sanitation issues in the context of poverty reduction efforts and sustainable development; promoting better water governance arrangements; encouraging regional and sub-regional cooperation on water management issues; and catalyzing additional funding.

The **Africa-EU Strategic Partnership on Water Affairs and Sanitation**, has been launched in 2002 at the same time as EUWI and cooperation has been developed with the African Ministerial Council on Water (AMCOW), which is a "Specialised Technical Committee" of the African Union. It provides a platform for developing more coordinated assistance in the implementation of the African Water commitments based on Sharm El Sheik and eThekwin declarations of 2008. Implementation of the policies laid out by these bodies can have a significant impact on inclusive growth, but implementation remains weak. The final statement of the 3rd African Water Week in November 2010 conveyed the message that "AMCOW and the EU should upgrade comprehensively the existing partnership on water and sanitation sectors". Subsequently the Africa-EU Summit in Tripoli has endorsed the integration of water and sanitation issues in the framework of Africa-EU Partnerships on MDGs, Infrastructure and Climate change.

Similar actions supported by expression of political commitment are advancing in other regions where EUWI is active. Indicatively, in the Mediterranean, the new **Strategy for Water in the Mediterranean** has been drafted with the participation of all countries of the Union for the Mediterranean as well as with contributions by regional water stakeholders and International Funding Institutes. The document is currently pending formal political approval. The preparation of an Action Plan, that will match recommendations in the Strategy with human and financial resources, is foreseen as the next key step towards concerted action for responding to water challenges in the countries of the region.

In the Eastern Europe, Caucasus and Central Asia (EECCA) region the national policy dialogues (NPDs) on IWRM and water supply and sanitation (WSS) have made a strong impact in improving water governance. NPDs keep focus on implementation of IWRM principles in the countries legislation and institutions as well as on developing financing strategies and strategic financial plans beyond WSS and the MDG targets. At the same time, NPDs take on board climate change, interrelations between water and energy, agriculture and social development, including transboundary issues. Work will continue to support the

implementation and harmonization of other EU policies with the water framework directive principles.

The Latin American Component of the EUWI gives priority to training, technology and knowledge sharing in IWRM as a mean for contributing to management and sustainable use of natural resources for inclusive growth, to the improved availability of water as natural resource for energy and development, and to environmental challenges such as water scarcity in relation with agriculture and food security.

Although an EU policy for water and development is in place and EU Member States together with the Commission support the water sector efforts in developing countries and regions, effectiveness of transforming policies into action is often hampered by a number of factors:

- Insufficient progress in the promotion of the integrated water resources management approach on the mainstreaming of water issues into relevant policies and initiatives related to agriculture, energy, environment, health, education, gender, peace and security.
- Limited political prioritization of the sector as a whole both among partner countries and developing countries.
- Limited follow up and implementation of declarations, resolutions and international statements on water and sanitation.
- Insufficient allocation of resources to the water sector and in particular for the promotion of initiatives aimed at better use of water for pro-poor growth strategies including small and large scale infrastructure and private sector initiatives.
- Insufficient adaptability of EU instruments to changing realities in developing countries. *For example, Transboundary River Basin Organizations do not readily fit into the structure of the National and Regional Strategy Papers which programme the majority of EDF resources.*

The Green Paper on EU Development Policy in Support of Inclusive Growth and Sustainable Development acknowledges that due to new global challenges emerged in recent years; the impact of EU development policy has to be raised. The Commission initiates development assistance being concentrated on the enabling factors for inclusive growth by developing countries, whereby the EU would focus on those sectors where it has comparative advantage in achieving sustainable development and where impact on poverty reduction is generally high. The increased focus on agriculture, food security and energy as proposed in the Green Paper, highlights the role of water in pursuing these goals as well as the possible implications of the new EU development policy directions for the sustainability of the world's freshwater resources. This is again an opportunity for reinforcing the EU's policy and implementation framework on water and development in order to accelerate progress towards the MDGs.

5. Conclusions - strengthening policy and producing results

Water is a key factor of economic development: History shows a strong link between water resources development and economic development achieving social and human development. There are abundant examples of how water has been a fundamental element in economic development and how development has demanded increased usage of water. Sustainable development and inclusive growth will require the harnessing of more water by the productive sectors, alongside boosting productivity and efficiency in existing water use. Water resources development and management are fundamental to the green economy and for building climate resilience, and there are strong interconnections between water, food and energy.

Water contributes to human development: Water is essential for achieving sustainable development and the MDGs. The distribution of economic growth affects the rate at which the growth is converted into poverty reduction - policies should shape the conversion of income into human development. Water services are critical to social development and poverty reduction. Properly managed water resources are an essential component of social development, economic growth, poverty reduction and equity - all crucial for achieving the MDGs. Sustaining increased efforts on drinking water and sanitation will be vital to social development, and in laying a foundation for growth. In respect of energy and agriculture, equity will depend partly on access to water itself, and partly on access to the benefits of water (for example energy produced, distributed and sold).

The importance of aquatic ecosystems needs stronger recognition for sustainable development: The economic and social benefits of water use come at a cost and in some places have led to increasing pressure on the environment and increasing competition among users. The effects of water-depleting and water-polluting activities on human and ecosystem health demand the effective protection of ecosystems and the goods and services they produce – on which life and livelihoods depend. Requirements for water to meet fundamental needs and the collective pursuit of higher living standards, coupled with the need for water to sustain the planet's fragile ecosystems, place water central in the nexus of sustainable development and inclusive growth.

A policy shift and stronger commitment is needed: EU donors and partner countries should commit to increased attention on the crucial role of water in development and growth agendas, should fulfill existing commitments and honor agreed declarations.

However, these messages are not in isolation from each other. The challenge of “responsible growth” is to grow, while at the same time embracing both environmental sustainability and social development.” (OECD, 2011)

6. Recommendations for EU Action

In order to cope with the increasing water scarcity and irregularity brought about by recent global challenges, managing water resources sustainably should move high on the development agenda. Mainstreaming of water into relevant policies and initiatives related to agriculture, energy, environment, health, education, gender, peace and security can contribute

to poverty-reducing growth and sustainable development by making water a horizontal element of future EU development policy.

To further strengthen water for pro-poor growth in EU development policy, the Council could:

- **Invite the Commission** to make a policy shift that better integrates the role of water as a key element in inclusive growth and sustainable development, to take fully account of changing dynamics, lessons learnt and best practices of the last decade;
- Invite the Commission to draw up a comprehensive policy framework on Water in EU Development Cooperation;
- This policy initiative should reinforce the interlinks between water and the productive sectors building on the catalytic role of water management in the green economy, through integration of sustainable water resources management into agricultural and energy programs supported by EU development assistance;
- An EU water policy for developing countries should integrate water resource management and implementation in form of a Plan of Action, entailing set objectives, needed actions, indicators and a timetable for implementation.
- This EU water policy for developing countries should be linked to the forming future EU development policy framework and set out ways to combat climate change, in particularly related to developing countries' adaptation efforts;
- **Invite the Commission** to develop appropriate integrated instruments and implementation mechanisms to overcome the factors hindering efficient policy implementation. This requires comprehensive initiatives that effectively link political and policy dialogue with flexible financial instruments. Such an initiative should inter alia target transboundary River Basin Organizations, develop national and regional management structures and appropriate regulatory frameworks as well as leverage infrastructure investments.
- This effort to improve actual implementation, increase results and create high-impact should build on the experiences from the EU Water Initiative and the Water Facility. A 2nd Generation Initiative should focus on 'Water for Growth and Development' while linking dialog with partner countries to coordination, policy making and implementation. Innovative strategies such as cooperating with private sector operators and cross-boundary actors as well as blending of grants and loans should be considered by the Commission.