

HUMAN DYNAMICS

Examples of our Portfolio of EU-funded Projects in the Water Sector

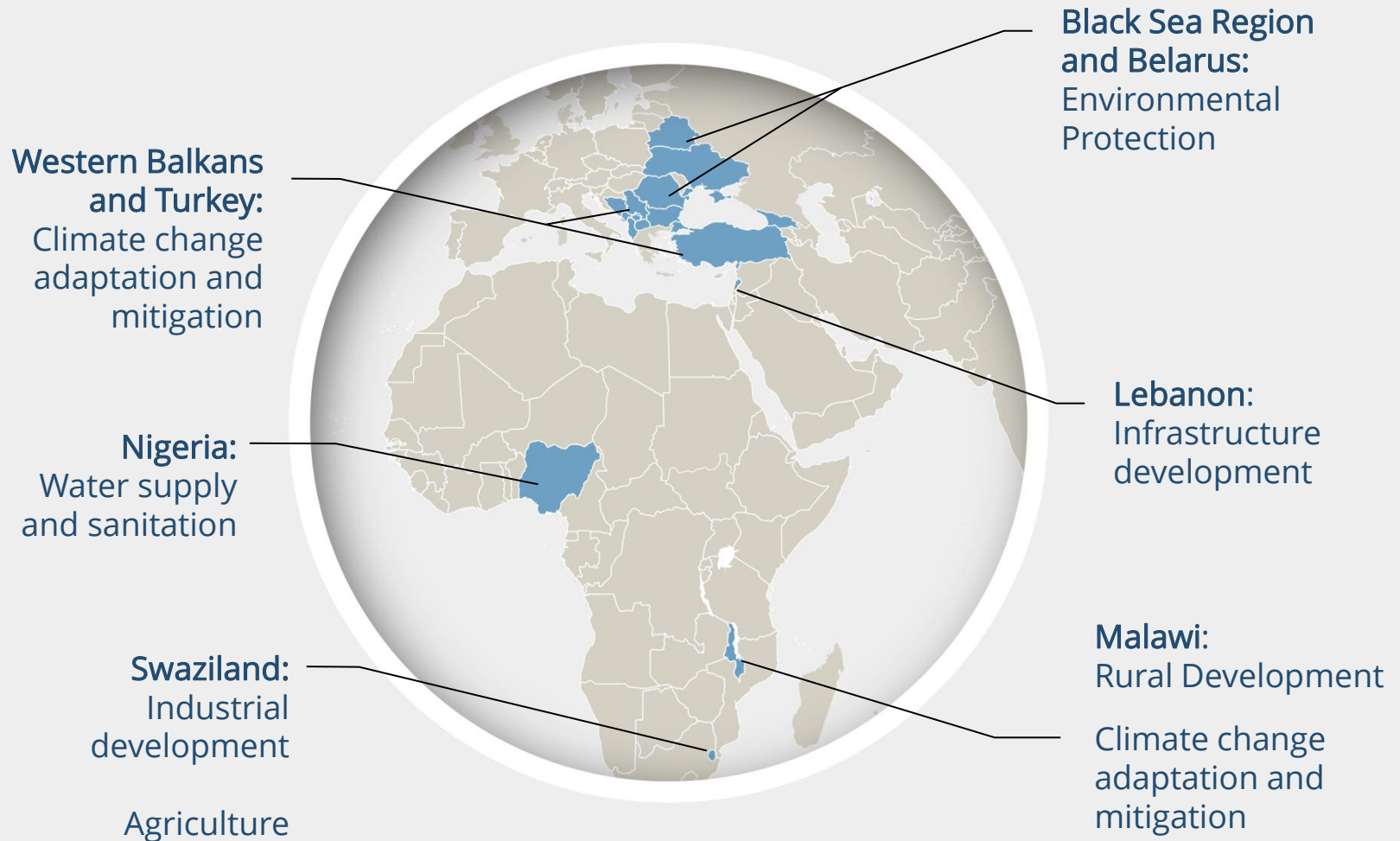
Jakob Zeidler, Head of Implementation Department

Brussels, 15th November 2016

We have implemented a variety of projects illustrating how water cuts across multiple issues for development and showcasing the broad impact of technical assistance projects in the water sector on

- Health
- Poverty reduction
- Agriculture
- Security
- Rural development
- Industrial development
- Climate change mitigation and adaptation

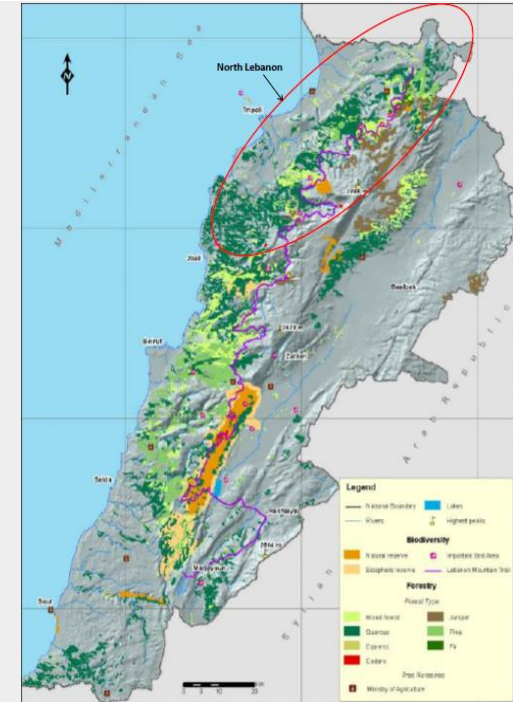
Mapping Human Dynamics Water Projects



Support Programme for Infrastructure Sector Strategies and Alternative Financing (SISSAF) Lebanon

- The project supported the rehabilitation of 3 water treatment plants (including Lebanon's largest), increasing efficiency, effectiveness and stability of water supply, including increasing pumping capacity by 60% to a total of 400.000 m³/d
- SISSAF supported the preparation of the Water Master Plan for Northern Lebanon – a strategic long-term planning tool to define the optimal development concept and build on best practices in operating and maintaining water facilities. As part of the plan, the project helped develop a strategic investment plan to future-proof the water infrastructure based on future demand projection until 2040, balancing afford

The project has impacted **2.5m people** in the Beirut area and North Lebanon (including 500,000 refugees) and highlights the importance of improving water infrastructure in the context of significant challenges, including population growth, refugee flows and climate change.



Environmental Protection of International River Basins

- The project improved water quality in 6 countries in the transboundary river basins of the wider Black Sea region and Belarus
- The project supported the development of River Basin Management Plans according to the requirements of the WFD in context of chronically under-funded water management infrastructure. The WFD provides a



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Newsletter of the Environmental Protection of International River Basins project

IN THE flow

2 Key indicators: We take another close look at macroinvertebrate sampling at pilot sites

3 Tools for knowledge: Latest publications include informative brochures and e-learning video

RBMPs add value to water protection schemes

Competing water uses and different demands for water resources and associated systems within a river basin require an integrated management approach, which means bringing together a range of topics and disciplines.

The EU Water Framework Directive (WFD), published in 2000, establishes a framework for protecting rivers, lakes, coastal waters and groundwater. It takes a pioneering approach, namely by protecting water bodies on the basis of their natural geographical formations (i.e. as river basins) and sets the ambitious objective of ensuring that all waters achieve "good" status.

Approaching the river basin as a whole is the best way to identify solutions to many of the problems arising in rivers.

The tool of choice for achieving WFD goals is the creation of river basin management plans (RBMPs). The RBMP scheme has grown out of a novel approach in which ecological considerations are deemed just as important as economic and social

A COMBINED EFFORT: Experts work along a stretch of the Drut River in Belarus during a JFS III and gap-filling survey conducted in the Upper Dnieper pilot basin.

The project's pilot project approach at national and basin level provided real impetus and momentum to improve environmental protection and water quality.

Malawi Rural Infrastructure Development Programme



- RIDP improved the livelihood of the rural population through infrastructure development, enhancing the socio-economic situation of the rural/peri-urban population. The major emphasis of RIDP 1 is to provide a link between rural infrastructure development, notably including irrigation, and productive activities within the communities through practical and sustainable approaches
- Short term "cash injections" in rural communities are complemented and sustained by long term income generation from road maintenance and productive



Indicator Target	Unit	Achieved
Area under Irrigation	Ha	760
Village Irrigation Clubs established, equipped and trained	No.	564
Aquaculture Clubs established, equipped and trained	No.	87
Village Forestry Clubs established	No.	1.050
Trees planted	No.	27.800.000

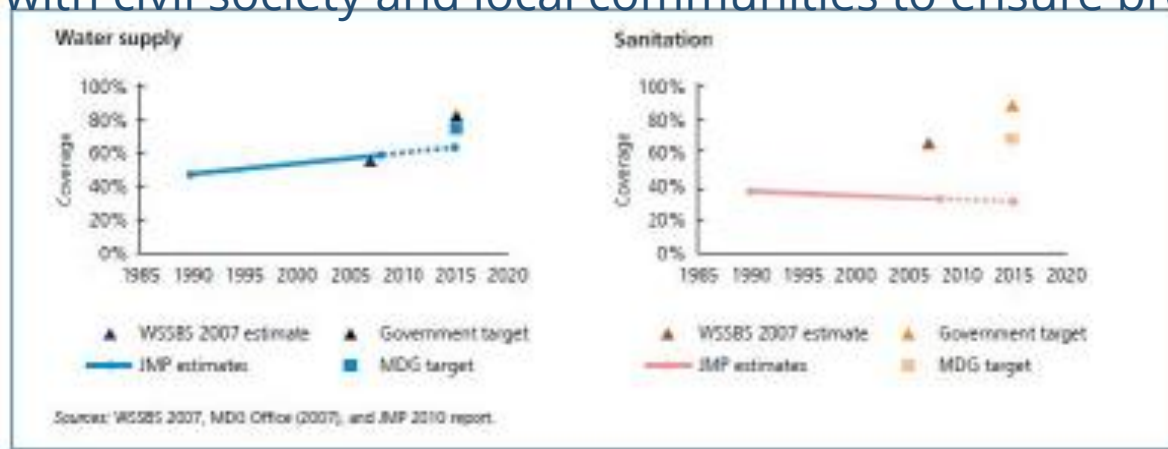
67.000 persons benefited directly in terms of improving their livelihood, food security and cash income.

- Climate change is an important challenge in Malawi, with significant impact on smallholder farmers, as well as water resources, energy, transport and health. The project helps Malawi address the lack of mitigation measures with a particular focus on irrigation to enhance food security as well as poverty reduction through improved agriculture
- The project enhanced the resilience of Malawian institutions and communities at national and local levels to climate change risks and impacts by contributing to climate change mainstreaming in the irrigation sector, in natural resources, agriculture and forestry sectors in 4 districts.
- The project helped the authorities improve Malawi's designs of dams and water catchment structures and improved their operation and maintenance with a specific focus on how this reduces climate change effects.
- The project also supported increasing



Nigeria Water Supply and Sanitation Sector Reform Programme

- WSSSRP improved water governance and institutional capacity for increased access to safe, adequate and sustainable water, sanitation and hygiene services delivery in Adamawa, Ekiti and Plateau States. The project enhanced water governance (water policies, laws and institutional framework) through improved service delivery.
- The project supported the development of water resource policies, implementation of WASH policies and developed performance improvement plans for all water utilities in the States. In the process, the project engaged extensively with civil society and local communities to ensure broad impact



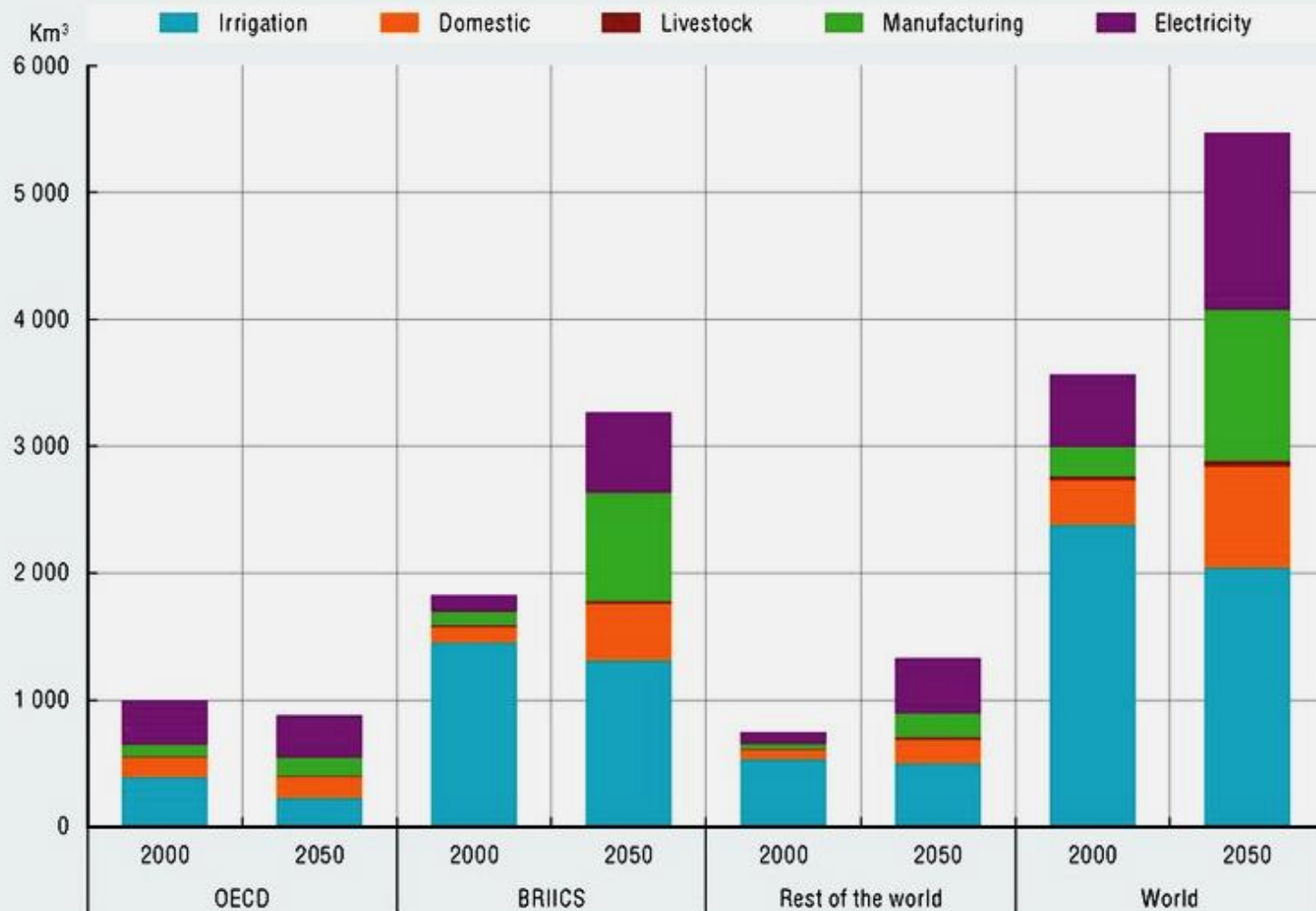
Environmental and Climate Regional Network for Accession

- ECRAN provided technical assistance for a better, more efficient and correct transposition, implementation and enforcement of the environmental and climate action legislation, including the Water Framework Directive in 7 Western Balkan countries and Turkey
- The project included the development of the Handbook on the Implementation of EU Climate Change Legislation and updates of the Handbook on the Implementation of EU Environmental Legislation (including 9 directives relevant for water protection) – both include important components on water management

ECRAN in a nutshell



Global water demand: Baseline scenario, 2000 and 2050



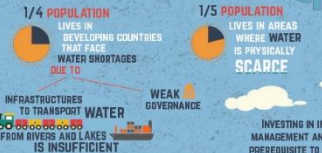
Source: OECD Environmental Outlook to 2050

WATER FOR A SUSTAINABLE WORLD



SOCIETY

THE WATER AND SOCIETY RELATIONSHIP



INVESTING IN IMPROVED WATER MANAGEMENT AND SERVICES IS ONE PREREQUISITE TO REDUCING POVERTY AND ACHIEVING SUSTAINABLE ECONOMIC GROWTH.

1 IN 2.5 BILLIONS PEOPLE DID NOT HAVE ACCESS TO SANITATION FACILITIES



ECONOMY

EXPANDING ECONOMIC OPPORTUNITIES THROUGH WATER

WATER IS AN ESSENTIAL RESOURCE IN THE PRODUCTION OF GOODS AND SERVICES, INCLUDING FOOD, ELECTRICITY AND MOST MANUFACTURED PRODUCTS.

WATER SUPPLY (QUANTITY AND QUALITY) MUST BE RELIABLE AND PREDICTABLE TO SUPPORT FINANCIALLY SUSTAINABLE ECONOMIC ACTIVITIES. INFRASTRUCTURE THAT REDUCES RISKS FROM WATER SCARCITY AND WATER-RELATED DISASTERS SUCH AS FLOODS AND DROUGHTS INCREASES THE RESILIENCE OF ECONOMIES.



IMPACTS OF NEGLECTFUL WATER MANAGEMENT

OVER 80% OF WASTEWATER WORLDWIDE IS NOT COLLECTED OR TREATED.

SMALL-SCALE INDUSTRIES, SUCH AS AGRO-PROCESSORS, TEXTILE DYING AND TANNERIES, CAN RELEASE TOXIC POLLUTANTS INTO LOCAL WATERS. UNTREATED EFFLUENT FROM URBAN SETTLEMENTS AND INDUSTRY POSSES A MAJOR HEALTH THREAT TO PEOPLE, THE ECONOMY AND THE ENVIRONMENT.

DEFORESTATION RESULTS IN DEGRADATION AND DESERTIFICATION OF WATERSHEDS AND CATCHMENT AREAS, AND REDUCES THE AMOUNT OF SAFE WATER AVAILABLE DOWNSTREAM.

DROUGHTS IN THE UNITED STATES, THE 2012 DROUGHT AFFECTED 80% OF FARMS AND RANCHES, RESULTING IN CROP LOSSES IN EXCESS OF US\$20 BILLION AND A WIDE RANGE OF RIPLE EFFECTS. THE FULL COSTS ARE ESTIMATED TO BE AS HIGH AS US\$50 BILLION.

ENHANCING WATER RESOURCES MANAGEMENT

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AS POPULATIONS INCREASE AND ECOSYSTEM SERVICES DECLINE, THE RISK OF RESOURCE CONFLICTS RISES ESPECIALLY WHERE TENSIONS ALREADY EXIST.

ECOSYSTEM VALUATION IS BASED ON WHAT USERS WOULD BE WILLING TO PAY TO LIVE WITH FOR SERVICES OR WHAT IT WOULD COST TO REPLACE THE SAME SERVICES WITH BUILT INFRASTRUCTURE.

ENVIRONMENT

AQUATIC ECOSYSTEMS ARE CENTRAL TO SUSTAINING BIODIVERSITY AND ALL FORMS OF DEVELOPMENT.

'NATURAL INFRASTRUCTURE' USES ECOLOGICAL PROCESSES TO PROVIDE MANY OF THE SAME SERVICES THAT HUMAN-BUILT INFRASTRUCTURE DOES. IT OFFERS MANY ECONOMIC BENEFITS, ESPECIALLY WHEN THE DESTRUCTION OF NATURAL INFRASTRUCTURE REQUIRES INVESTMENT IN HUMAN-BUILT INFRASTRUCTURE TO PERFORM THOSE SAME SERVICES.



THERE IS A NEED TO SHIFT TOWARDS ENVIRONMENTALLY SUSTAINABLE ECONOMIC POLICIES THAT ALSO CONSIDER THE INTERCONNECTIVITY OF ECOLOGICAL SYSTEMS TO ADDRESS HUMAN IMPACTS AND MAINTAIN PRODUCTIVE ECOSYSTEMS.

IN SOME CASES, HUMAN-BUILT INFRASTRUCTURE CAN CAUSE BIODIVERSITY LOSS AND DEGRADATION OF ECOSYSTEM SERVICES.

THE CHALLENGE IS TO MANAGE WATER RESOURCES TO MAINTAIN A BENEFICIAL BALANCE BETWEEN BUILT AND NATURAL INFRASTRUCTURE AND PROVISION OF THEIR RESPECTIVE SERVICES.

CURRENT FOOD PRODUCTION PRACTICES ARE RESPONSIBLE FOR NITROGEN, PHOSPHORUS AND PESTICIDE LOADING AND FISHERIES DEPLETION.

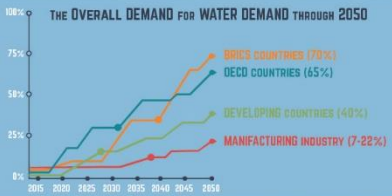
IT IS ESTIMATED THAT BETWEEN US\$4.3 AND US\$20.2 TRILLION PER YEAR WORTH OF ECOSYSTEM SERVICES WERE LOST BETWEEN 1977 AND 2011 DUE TO LAND USE CHANGE.

CLIMATE CHANGE HAS A SIGNIFICANT IMPACT ON ECOSYSTEMS, THREATENING BIODIVERSITY WHILE INCREASED FREQUENCY AND STRENGTH OF STORMS AND TIDAL SURGES WILL INCREASE EROSION AND VARIATION OF SEDIMENT TRANSFER IN RIVER FLOWS.

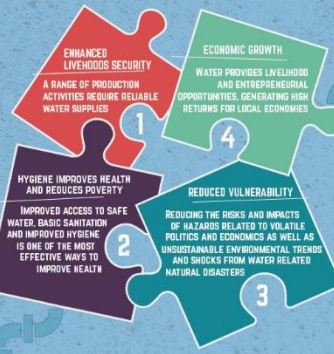
THE CREATION OF 'GREEN CORRIDORS' ALONG RIVERS, FLOODPLAINS AND STREAMS CAN LINK ECOSYSTEMS, THUS ABSORBING NUTRIENTS AND REDUCING WATER POLLUTION.

THE REAL CHALLENGE IS IN BUILDING AWARENESS OF THE ECONOMIC VALUE OF HEALTHY ECOSYSTEMS.

POLICIES SHOULD SEEK TO INCREASE PARTICIPATION OF ALL STAKEHOLDERS (LOCAL, REGIONAL AND NATIONAL) INCLUDING RURAL WOMEN IN DEVELOPING COUNTRIES, WHO ALREADY ACT AS GRASSROOTS ECOSYSTEM MANAGERS.

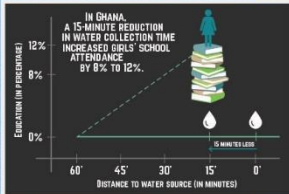


WATER MANAGEMENT CONTRIBUTES TO FOUR KEY DIMENSIONS OF POVERTY REDUCTION:



TIME TO CHANGE

IMPROVED GENDER EQUALITY IS A KEY TO BOOSTING WATER MANAGEMENT AND ACCESS. ONE 2012 ESTIMATE SUGGESTS THAT CUTTING JUST 15 MINUTES OFF THE WALKING TIME TO A WATER SOURCE COULD REDUCE UNDER-FIVE CHILD MORTALITY BY 11% AND THE PREVALENCE OF NUTRITION-DEPLETING DIARRHOEA BY 41%.



- Global water demand is rising significantly, highlighting the importance of future-proofing the water sector in the context of climate change
- The significant inefficiencies in water management and governance across the globe – e.g. some cities in the Middle East lose up to 60% of their water - highlight the potential further impact of targeted technical assistance programmes, of which we highlighted some success stories in the examples discussed
- The complexity of the water sector, cutting across sectors and stakeholders, highlight the importance of leveraging sector-wide approaches (SWAP) and integrated water resource management (IWRM)
- Water impacts many aspects of development and will only become more important going forward

Thank you very much for your attention!