

**Executive Summary of the Action Plan for the
Arab Water Security Strategy 2010-2030
A call to action**



Introduction:

Achieving Arab water security

The history of the Arab World is also a history of managing water. For six thousand years, societies from Iraq to Morocco have adapted to water scarcity with technical and institutional ingenuity. The world's first dams and irrigation systems were built here, allowing the rise of great civilisations.

At the dawn of the 21st century, Arab states face new challenges with water security, which is core to achieving the Sustainable Development Goals. Guaranteeing the water security of all Arab citizens requires renewed ingenuity and action.

The Arab states inhabit the world's most water scarce region; with 5 per cent of the global population they have less than 1 per cent of the world's renewable fresh water. Water insecurity is increasingly a constraint on job creation and economic growth, particularly in the region's booming cities. This creates political and economic challenges and trade-offs: on average, 75 per cent of the region's water is used in agriculture, which contributes a declining share of employment, GDP, food security, and exports; yet agriculture remains a crucial source of income for the rural poor.

Meeting increasing demand for water from growing populations and economies in a time of greater economic and climate risk will be challenging. With most readily available water resources already mobilised, strengthening water security will largely rely on improving governance, and making better use of what we have.

All Arab States face these common issues. This shared challenge creates opportunities for joint learning and action, pooling the capacities and resources of Arab states to address collective problems and opportunities to achieve water security. Taking advantage of regional economies of scale in research and development will benefit all, particularly the less advanced Arab economies. Regional approaches can support the management of transboundary rivers and aquifers.

Regional exchange and dialogue will strengthen the cadre of Arab technical and policy experts working on these challenges.

The role of each individual State remains crucial, but regional water insecurity won't be resolved by governments alone. Collaboration is needed from civil society organisations in advocating for the rights of citizens, raising awareness, and implementing projects. Collaboration is needed from the private sector for investment, and seizing on opportunities for creating jobs in new water efficient sectors. International partnerships are also important for raising capital and transferring technology. Regional action and partnerships will be key to achieving Arab water security.

In 2011 the Arab Ministerial Water Council adopted “The Arab Strategy for Water Security in the Arab Region– Meeting the Future Challenges and Needs of Sustainable Development (2010–2030)”, a vision for achieving water security for all by 2030. This was followed in 2014 by a robust and comprehensive framework for mobilising regional action – the Arab Water Security Action Plan which elaborates six themes, 16 main activities, and 49 sub-activities, providing entry-points for collaboration by states, civil society, the private sector:

- Generating and sharing information on water resources
- Promoting Integrated Water Resources Management
- Strengthening scientific, technological and industrial bases
- Ensure funding for water projects
- Enhancing capacity for climate change adaptation
- Protecting Arab water rights in shared international water resources

The Action Plan is a remarkable opportunity for enhancing regional integration through joint programmes and projects, building on the comparative advantages of Arab countries.

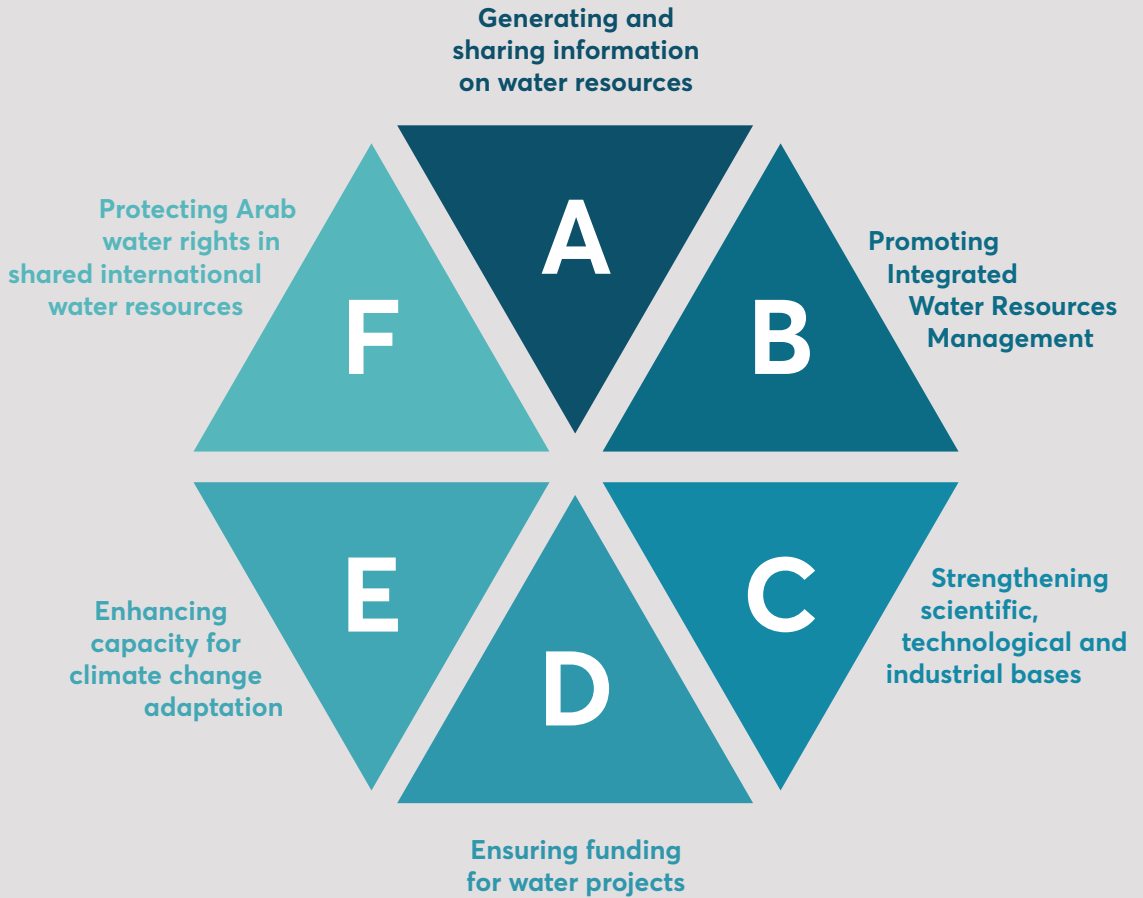


Water Security:
the capacity of a population to safeguard access to adequate quantities of water of acceptable quality for sustaining human and ecosystem health on a watershed basis, and to ensure efficient protection of life and property against water related hazards – floods, landslides, land subsidence, and droughts.

UNESCO about
Water Security



Overview of the Arab Water Security Strategy Action Plan





Generating and sharing information on water resources

1. Building the Integrated Arab Water Information System
2. The State of Water in Arab States Report



Promoting Integrated Water Resources Management

1. Enhancing the use of IWRM concepts
2. Institutional and human capacity building
3. Developing legislation and laws
4. Raising awareness about water and environmental issues
5. Public and private sector participation
6. Promoting water use efficiency
7. Expanding non-conventional water
8. Protecting water resources in coastal areas



Strengthening scientific, technological and industrial bases

1. Developing scientific research and transferring technology



Ensuring funding for water projects

1. Ensuring funding for water projects
2. Supporting Arab States to achieve SDGs



Enhancing capacity for climate change adaptation

1. Assessing climate change impacts on water resources
2. Adapting to climate change in the water sector



Protecting Arab water rights in shared international water resources

1. Protecting the water rights of Arab States

A

Generating and sharing information on water resources

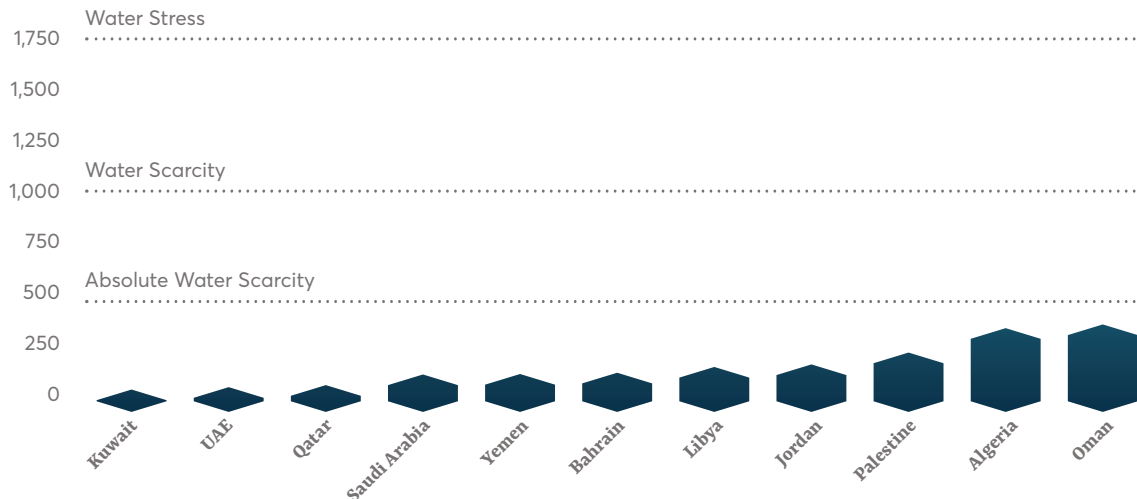
Policy dialogue and action for achieving water security must be grounded in a solid evidence base. The highly complex technical and political issues involved mean that poorly informed policy options and choices can result in trade-offs between objectives and create losers as well as winners. Information is needed not only on what water resources are available, but also on how they are used and by whom, how they are managed, and what technological and institutional options improve water security, where, and why.

Yet the Arab Region faces significant water information challenges. Data is often outdated, and fragmented and inconsistent between sectors and users. Few countries have effective water information systems, and there are gaps between information systems that exist and the development of water policy. More information is needed on how much water is available, and where, and also the cost of production, and the benefits, opportunity costs, and economic efficiencies of allocating water to different sectors, including environmental flows. The Arab Region can build on national and regional knowledge, research and institutional expertise to create and share of such evidence.

Gathering, evaluating, prioritising, and sharing information is a crucial activity, and will engage regional and national centres of excellence, academic experts and civil society.

Water availability per capita in Arab countries

Source: FAO AQUASTAT Database, 2016



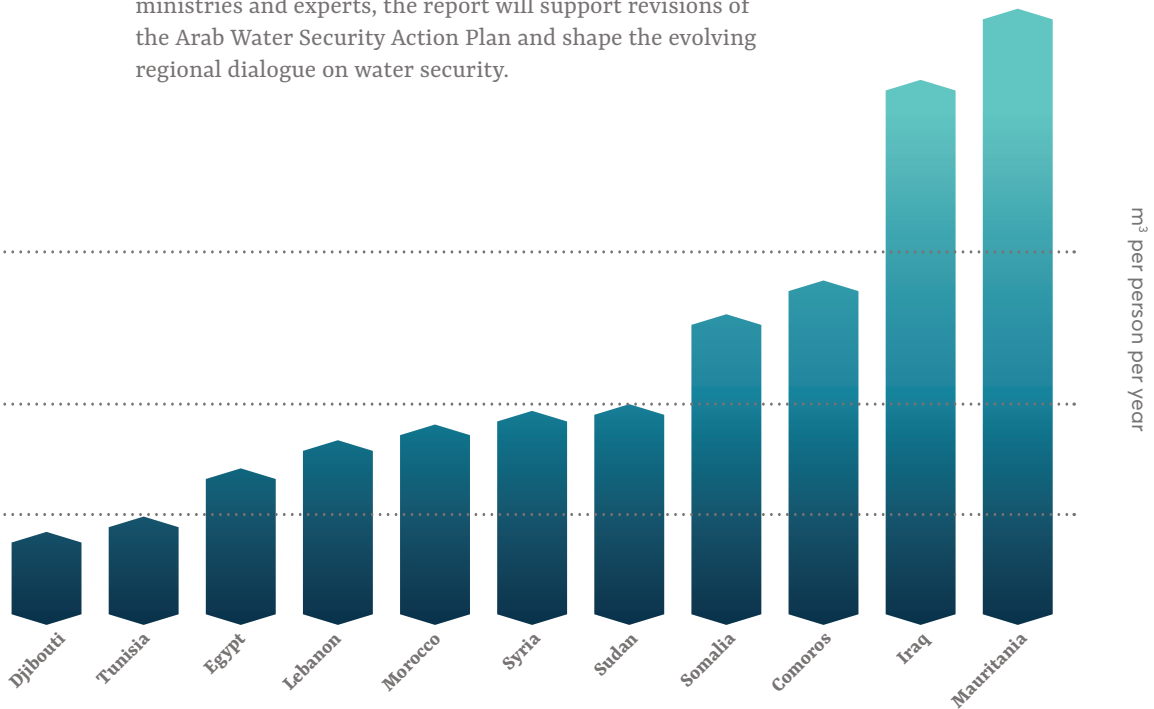
A large amount of advanced research on water security has been done in the Arab region, yet databases and knowledge remains fragmented. Reviewing existing knowledge bases, holding national and regional consultations, and preparing reports on specific issues and sectors to identify challenges, opportunities and policy options will be crucial for framing policy dialogue.

An Arab Water Information System will make information and data accessible to policy researchers and decision-makers. Standardised data sets, providing consistent indicators and statistics, will support regional action and collaboration between national and regional institutions. Crucially, these data sets will enable monitoring and evaluation of progress in achieving Arab water security.

As well as benefitting Arab states, these outputs will be critical in supporting ongoing regional dialogue. Updating the 2012 flagship report “The State of Arab Water” will consolidate knowledge, analyse policy options, and set out a definitive reference point for responses to critical water security challenges. Written in collaboration with national ministries and experts, the report will support revisions of the Arab Water Security Action Plan and shape the evolving regional dialogue on water security.

The coordinated development and management of water, land and related resources, maximising economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

Global Water Partnership
about IWRM



B

Good governance is the key to water security. The Arab region is water scarce, yet most citizens experience water insecurity because of challenges in accessing, using, and managing water, not because no water is available. Governance tools such as improved risk management strengthen water security, even in times of heightened scarcity such as summer months and drought periods. Good governance is the key to ensuring that all citizens have sufficient water for meeting their needs.

Promoting Integrated Water Resources Management

Integrated Water Resources Management (IWRM) is an approach to governance that supports water security. It focuses on achieving the best economic, social and environmental outcomes from water by ensuring that technology, institutions, and policies in all relevant sectors are aligned with water security goals. The Arab Ministerial Water Council and independent experts agree that adoption of IWRM is a critical component of achieving water security in the region.

Yet Arab states face significant challenges because of limited regional experience with implementation of IWRM principles. Regional collaboration is needed to complement national activities and engage with civil society, academic, and private sector actors across sectors and across the Arab World.

Enhancing the understanding and use of IWRM concepts in Arab states is essential. Regional capacity can assist nations revise plans and strategies and, crucially in a region where most population growth is now in towns and cities, promote integrated urban water management. Adopting monitoring

and evaluation frameworks will support achievement of IWRM and the Sustainable Development Goals, particularly SDG 6 which focuses on water.

Regional collaboration also has a role in building capacity for the implementation of IWRM plans and strategies. The region needs an expert community of practice exchanging knowledge and lessons and strengthening institutions, particularly in managing shared international waters and monitoring and evaluation. This regional community will also play a central role in developing the legislation and laws necessary for IWRM.

In addition to developing this cadre of experts, regional dialogue between state, research, private sector and civil society actors and between sectors will highlight challenges and opportunities for improving water security, and mobilise contributions from stakeholders according to their abilities.

The AMWC also calls for regional collaboration on specific areas of common interest, notably water use efficiency and the protection of coastal water resources. With increasing water stress, maximising economic (“more dollars per drop”) and social (“more jobs per drop”) water use efficiency is a regional priority. Meanwhile, with coastal aquifers and wetlands under increasing pressure from water abstraction and seaside construction, greater collaboration in ecosystem-based management is needed to maintain critical environments and resources. Regional cooperation is needed to support member states develop concepts, monitoring approaches, and institutions in these priority areas.



Regional economies of scale in research and technological development offer new opportunities for water security. A pervasive problem in the region is inadequate access to clean drinking water and sanitation, a challenge that will increase as demand for water grows.

Upgrading existing Arab capacities in science and technology offers exciting prospects for developing new solutions for water production and treatment. Reducing pollution, improving drinking water, and generating water from unconventional sources will all help improve the quantity, quality, and affordability of water. Improving technology and infrastructure design will help reduce environmental impacts, and help maintain healthy aquatic ecosystems. Desalination, and the treatment and reuse of waste and brackish water, are particularly promising areas for development.

The Arab region already has strong universities and research centres, but more can be done to increase funding and effectiveness, and make use of the knowledge generated. Developing stronger regional networks will capitalise on these national centres of excellence. There are also opportunities for enhancing the regional industrial and engineering base, and mobilising the private sector for investment in water production, treatment, reuse, and waste management.

Although there are few untapped freshwater resources in the region, there are enormous opportunities for developing

alternative water sources. Chief among these is desalination and treatment of brackish and seawater to produce drinking water. Until now these technologies have mostly been applied in advanced economies and specific investments such as tourist resorts. If costs can be reduced, however, desalination offers an almost unlimited supply of drinking water. The Arab region is the world's leading consumer of desalinated water, yet relies on imported technology and spare parts. Technological and industrial investment could generate comparative advantage in desalination technology exports.

Another key area for technology and industrial investment is water recycling. Particularly in closed basins such as the Nile and the Jordan rivers, where water demand outstrips supply, water recycling will be of increasing importance in meeting water quantity and quality needs. Some Arab countries have already made advances in separating waste water streams, and reusing waste waters in agriculture and industry, yet much more can be done.

Neither desalination nor recycling technologies yet fulfil their potential because of the large financial and environmental costs of the energy required. Developing low carbon energy sources to power alternate sources of water would be a major benefit to the region, and would also meet other energy needs.



The Arab Region has more to benefit from solar energy than anywhere else in the world, and no other region is in a better position to capitalise on this technology.

D

Ensuring funding for water projects

Delivery of basic water and sanitation services is an essential public service, and a vital dimension of water security, public health, and poverty reduction. Particularly in this water-scarce and rapidly urbanising region, access to basic water services is a crucial component of public welfare and economic opportunity. Yet, the provision of water and sanitation infrastructure is an expensive public good. Low incentives for private sector participation makes this a key challenge for states, particularly for low and middle income economies with limited public budgets. Regional collaboration can raise the profile and secure funding for water infrastructure in low and middle income countries, with social, economic, and environmental benefits for all.

The Arab Ministerial Water Council will support engagement with development banks, donors and the private sector to develop complementary funding sources for investments with high levels of social return, particularly for the region's least developed countries. Potential routes for improved financial investment and sustainability lie in both novel technologies and innovative institutional and financial arrangements. Studies identifying investment priorities, based on robust analysis of social and economic costs and benefits, will guide these activities.

Beyond mobilising finance for water infrastructure, the AMWC is committed to playing a significant role in monitoring progress towards the achievement of the Sustainable Development Goals. Enhanced regional capacity for data collection and management, complementing national efforts, will inform decision-making on investment priorities. It will also support policy dialogue on regionally appropriate and culturally sensitive approaches to ensuring access to water and sanitation for all. As well as supporting the reporting of Arab States on the SDGs, a regional facility will also support the mobilisation of finance and investment in water and sanitation for the region.



E

Enhancing capacity for climate change adaptation

The Arab World is the global region most vulnerable to climate change, and water security challenges will be exacerbated by increasing climate risk. Higher temperatures and changing rainfall patterns will affect patterns of water availability and demand, and against the background of these long term changes, climate extreme events will have more pronounced impacts. More frequent, more intense, and more persistent heat waves, droughts, and floods will all threaten livelihoods, infrastructure, and human health. The principal impacts of climate change will be mediated through water, bringing additional risks in a water insecure region.

The risks from inaction are high. A recent study found that without adaptation, the costs of climate change to Lebanon will be 3% of gross domestic product by 2020, rising to 14% by 2040.¹ However, although the Arab World is highly exposed to climate change impacts, much can be done to adapt and strengthen resilience to changing climate risks. Enhancing drought management, adopting drought and saline tolerant crops, and making water allocations more economically efficient in response to risk are just some of the many beneficial options.

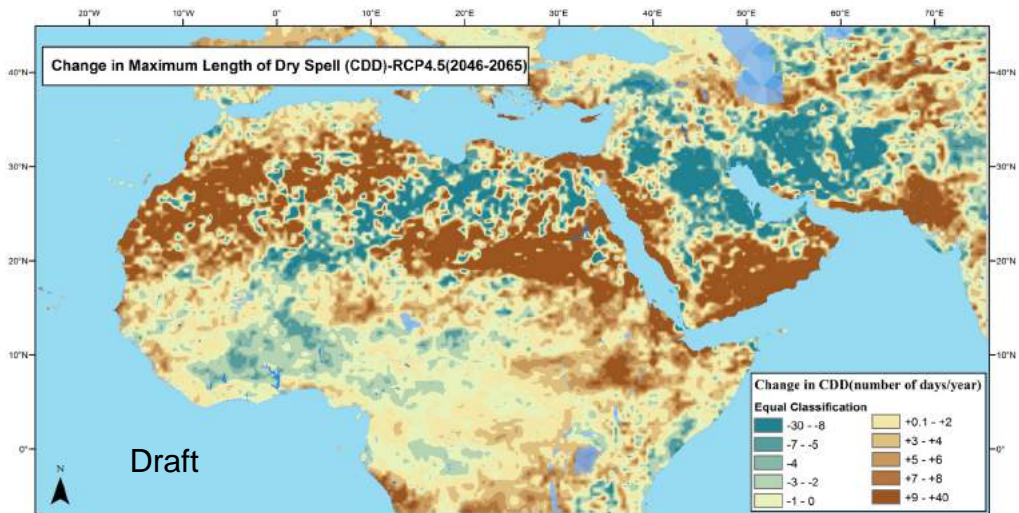
Collective action by the Arab States is needed to address the social, economic and environmental challenges of climate change. Pooling resources to understand climate impacts on water resources, develop appropriate adaptation strategies, and access climate finance will complement and support national activities.

Developing robust policies for climate adaptation requires a strong evidence base for guiding action. Much more information is needed about climate change impacts on water security in the Arab region. While the general shape of future trends is clear, it is only recently that region-specific models have been available for evaluating climate impacts and guiding adaptation options in Arab countries. Building on recent progress by regional institutions and sharing the scientific expertise and resources will help all Arab States understand the implications of an uncertain future climate.

¹ MoE/UNDP/GEF (2015). *Economic Costs to Lebanon from Climate Change: A First Look*. Beirut, Lebanon.

The Arab World's defining challenge for the 21st Century is to build resilient, forward-looking economies and societies that meet the aspirations of citizens despite increasing water stress and volatility. Better assessments of climate vulnerability are needed to identify risks, impact pathways, and options for strengthening resilience that are specific to the different economic, social, cultural and institutional contexts of the Arab World. Despite this rich variety of experience, the Arab States share many common concerns; developing non-conventional water using renewable energy, adapting agriculture through new crop varieties and improved agricultural water management, and accessing sources of international finance to support climate adaptation, to name just three. This juxtaposition of diversity and shared challenges means the Arab World can reap huge benefits from collective action in research, technology development, and fundraising.

Increased drought risk will be an early impact of climate change



Source: Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR)

F

Protecting Arab water rights in shared international water resources

The Arab states share not only major international rivers, but also strategic transboundary groundwater resources. Regional cooperation is key to strengthening Arab water security in shared resources.

Arab states depend on critical shared transboundary water resources. Major international rivers such as the Euphrates, the Nile, and the Orontes, and expansive groundwater resources such as the Nubian Sandstone Aquifer System are essential for the water security of their users. Shared water resources offer potential co-benefits including increased trade, food production, and environmental protection. On the other hand, shared water resources can be sources of disagreement, and actions by one country can have negative consequences for the downstream countries. Political will and institutional development is needed to achieve co-benefits and resolve disputes. Regional and multi-lateral approaches are key to strengthening the water co-security of Arab States, and promoting Arab solidarity in negotiations with non-Arab upstream countries.

Developing regional cooperation for managing shared international waters is a gradual process. The Arab Ministerial Water Council is committed to support enabling environments at the national and regional levels to promote joint management, monitoring and cooperation. Bi- and multi-lateral agreements will initially focus on joint research, knowledge and data sharing, and identification of joint projects to improve co-benefits from water resources shared between Arab and non-Arab States.

Major water resources are shared with non-Arab states. The Arab Water Security Action Plan advocates collective action to support negotiations, mobilise civil society, and strengthen capacity for water diplomacy. In particular, there are opportunities to coordinate efforts in negotiation and raising international support for the rights of Palestine, Syria and Lebanon which have water under occupation.

The Arab States can build on positive examples of transboundary water management that exist both in the region and elsewhere. International cooperation can transfer experience and lessons from other regions, and support efforts to strengthen cooperation and the realisation of mutual benefits.



Conclusion

The Arab World is the most water stressed and climate vulnerable region on Earth. The Arab Water Security Strategy and Action Plan are important steps initiating greater regional cooperation and national action to achieve water security for the Arab States.

Despite the diversity of the Arab World, Arab nations and people share common interests and challenges in the pursuit of water security. Achieving water security for the Arab people requires sound evidence to inform policy and dialogue, good governance, advances in research and technology, the mobilisation of finance and investment, management of climate risks, and cooperation in managing shared international water. These six themes orient the Arab Water Security Action Plan, and provide a rallying point for governments, civil society, the private sector, researchers, and the international community.

The Arab Water Security Action Plan sets out priorities and investments until 2020. After five years, a Second Action Plan (2020–2025) will reflect on progress and set out new priorities, and subsequently a third (2025–2030) five years later. This iterative process, supported by a robust monitoring and evaluation framework, will keep the Arab Ministerial Water Council and partners focused on achieving the goals of the Arab Water Security Strategy by the year 2030.

Regional research institutions, think tanks and policy organisations – including the Arab Centre for the Studies of Arid Zones and Drylands, the Centre for Environment and Development in the Arab Region and Europe, the Arab Water Council, the Centre for Water Studies and Arab Water Security, the International Centre for Biosaline Agriculture, and the United Nations Economic Commission for West Asia – possess much of the expertise, skills and experience needed to find solutions to the region’s water security challenges. The Arab Water Security Action Plan establishes a framework for collaboration between these organisations and national institutions, and for creating enabling environments at the regional and national levels.



Policy cycle of the Action Plan

The Arab States face water security challenges greater than anywhere else on Earth. Yet these challenges are also opportunities. In achieving water security, Arab countries can grow their economies, reduce poverty and improve welfare, develop new industries, businesses and exports, and build peace. To do so requires ambitious thinking, solidarity, and urgent action.

National governments have the leading role in ensuring water security, and their potential support and benefits from regional action includes:

- Integrating water security in national development, economic and climate change plans and policies
- Identifying opportunities for support national water security priorities by working with regional institutions and neighbouring countries
- Supporting regional collaboration in research and data sharing

The private sector – crucial for investing in and delivering goods, services and technology – have opportunities that include:

- Investing in regional cooperation for technology industrial development
- Advising on policies that encourage investments in water security

Civil society and researchers are vital for ensuring action is informed by high quality expertise and the needs of citizens by:

- Raising public awareness of water security issues
- Developing new ideas that address water security challenges
- Engaging in regional dialogue and policy processes

The international community has an important support role in:

- Providing technical support and finance
- Transferring experiences from other regions of the world