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Resilient nations.*

Transformation Towards Sustainable and Resilient Societies

Ecosystem Resilience for SDG Achievement and Human Security in the Arab Region



Background

The cumulative implications of climate change, biodiversity loss, water insecurity, land degradation and toxic pollution threaten achievement of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). Unless addressed, these drivers of change will act as a decelerator, slowing the rate of progress on SDG achievement, and could well lead to a reversal of development gains by mid-century, eroding the fundamental freedoms and choices at the core of human development. In addressing this challenge, the 2030 Agenda and the SDGs aim to set a new balance between people and planet.

As countries move to the implementation agenda, innovative solutions are needed for more effective public policies and institutions, for a much greater role by private sector, and for rapidly scaling-up green finance and technology. To help accelerate this transformation, the United Nations Development Programme (UNDP) has launched a new Strategic Plan (2018-2021) – a blueprint to help countries eradicate poverty in all its forms and dimensions, accelerate structural transformations for sustainable development, and build resilience to crises and shocks. Ensuring the stability of ecosystems and the services they provide humanity is a foundation for these outcomes.

In partnership with fellow members of the UN Development System (UNDS), UNDP is helping generate innovation solutions at the country level to scale-up local results and bring forth integrated solutions to achieving the 2030 Agenda. This builds on our presence in over 170 countries and territories, and our role as the UN's largest provider of grant assistance on climate change and the environment, with over \$4 billion of grant initiatives around the world today. The Arab region is a priority in this regard, already the world's most water scarce and food import dependent region, and with temperatures rising faster than the global average, it is emerging as a global hotspot of climate risk, drought and land degradation. Unless urgent actions are taken to enhance the resilience of ecosystems and communities, these trends will deepen social vulnerability and exacerbate trends of conflict and displacement.

In concert with UN system partners, UNDP is now expanding its country cooperation across the region to address these challenges. This includes over \$500 million of ongoing grants today specifically dedicated for countries across the Arab region to take action on climate change and environment priorities. Through these initiatives, UNDP and our country partners reduce the risk to SDG achievement from climate change, natural disasters, biodiversity loss, toxic pollution and growing pressures on land and water resources. What follows is an overview of local trends and solutions emerging across the region to build ecosystem resilience for SDG achievement and human security in the Arab region.



SDG 6: Ensure availability and sustainable management of water and sanitation for all

The Arab region receives rainfall well below the world average, with the average person accessing just one-eighth the renewable water that the average global citizen enjoys. Fourteen of the world's twenty most water stressed countries are in the Arab region, while water demand in the region continued to grow, expected to increase by 85 billion cubic meters (Bcm) by 2030; a 47% increase from 2005. By 2030 the effects of climate change will also take a toll on the challenge of water security, possibly reducing renewable water resources by a further 20%. If these trends of growing demand and reduced supply continue, projections are that the region's water deficit would increase from 28.3 Bcm in 2000 to 75.4 Bcm by 2030.

An urgent need exists to enhance systems for integrated water resource management, to find synergies with and generate co-benefits across the SDGs. Water plays a vital role in achieving various SDGs including those on poverty reduction, food security, energy access and gender equality. New capacities are needed to improve the nexus between water, food and energy security, to expand water access for empowering livelihoods and health of women, to manage risks from climate change, reduce water loss and enhance conservation, explore innovations in water reuse and recycling, and scale up investments in community based solutions and private partnerships.



Poor and marginalized communities, and women suffer the most from lack of water access and stand the most to benefit from new initiatives to enhance water security. In the Arab region, an important focus in this regard is the growing numbers of communities across the region displaced by conflict, for whom access to water is an existential need and a key foundation for recovering from crisis. UNDP has a growing portfolio of initiatives meant to address this challenge.

In Yemen, the world's worst humanitarian crisis, more than 19 million Yemenis, close to 80% of the population, lack access to clean drinking water and sanitation, as the country faces the largest and fastest outbreak of cholera in modern history. UNDP's Emergency Crisis Response Project, with \$300 million support from the World Bank, helps to expand access to water for the benefit of over 2 million people, alongside the project's other key areas of focus such as cash-for-

work initiatives, access to social services, livelihoods in agriculture and fisheries sectors, improved nutrition, and clearance of landmines. The project supports more than 300 water harvesting and water supply projects around the country, having established more than 70,000 cubic meters of water reservoir capacity at the local level. This also generates benefits through emergency employment and labor-intensive activities around irrigation rehabilitation, water harvesting, improvement of drinking water resources and watershed management.

In Iraq, millions of IDPs have been returning to areas of the country newly liberated from the Islamic State group. UNDPs Funding Facility for Stabilization, with over \$400 million of assistance from a group of 20 donors, supports over 1,000 projects for various stabilization needs across electricity, health, education and infrastructure rehabilitation. A key focus of assistance has also been on rehabilitation of water treatment facilities. UNDP and partners under the multi-donor Facility have supported of twenty-five water rehabilitation initiatives in Ramadi, fourteen such initiatives in the Ninewah Plains region, and rehabilitation of twelve water treatment facilities in Mosul. These and other activities are helping to expand water access for hundreds of thousands of people, supporting overall stabilization and resilience in crisis-affected parts of Iraq.



Similarly, in the Kurdish region of Iraq, UNDP's Crisis Response and Resilience Programme, with more than \$120 million of support from Germany, Japan and other donors, helps enhance social services, enhance livelihoods and improve social cohesion across the region. One important component has been to upgrade key water treatment facilities, water pumping stations and transmission pipelines. The region has experienced a large influx of IDPs in recent years, especially into areas facing pre-existing challenges of water insecurity and access challenges. By repairing and upgrading water systems, UNDP and partners promotes social cohesion and resilience in IDP host communities, alleviating chronic water shortages and the related impacts on health and livelihoods.

In Syria, damage to water systems and departure of skilled water maintenance workers and managers, have resulted in a lack of access to clean and safe water for people across the country. This has had serious impact on residential water needs as well as agricultural livelihoods. In support of addressing the needs of poor and crisis affected communities, UNDP provided technical assistance to local communities to rehabilitate thirty-six ancient roman wells, helping clean and pump out stagnant water, widen and deepen the wells, monitor the quality of extracted water, and in the process generating emergency livelihoods for conflict-affected communities. Thousands of conflict-affected individuals have regained access to water for household needs, while farmers are able to resume basic livelihoods.

Likewise, in neighboring Jordan and Lebanon, the challenge of hosting Syrian refugees converges with high levels of water insecurity. UNDP supports a programme on Enhancing Resilience of Host Communities in Jordan by Promoting Sustainable Water Solutions, supported by \$300,000 from the OPEC Fund for International Development. It focused on Mafraq, Irbid, Zarqa, Jarash and Ajloun, regions of the country on the frontline of refugee influx, and helps strengthen water access and resilience of water systems in host communities. UNDP helps generate innovative solutions such as rainwater harvesting and reuse of waste water, while providing local communities the tools needed to collect and conserve water. In Lebanon, UNDP has supported a programme of Support to Host Communities for Water and Sanitation, with more than \$8 million support by Germany, Switzerland and the US. The initiative has helped enhance water networks and household connections for villages across the Akkar region of North Lebanon, along with water pumps, rehabilitation of water reservoirs, and development of wastewater networks.

Meanwhile in the Occupied Palestinian Territories, UNDP has been supporting a programme for establishment of the Khan Younis Wastewater Treatment Plant in the Gaza strip. Through a grant of over \$14 million by Japan and \$41 million by Kuwait, UNDP is helping address the water and sanitation crisis faced in this and other areas of Gaza, with raw sewage has been disposed in the environment without treatment, posing risks to human health and coastal aquifers. Through the programme, UNDP helps design and establish the facility, bringing capacity of over 26,000 cubic meters of wastewater treatment per day, helping reduce the environmental risks to the community while generating new sources of renewable water supply for agricultural and related uses.

Another key challenge in address water insecurity in the region is to help catalyze transformational changes in national water policy, water management systems, ensuring development benefits of water use in energy, food and other sectors, and enhancing the efficiency of water use. In Saudi Arabia, for example, water has always played a key role in development pathways. The Kingdom is among the driest countries in the world with no significant surface water bodies and a large and growing water demand from residential, industrial, power and other sectors. Water has thus arisen as a key part of its new 2030 Vision. To support this effort, UNDP has launched a new Integrated Water Resource Management programme, with \$25 million support from Saudi Arabia, to enhance integrated approaches for management of water demand and supply across sectors, nexus between water and energy sectors, improve water conservation and delivery systems, and better manage the growing risks from climate change and toxic pollution.

Finally, in closing the water gap in the region a key challenge is the fact that only 43% of water originates from within the region itself, making the Arab region the most dependent on external sources of water. In this regard, a need exists to enhance transboundary co-management of water resources, to prevent tensions over shared resources and ensure the sustainable use of this increasingly scarce resource for the benefit of all. Such challenges exist around the use of transboundary rivers in the Nile and Tigris-Euphrates river basins, and they are also relevant for sustainable use of groundwater resources, on which communities have a growing reliance for agricultural livelihoods.

One example is the Nubian Aquifer, one of the largest aquifer systems in the world, stretching over approximately 2.6 million square km under Chad, Egypt, Libya and Sudan, countries that face similar problems of arid climate, scarce surface water resources, persistent droughts and fragile ecosystems. The aquifer is a critically important source of water in the region and will be increasingly in demand in the future. Growing pressures on the aquifer pose threats to sustainability of the shared resource, and could lead to transboundary tension unless cooperative measures are put in place.

Through support of UNDPs Nubian Aquifer project, supported by the Global Environment Facility (GEF) and implemented in concert with IAEA, partner countries produced in recent years a Shared Aquifer Diagnostic Analysis and a regional Strategic Action Programme (SAP) identifying strategic actions to be undertaken jointly among the countries. To support future results under this emerging regional framework of cooperation, UNDP is launching a regional project to implement the SAP, in partnership with UNESCO, FAO and IAEA, and with \$3.99 million of planned support from GEF. It will help enhance scientific understanding of the shared resource, develop regional and national institutional capacities for co-management of the transboundary water resource, design national action plans to align water resource management actions with poverty eradication, women's empowerment and other development objectives, and achieve equitable and sustainable water use of the Nubian Aquifer among partner countries.



SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all

Energy has played a key role in the Arab region's development trajectory for decades, and as countries in the region seek to craft new development trajectories towards 2030, it is again arising as a key factor in the emerging agenda for change. While oil has been a resource of primary focus over the years, today it is the potential of solar power and other forms of sustainable energy solutions that is quickly rising up the policy agenda. The Arab region hosts the planet's largest levels of solar radiation, and harnessing just a fraction of this could power the entire region's needs now and into the future. But most countries have yet to develop this potential.

Renewable energy capacity remains low, at just 7% of the energy mix in the region. But with countries facing growing levels of energy insecurity, a series of ambitious policy targets have emerged. Morocco for example seeks to achieve 42% renewable energy in its national energy mix by 2020, matched by a 20% target by 2020 in Egypt and 10% in Jordan and Palestine, and 2030 targets of 40% renewable energy in Algeria, 30% in Tunisia and 11% in Sudan. To support tracking and monitoring of national actions on the road to 2030, UNDP supports the annual production of the Arab Future Energy Index (AFEX), led by the Regional Center for Renewable Energy and Energy Efficiency. AFEX is the first Arab index dedicated to monitoring and analyzing sustainable energy competitiveness in the region and an important platform for monitoring SDG 7 achievement at the regional level. The index

tracks progress and thanks all countries in the region across 30 indicators, evaluating actions on policy, institutional and financing measures, and providing recommendations for actions that further scale-up results towards 2030.

In achieving targets in the region, a major challenge is to support transformative policies and improved institutional capacities to take action. A need exists to put in place new policies that reduce investor risks into sustainable energy solutions, and incentivize public-private partnerships and breakthrough technology innovations. A sustainable energy transition in the region's economy entails efficiency improvements in energy intensive sectors such as buildings, industry and transport, reduced reliance of countries on increasingly scarce oil reserves for power generation, and generation of new high-tech added-value employment opportunities from the solar sector. UNDP is expanding its support to countries to accelerate this envisaged transformation to a sustainable energy economy, and to do so in a way that brings benefits across SDGs.

One example is UNDP's expanding cooperation in the Gulf Peninsula. While the Gulf economies continue to place heavy reliance on oil and gas for domestic power generation, leading to some of the world's highest per capita carbon footprints, signs of change are underway. With some of the world's fastest electricity consumption growth rates, a continued reliance on oil and gas is now a drain on energy export revenues, in turn an important basis for achieving future development goals. As such, Gulf countries are now putting in place ambitious plans for scaling up sustainable energy solutions.

In Saudi Arabia for example, UNDP helps implement a National Energy Efficiency Programme, UNDP's largest sustainable energy project globally, with \$94 million financing from Saudi Arabia. Through it UNDP has helped national partners establish the national energy center, and develop its capacity to design new laws and regulations, generate action plans to reduce the energy intensity of growth in key economic sectors like buildings, power and transport, bring together innovative public-private



partnerships, and raise awareness among leaders and the public on the development benefits of sustainable energy solutions. UNDP is similarly helping develop the capacity of national institutions for achieving SDG 7 in Bahrain through a Sustainable Energy programme with \$6.7 million support from the Government, and in Kuwait through a National Energy Outlook programme which develops capacity for energy forecasting, policy and planning.

Another important example is UNDPs expanding work in the region to put in place new policies, institutional capacities and public-private partnerships to expand investments into sustainable energy solutions. In Egypt for example, UNDPs Energy Efficient Lighting programme, with \$4.8 million of GEF support, has supported the successful expansion of partnerships with leading companies in the banking, retail and tourism sectors. This includes cooperation with Egypt's largest private sector bank which converted all its 160 branches across Egypt to energy efficient lighting through its own internal resources, leading to a 30-40% reduction in electricity consumption. The programme also partnered with major five-star hotels and large supermarkets in Cairo who fully converted to energy efficient lighting. Building on the business models used for these efforts, these companies then proceeded to scale up the energy transition to all their branches across Egypt.

In places like Tunisia and Lebanon, private investors are keen to support national plans for sustainable energy expansion, but face many barriers. To help address this challenge and opportunity, UNDP has been partnering with Tunisia and Lebanon to apply a Derisking Renewable Energy Investment (DREI) methodology to identify the scope for expanded investments and support emergence of new public-private partnerships. Through the support of GEF in Tunisia, and Australia, the European Commission, Germany and GEF in Lebanon, UNDP has helped partners identify barriers and risks which can hold back private investment to achieve the goals of the Tunisian Solar Plan and the Lebanon Renewable Energy Plan. UNDP assists policymakers to put in place packages of targeted public interventions to address these risks to either reduce, transfer or compensate for risk. The overall aim is to cost-effectively achieve a risk-return profile that catalyzes private sector investment at scale. The expected result will be clean and affordable energy solutions in both countries.

Last but not least, a serious challenge in achieving SDG 7 in the region regards the growing needs of the most poor and vulnerable in society, for whom lack of access to energy is a major barrier to development. In the Arab region, this includes the large number of communities displaced by conflict, usually in countries already experiencing high levels of energy insecurity. The ability of communities to cope with and rapidly recover from crisis hinges in many ways on their ability to regain access to energy. But too often countries affected by crisis are unable to rapidly bring back the type of energy systems needed for recovery.



In such contexts, decentralized solar solutions are receiving greater attention as a means of addressing emergency needs while setting the foundations for longer-term recovery. UNDP has commenced a series of new initiatives across the Arab region adapting solar solutions to very localized needs of displaced communities in places like Lebanon, Palestine, Sudan, Somalia, Syria and Yemen. Through these initiatives, solar solutions are deployed not as an end in themselves, but as enablers of poverty reduction, women's empowerment, water access and livelihoods regeneration; helping putting communities on a path from crisis to recovery.

In Yemen, for example, risk of famine risk, lack of access to water and breakdown of health and education facilities are all exacerbated by the energy crisis ongoing in the country. Yemen was already one of the region's most energy poor countries, and the ongoing conflict has dramatically reduced conventional energy supplies every further. Decentralized solar solutions have arisen as one solution to ease the suffering of an estimated 3 million internally displaced persons (IDPs) across the country today.

To address these needs, UNDP in partnership with WFP, ILO and FAO is implementing the Enhanced Rural Resilience in Yemen programme. With \$38 million from the EU, ERRY supports livelihoods stabilization, food security, local governance and social cohesion. It also supports local deployment of solar technologies to expand energy access in schools, health facilities, small businesses, and solar irrigation pumping for agricultural livelihoods and food security. Decentralized solar solutions were initially provided to 20 schools, 20 health clinics, 800 households, two food markets and 20 public agencies, and this has now been scaled up to reach a further 32 schools, 32 health facilities, nine markets and 2,400 households. Through support of UNDP and partners, solar solutions are helping to meet emergency development and recovery needs, regenerating livelihoods, and powering better access to critical social services like health and education facilities.

Another important example is in Sudan, which hosts over 3 million IDPs, converging with high levels of energy insecurity. After a decade of conflict and displacement in Darfur, the Document for Peace in Darfur and the Darfur Development Strategy set the foundations for the return of a large number of IDPs to the Darfur region of Sudan. But as IDPs return, the lack of access to energy is a barrier to regenerating livelihoods and access to water, health and education services. In



response, UNDP in partnership with UNIDO, WHO and UN Habitat, and with over \$5 million support by Qatar via the UN Multi-Partner Trust Fund Office, is supporting the Darfur Solar Electrification programme. It helps the Darfur Regional Authority and the

Government of Sudan deploy solar solutions in 70 settlements for enhanced health clinics and schools, street lighting and solar water pumping, directly benefiting 7,000 households, with additional dividends for a further 35,000 households in neighboring satellite settlements.

Beyond deployment of innovative solar technology, UNDP is also supporting upstream policy frameworks that promote scaled-up use of sustainable energy for crisis recovery. Around the Syria crisis for example, UNDP assistance has been provided to national partners in Jordan and Lebanon to integrate sustainable energy solutions into national crisis response plans, to help close the energy gap and build stability in communities hosting Syrian refugees. Through such support, UNDP and partners help empower affected communities, while supporting broader goals of national stability and resilience based approach to SDG 7 achievement.



SDG 12: Ensure sustainable consumption and production patterns

Commercial and industrial expansion is being pursued across the region as a means of increasing growth rates to generate new youth employment, and as a means of recovering from crisis. But this also brings risks from growing waste production and the health risks from chemical use in various sectors. Systems to prevent impacts on ecosystems and human health are often inadequate, with landfill systems increasingly under pressure and a lack of effective reuse and recycling systems. As part of the 2030 vision for sustainability, countries across the region now seek more environmentally sound management of waste and chemicals to significantly reduce toxic risks to air, water and soil to minimize impacts on ecosystems and communities.

One key focus is on developing capacities to enhance solid waste management approaches and to promote waste reduction, reuse and recycling in the economy. Innovative solutions can generate valuable resources for reuse of materials in the local economy, with important benefits for poor. This also includes solutions in areas affected by conflict, where waste clearance is often a major challenge. This includes initiatives to clear rubble and remove waste in the Gaza strip in the Occupied Palestinian Territories, and in parts of Iraq, Lebanon, Syria and Yemen.



In Jordan, municipal solid waste is growing 5% each year. Only 7% of this recycled or salvaged, through the support of 7,000 informal workers from local Jordanian and

Syrian refugee communities. Enhancing recycling and materials recovery is thus an opportunity to address the waste management challenge while also improving livelihoods of informal workers, including in Syrian refugee host communities. Through a UNDP programme on Improving Solid Waste Management and Income Generation in Refugee Host Communities, with over \$19 million from Canada, UNDP is helping prevent impacts of waste on ecosystems and communities in some of the less developed parts of the country's Irbid and Mafraq regions. In Irbid for example the programme has helped establish the first sanitary cell at the Al Kaidar landfill. As the landfill reaches its capacity in recent years and with forecasts of growing needs owing to continued growth in waste generation and growing generation from influx of Syrian refugees, the programme has helped establish a new cell at the landfill using international standards for cell lining, leachate collection and biogas collection.

UNDP helps prevent toxic pollution from the landfill expansion, while also reusing biogas for energy needs within the facility. The assistance is helping enhance life and working conditions for waste pickers and efficiency of waste management in 33 municipalities, expand recycling for metals and plastics, and construct composting systems to reuse organic waste and prevent its entry to landfills. It also supports women's empowerment, with the composting



facility to be managed and operated by women from the local community. The programme also helps establish new public-private partnerships for recycling and materials recovery in various parts of Jordan, to improve and standardize the nature of contracts with informal sector workers in 18 landfills and disposal sites across the country, supporting monitoring of contractors and private sector investors, and enhancing occupational health and safety standards for workers.

Another important area of focus is on reducing the use and release into the environment of persistent organic pollutants (POPs) from of medical and electronic wastes streams, both of which have serious and long-term impacts on human health and ecosystems. In Egypt for example, UNDP implement a programme on Protecting Human Health and the Environment from Release of POPs from Health Care and E-Waste, with \$4 million support of GEF. UNDP helps national partners improve incineration practices and reduce the open burning of health care waste, as well as enhancing collection and recycling activities to reduce open burning of electronic waste. The programme helps establish baselines for releases of POPs and other hazardous substances like mercury resulting from current practices, assessment of current facilities, building capacity and practices at selected health facilities and treatment facilities, and introducing best practices and technologies at e-waste processing facilities.



SDG 13: Take urgent action to combat climate change and its impacts

In the Arab region, climate change presents one of the single biggest threats to the future of development, and has already emerged as a new driver of social vulnerability, inequality and displacement. As one of the planet's hotspots for climate risk, temperatures in the region are rising faster than the global average. Droughts have already become more frequent and severe, with most countries in the region having suffered from reduced agricultural productivity, water scarcity and land degradation as a result. From 2007-2017, the



region suffered one of the most severe drought cycles in its modern history triggering food insecurity and famine in some parts of the region and internal displacement from rural to urban areas in others. On the region's coastlines, more frequent and severe storms and flood events have been recorded, while sea level rise now threatens to displace millions of people in coming decades. Looking ahead, these trends are expected to get worse, with the Arab region possibly seeing average daily temperatures rise between 2-4°C by 2030 and 4-7°C by 2100.

The entry into force of the Paris Agreement on climate change and enactment by member countries of Intended Nationally Determined Contributions to climate change (NDCs) now set the stage for action. Unless scaled up actions are taken to achieve climate resilient development pathways, climate change will serve as a barrier to SDG achievement in the region, reducing the rate of progress on food and water security goals, entrenching challenges of gender inequality, exacerbating trends of displacement, and pushing people back into poverty. Across the region, UNDP is helping scale up access to climate finance and put in place a new generation of climate resilient development policies, institutional responses, and technological solutions that build the resilience of communities and ecosystems to climate risk.

Somalia for example has been among the most ravaged by the impacts of climate change, and was the first country in the Arab region to sign onto the Paris Agreement. The last decade has seen the onset of two famine episodes, with severe drought exacerbating challenges of social vulnerability, poverty and displacement. Nearly 70% of Somalia's population depend on agricultural and pastoralist livelihoods, with livestock accounting for 40% of GDP and more than 50% of export earnings. Farmers and pastoralists are increasingly sensitive to more frequent and intense droughts and resulting loss of grazing land. Women in rural areas are especially vulnerable. To address these challenges and achieve Somalia's NDC under the Paris Agreement, UNDP is implementing a programme on Enhancing the Climate

Resilience of Vulnerable Communities and Ecosystems, with \$8 million support from the Least Developed Country Fund (LDC-F). UNDP and partners help Government partners in Somaliland and Puntland regions of the country to integrate climate risks into development, natural resource management and disaster preparedness policies and plans. Capacities are also built at the community level, supporting CBOs to take the undertake ecosystem-based preparedness and adaptation to climate change and disasters. A particular focus is on community based infrastructure for enhancing the capture of water resources and promoting more climate resilient approaches to land and water management.

In Sudan, rain-fed farmers and pastoralists are particularly affected by climate change and are in desperate need of risk reduction measures. A main challenge in taking action has been the lack of access to climate finance and capital needed for resilience building measures. Through UNDP's Climate Risk Finance programme, with \$5.7 million support of the LDC Fund, national capacities are being built to initiate new financial mechanisms to scale up investments into climate change adaptation. The programme helps



develop Sudan's first Weather Index Insurance products, helping design new adaptive social protection tools and building the capacity of national insurance providers to support the resilience of farmers to climatic disasters. Activities are also underway in climate affected regions of Sudan to develop capacity of hydro-meteorological services for enhanced monitoring and interpretation of weather information, better risk mapping, rainfall forecasting and drought early warning.

In neighboring Egypt, the Nile Delta is home to 90% of Egypt's agricultural production, but it is also among the most climate vulnerable areas on the planet. With sea levels expected to rise in coming decades, climate change threatens to impact the country's food security, and its ability to sustain poverty reduction results beyond 2030. Unless actions are taken, rising sea levels will impact poor rural farmers in the Delta and displace millions of inhabitants in the decades to come. To address these challenges and achieve this component of Egypt's NDC climate plan under the Paris Agreement, UNDP has launched a new landmark initiative to Enhance Climate Change Adaptation in the North Coast and Nile Delta Regions of Egypt, supported by a US\$31.4 million grant from the Green Climate Fund. Through the programme, UNDP helps develop the capacity of national partners for integrated coastal zone management that reduces vulnerability of coastal developments and local communities from expected sea level rise. This includes new strategies, policies

and regulations and the installation of 69 kilometers of sand dune dykes to protect communities from future sea level rise.

In the Occupied Palestinian Territories, communities face growing pressures from climate change and long standing social vulnerabilities resulting from conflict and occupation. Climate risks in Palestine are serious, with increasing scarcity of water resources, growing fragility of natural resources and land resources. Climate change is increasing already high levels of social vulnerability of the marginalization among local communities. To act on these challenges, UNDP implemented a



programme to Enhance Capacities of Palestinian Institutions to Mainstream Climate Change, with \$1.4 million support of Belgium. Through the programme, UNDP helped assess the state of climate risks across Palestine, implications for social vulnerability in the West Bank and the Gaza strip, and support for the definition of plans and measures to build resilience across sectors and achieve targets set in Palestine's NDC climate plan. The programme also included a series of local community based grants to generate innovative local solutions for possible future replication. This is coupled with a UNDP programme to Enhance Hydro-Climate Modeling to Foster Cooperation among Palestinian, Jordanian and Israeli Water Authorities, through \$411,800 of support from the European Union.

To help Palestine scale up climate measures, a new UNDP programme on Readiness and Preparatory Support for scaled up climate finance is underway, with a \$318,996 of support from the GCF. The programme helps develop the institutional capacity of Palestinian institutions to effectively plan for climate actions, and put in place an enabling environment of policies and mechanisms to mainstream climate change with broader processes for development and resilience. The programme will result in definition of a gender response and social inclusive country programme that defined priorities for scaling up climate investments across various sectors in the West Bank and Gaza.



SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and biodiversity loss

Biodiversity and ecosystems have been at the base of development in the Arab region for millennia, with the effective use of natural assets a key foundation in the onset of agricultural civilization in the region and achievement of a human development goals in recent decades. While communities have adapted to ecosystem change throughout history, the pace and scale

of change from the humanity's ecological footprint is surpassing the ability of people to cope. This is a particularly critical challenge for nomadic and rural communities who have relied heavily on natural assets for livelihoods and social cohesion for generations. Ecosystem disruption is also a serious challenge in areas of the region affected by conflict, with ecosystem rehabilitation an important foundation for resuming livelihoods and promoting resilient forms of recovery.

There are several critical ecosystems of concern in the region. About 80% of the Arab region is made up of dryland ecosystems, impacted by converging trends of land degradation and exposure to more frequent and severe drought cycles. Dryland ecosystems are particularly fragile, but they are also areas in the region where biological productivity is declining, and where rates of poverty and conflict are highest. Limited levels of productivity in drylands is a major barrier to achieving community resilience, preventing conflict and recovering from crisis, and has emerged as a destabilizing force for communities across the region.



Delta, wetland, oases and marshland ecosystems are also critical priorities in the region, as important foundations for productivity of agricultural and fishery sectors in countries across the region. A large proportion of the region's population reside in and around these highly productive areas, but converging pressures from industrial growth and humanity's growing footprint are now threatening the future of these natural assets. These and other ecosystems are home to hundreds of fish, bird and mammal species which are today threatened with extinction.

To act on these challenges, countries in the region have enacted policies and action plans in line with the UN Convention on Biological Diversity and the UN Convention to Combat Desertification. These measures seek to promote the sustainable use and conservation of biodiversity and ecosystems. One important trend in this regard has been the expansion of protected areas and sustainable use regimes. As a percentage of the region's territory, protected areas grew from 3% in 1990 to approximately 9% by 2015. Another important trend has been the growing attention to achieve sustainable land management practices as a means of achieving a balance between growing resource demands and the role of dryland ecosystems as a social, environmental and economic asset for communities.

Algeria, the largest country in Africa, hosts a diversity of habitats from the Mediterranean ecosystems of the coastal north to the dryland ecosystems of the Saharan south. Dryland, desert, mountain, steppe and mountain ecosystems face various pressures, as do the nomadic and rural communities that rely on the natural assets they host. UNDP supported the development of a new National Biodiversity Strategy and Action Plan (2016-2030), with \$242,000 support of GEF, a key foundation for taking action under the SDGs and the Aichi Targets under the UN Convention on Biological Diversity.

The NBSAP takes an integrated approach for the sustainable use of ecosystems, elaborating a set of actions to sustain the role of biodiversity as a means of social and economic sustainability and as a means of foundation for adapting to climate change.

One example of an initiative achieving local results is UNDP's programme on Sustainable Use of Ecosystem Services in Cultural Parks in Algeria. Through \$5.3 million support by GEF, the programme has supported actions in the Tassili N'Ajjer and Ahaggar Cultural Parks to improve systemic, institutional and operational capacities for conservation of cultural and ecological heritage. The programme helps to improve the use of science for effective planning and conservation of flagship species in the parks, and puts in place new collaborative management arrangements with local communities to create win-win solutions between ecosystem conservation and sustainable livelihoods.

Sustainable use of biodiversity and land resources are also critical challenges in areas affected by crisis. In Lebanon, pre-existing challenges of land degradation and ecosystem disruption converge with the consequences of growing conflict in Syria. Communities in the northern reaches of Lebanon, including those in the Bekaa Valley, have hosted large number of Syrian refugees in recent years. Within the Bekaa Valley, growing pressures have been seen in the Qaraoun catchment area, serving as a critical source of water for food production, ecosystem services and as a home for threatened species. The ability of the catchment to sustain these functions is increasingly at risk owing to accelerating land degradation.

To help address these issues, UNDP implements a Sustainable Land Management programme, with \$3.1 million support from GEF, to address the main causes of land degradation such as deforestation, excessive firewood collection, overgrazing, expansion of urban settlements, and expanding infrastructure. These have been long-standing issues in the region, while the Syrian crisis is also now an exacerbating factor, adding pressures on local land and ecosystems. The programme helps develop capacity of national and local partners for sustainable use of agricultural, forest and rangeland areas, establishment of multi-sector platforms to mainstream ecological sustainability within local development plans and investments, and the use of strategic environmental assessments to identify ecosystem risks and take preventive action.

17 PARTNERSHIPS
FOR THE GOALS



SDG 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

Partner countries across the Arab region are taking important actions to achieve SDGs on water security, sustainable energy, sustainable consumption and production, climate change, biodiversity and land degradation. However, to fully achieve targets under the SDGs and related frameworks like the Paris Agreement, a need exists to further scale up actions on the road to 2030. To this end, UNDP and partners are initiating a new series of strategic regional partnership initiatives to help countries accelerate results across SDGs, scale up the use of green finance

solutions, deploy innovative green technology, and catalyze new strategic partnerships across the UN system, with the private sector, and with local communities.

One example is a new regional Green Finance initiative between UNDP and UN Environment, to assess capacities in national financial systems to scale up green solutions and private finance for achievement of SDGs and the Paris Agreement. As countries consider ways to promote growth and recovery from crisis, financial sector reform is high on the agenda, with green finance solutions an important opportunity to move from crisis to sustainability. The initiative will support diagnostic toolkits and country roadmaps to integrate green solutions into financial markets, credit, investments and insurance sectors, and monetary system and policies. It will help to better understand the flows relevant to green finance needs, to identify the investment gap towards 2030 targets, and alignment with the private finance and investment landscape. The programme will also explore the establishment of a regional platform for Green Finance, as a means of convening public and private investors around a set of green priorities and design a series of bankable projects to achieve local results at scale on the road to 2030.

Another important example is a new partnership on Derisking Renewable Energy Investments between the International Renewable Energy Agency (IRENA) and UNDP. Under the partnership, UNDP and IRENA will promote opportunities to scale up clean energy technology and finance in the Arab region towards achieving the SDGs. This involves development of regional analyses on ways to reduce investor risk in the Arab region and using the convening power of IRENA and UNDP to bring together Governments and the private sector to identify gaps on the road to 2030 targets, with a priority focus on crisis contexts.

A strategic One-UN partnership emerging in the Arab region is the SDG-Climate Facility, a new UN inter-agency platform for climate action. Through programme, UNDP, UN Environment, UN Habitat, UNISDR, WFP and WMO join forces with the League of Arab States and the Arab Water Council to help countries achieve the goals of the Paris Agreement in a way that catalyzes co-benefits across SDGs. A particular focus is on



building resilience to the converging forces of climate change, conflict and displacement. Many countries affected today by conflict and displacement in the region are also among the world's climate risk hotspots. Through the programme, the UN helps develop regional and local capacities to manage the multi-dimensional nature of risk and generate results towards climate, development and humanitarian goals. It supports new risk management tools, early warning systems, scaling up climate finance solutions that address the unique needs of crisis contexts, deploying innovative green technology for communities recovering from

crisis, and catalyzing new strategic partnerships with the private sector and local communities. The programme will advance climate solutions that generate integrated results across SDGs, and contribute to the goal of peace and security in the Arab region.

UNDP is also partnering with countries in the region to engage their expanding role as global and regional leaders for achieving the SDGs and Paris Agreement. In Morocco, UNDP supports a programme to develop the capacity of a new Center of Excellence for Climate Change (4C) launched during Climate COP22 in Marrakesh. The programme helps 4C achieve its local mandate to implement Morocco's NDC climate plan under the Paris Agreement, and it also helps expand the role of the new center to emerge as a hub for south-south cooperation on climate action. One focus is to bridge best practices and models for climate action between Morocco and partners in West Africa, the Sahel and the Congo Basin. Regarding the latter, the programme enables 4C to forge a new south-south partnership with the new Climate Commission for the Congo Basin and its 12-member countries in Central Africa. Through the programme, 4C supports the design of a new Blue Fund meant to scale-up finance for climate action and ecosystem resilience in the Congo Basin.

Lastly, in the United Arab Emirates, UNDP, the UN Office of South-South Cooperation support the establishment in Dubai of a new World Green Economy Organization (WGEO). The green economy concept has emerged in recent years as a means to achieve integrated results across the SDGs, and it is already seeing results. The combined market capitalization of green economy sectors, such as renewable energy, energy conservation, clean water provision, sustainable forestry and fisheries, and plastic and waste recycling, is now larger than many traditional sectors in the world economy, and is a new source of high-tech, added-value growth around the world. The programme helps establish and develop the capacity of WGEO to emerge as a global platform for accelerating innovation and private sector investment, and for expanding south-south cooperation on green solutions. This builds on the position of UAE as a hub for private investment and innovation and its role as a leading global provider of development and humanitarian assistance on the road to 2030.

Transformation Towards Sustainable and Resilience Societies: Ecosystem Resilience for SDG Achievement and Human Security in the Arab Region

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