

# Arab Climate Resilience Initiative

## *Concept Note*



**Regional Bureau for Arab States**

Climate change has been called the “defining development challenge of our time” – and the Arab countries are among the most vulnerable to its impacts.

The Arab countries already face a harsh climate, with long-standing factors such as water scarcity and desertification interacting with other development challenges to present formidable obstacles on the path to full and shared human development. The impacts of climate change – some already visible – stand poised to render these challenges even more severe, and more complex, with a potential of deep consequences for human development.

Preventing human development rollbacks in the Arab countries– and securing gains – will require that the climate challenge be addressed as an utmost priority. Piece-meal and reactive policy and engineering approaches will not suffice. While the exact impacts to be expected of climate change cannot be fully known, what is certain is that the only responses that will be effective will be those that are coordinated across a range of sectors and institutions, drawing on the energies and responding to the needs of all sectors of society.

To support national partners in moving toward integrated responses to key climate challenges, the UNDP Regional Bureau of Arab States is preparing an *Arab Climate Resilience Initiative* to bring a wide range of actors together to develop capacity and build momentum to achieve climate resilience in a rapidly changing environment.

## I. Background

The prospect of a changing climate has ascended on the international policy agenda in recent years and is today seen by many as “the defining human development issue of our generation.”<sup>1</sup> While pockets of skepticism do remain, it has been conclusively documented that the global surface temperature has risen by 0.76 degrees Celsius since 1850.<sup>2</sup> Eleven of the last twelve years have been among the hottest twelve years on record.<sup>3</sup> And the global average temperature is projected to rise by four more degrees by the end of the 21<sup>st</sup> century.<sup>4</sup>

Much of this change in temperature has been conclusively attributed to the emission of greenhouse gases, and accordingly the international community has pushed to establish frameworks to abate or sequester these emissions. The purpose of such efforts, known collectively as *mitigation*, is to reduce overall emissions as soon as possible and over time in order to avert the worst future climate change impact scenarios.

While mitigation is necessary to prevent the worst scenarios in the future, it will not protect people from the level of climate change that is already inevitable due to the current and ongoing buildup of emissions in the atmosphere. In fact, in a best-case scenario, mitigation will start to make a difference from around 2030 onwards.<sup>5</sup> Until then, countries must take action in advance to reduce the risks and limit the damage caused by climate change. This *adaptation* is necessary in the short and longer term to address impacts resulting from the warming that would occur even for the lowest stabilisation scenarios assessed.

Communities around the world are feeling the effects of climate change. Currently the poorest have been hit the hardest. Persons and communities with relatively few resources are the least equipped to recover from the devastation that can result from weather extremes such as storms, floods, eroding coastlines, heat waves, and droughts. The subsequent loss of clean water for drinking, the loss of productive conditions for agriculture, and the spread of malaria and other climate-sensitive diseases create threats to health and survival. These changes have effects throughout societies ranging from decreasing economic growth to increasing instability, and accordingly present strategic challenges in addition to humanitarian challenges.

Human systems have evolved a wide range of strategies to cope with climatic risks over the millennia. However losses from climatic variations and extremes are already substantial, and increasing. Autonomous, uncoordinated and reactive responses have not been sufficient. Protecting gains and continuing to advance human development around the world will require concerted and proactive efforts to build resilience to climate change. In the quickly evolving approaches to climate change around the world, adaptation and mitigation tend to be discussed and pursued by different actors and seemingly with differing goals. However societies cannot

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<sup>1</sup> UNDP (2008). Human Development Report 2007/2008. Fighting Climate Change. Human Solidarity in a Divided World.

<sup>2</sup> Intergovernmental Panel on Climate Change (2007). Fourth Assessment Report.

<sup>3</sup> *ibid*

<sup>4</sup> *ibid*

<sup>5</sup> UNDP(2008).



afford to choose between one and the other. Neither adaptation nor mitigation alone can avoid all climate change impacts. However, they can complement each other and together can significantly enhance climate resilience. For the overarching goal is neither adaptation *per se* nor mitigation *per se*, but rather sustainable human development in the broadest sense.

## II. The Arab States and Climate Change – projected impacts and the capacity challenge

### *Projected impacts*

The Arab States region has historically been exposed to risks associated with a harsh climate. It is already the most water-scarce region in the world, and 90% of its surface area lies within arid, semi-arid and dry sub-humid areas.<sup>6</sup> But consensus projections show that the harshest climate conditions still lie ahead.<sup>7</sup>

Climate change scenarios for the Arab region indicate that dry spells will become more pronounced. Projections of the Intergovernmental Panel on Climate Change (IPCC) show a future of reduced rainfall for the region. North Africa and the Middle East sub-region are very likely to be subject to extreme desiccation in the coming decades, with projected temperature increases in excess of 4°C throughout the far Northern part in summer, and reductions in rainfall exceeding 30% in some areas.

Higher temperatures and less rainfall will reduce the flow of rivers and streams, slow the rate at which aquifers recharge, and render the entire region more arid. These changes will have a series of effects, particularly on agriculture, energy and food security, and contribute to malnutrition. Agriculture yields, especially in rain-fed areas, are expected to fluctuate more over time, and to stabilize at lower averages over the long-term.

Climate change is also expected to increase the frequency and intensity of extreme climatic conditions and related disasters, leading to more severe events such as droughts, floods, hurricanes and dust storms. The Arab region has recently experienced an increasing number of extreme events such as droughts, flash floods, and storm surges. Although the damage associated with these events has rarely been quantified, primary estimates indicate huge economic, social and environmental costs and losses that could constrain development in many countries.

Sea-level rise could lead to inundation of the lengthy coastal areas of the Arab region, where the overwhelming majority of the population is clustered. And it is perceived as particularly threatening in the small-island states of the region as well as the natural and man-made islands in the Gulf. In addition, salt water could contaminate ground water, leading to severe land degradation and biodiversity loss.

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<sup>6</sup> Abahussain A. A., Anwar Sh. Abdu, Waleed K. Al-Zubari, Nabil Alaa El-Deen & Mahmood Abdul-Raheem. (2002). Desertification in the Arab Region: analysis of current status and trends. *Journal of Arid Environments*. Volume 51, Pages 521–545.

<sup>7</sup> Unless otherwise noted, data in this section are drawn from: Osman Elasha, Balgis (2010). Mapping of Climate Change Threats and Human Development Impacts in the Arab Region. Regional Bureau for Arab States, United Nations Development Programme.

Increasing urbanization and abandonment of rural areas are among the observed impacts of climate change in some Arab countries, and are projected to increase. Shifting rainfall patterns, expanding desertification and falling agricultural productivity are likely to undermine rural livelihoods, worsen job prospects in rural areas and accelerate migration to urban areas, where the provision of adequate infrastructure and public services will be a key challenge, especially given the backlog of un-serviced and under-serviced urban populations.

Population growth magnifies the challenges of climate change by increasing demand for food and water while also putting increased pressure on land use. The population of the Arab countries nearly tripled between 1970 and 2010, climbing from 128 million to 359 million. UN Population Division figures forecast that the Arab region will have 598 million inhabitants by 2050 -- 239 million more than in 2010.<sup>8</sup>

Climate change also presents threats to economic prosperity. It will impact all sectors of development in the Arab region, particularly water supplies, coastal and agricultural resources, tourism and public health. Tourism and agriculture are sensitive to changes in temperature and the frequency of extreme events and heat waves. Both sectors contribute significantly to the economy of most Arab countries particularly in providing employment, a key concern in this region with an average official unemployment rate of 14.4% and a growing population of youth. In some Arab countries, over 50% of the work force is employed in the agricultural sector, so declines in agricultural productivity or viability will have a major impact on employment. The impacts of climate change are also likely to close off opportunities for growth of promising sectors such as tourism, put strain on water used in manufacturing, and curtail the expansion of human capacities that can contribute to innovation and development.

Finally, climate change carries the possibility of inducing instability or conflict. Uncoordinated coping or survival strategies of local populations may include involuntary migration, competition with other communities or groups over scarce resources or overburdening of local or national governance capacities. Such trends can manifest themselves in the form of localized conflicts or spill over into the international arena in the form of rising tensions over resources.<sup>9</sup>

### *The capacity challenge*

Despite clear indications of threats to the region, Arab states still do not notably perceive the impacts of climate change as a threatening factor to their development and stability. Most Arab states have joined the UN Climate Convention and the Kyoto Protocol, as well as a number of international and regional governmental environmental organizations and treaties. However awareness and engagement in climate change among the public and national leaders remains low. Current research on development points to the importance of empowered leaders as active agents of change for transformative and sustainable results. Unfortunately, leadership

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<sup>8</sup> UNDP Regional Bureau for Arab States (2009). Population Levels, Trends and Policies in the Arab States Region: Challenges and Opportunities. Arab Human Development Paper Series. Paper 2009.1.

<sup>9</sup> United Nations (2009). Climate change and its Possible Security Implications. Report of the Secretary-General. New York.



development in the area of climate change adaptation has in most countries not been systematically undertaken or supported.

Even with this kind of leadership in place, effective responses to climate change would also require strong institutions to implement a broad climate-resilience vision. Consultations convened by UNDP-RBAS have yielded the following insights as to key areas needing support:<sup>10</sup>

- **Knowledge and Dialogue.** There has been a wealth of global reports on climate change issued over the last several years, as well as a few regional reports. However there are still critical gaps in knowledge about climate change, including the specific projections at the local and national level, the impact of a changing climate on other development areas such as health and the economy, and the range of options for adapting to and mitigating climate change that are available to countries. Similarly, the urgency placed on climate change in the public sphere in many parts of the world is not matched as yet in the Arab countries. There is still a need for more visibility and open dialogue on the nature of the threat and the options for addressing it.
- **Collective Action and Cooperation.** Climate change knows no borders. Responses to its threats require cooperation among neighbouring countries, for example by defining frameworks for sharing access to rivers. It also requires working together at the global level, either in terms of establishing a global climate change “deal” to take the place of the Kyoto Protocol, or even to achieve more modest but still constructive agreements through multilateral or even bilateral arrangements. However the Arab countries have yet to achieve constructive collective arrangements at the regional or sub-regional level, and the emergence of a renewed global commitment framework may take some time. There is a need for space for dialogue that can help bring countries toward agreement on key issues, as well as enable the establishment of specific partnerships among countries in the region and between countries in the region and around the world.
- **Financing.** LDCs and even the MICs in the region face fiscal constraints that hold back their ability to invest significantly in adaptation activities or in the development of low-carbon paths to growth. There is a need for greater understanding of the options available for financing development interventions around climate change, including through the analysis of fiscal space at the national level as well as the development of mechanisms for cooperation, both in the traditional multilateral and bilateral communities, as well as among emerging partners such as Arab funds, the private sector, and South-South actors.

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<sup>10</sup> On 31 April and 1 May UNDP-RBAS convened a *Human Security Dialogue* on climate change at the Library of Alexandria. Over 100 experts and policymakers from around the region and the world convened to discuss the projected impacts and the needed interventions in order to address the climate challenge. The event was a follow-up to the *Arab Human Development Report 2009*, which *inter alia* focused on the threat of climate change to the region. The outcome document, presentations, agenda and list of participants is available at [www.arab-hdr.org](http://www.arab-hdr.org)

### III. The UNDP Regional Initiative on Climate Change in the Arab States

Fighting climate change will require a dedicated, coordinated and multi-faceted response, which at the national and local levels will depend on the interaction of a range of institutions, from central ministries such as the finance ministry to sector ministries such as water and agriculture, to the private sector, civil society, academia and the media. The UNDP Regional Bureau for Arab States is planning to implement a *Regional Initiative on Climate Resilience* that will support progress on climate change in the Arab countries by fostering the capacity for *integrated responses* to the associated impacts and challenges.

The *Arab Climate Resilience Initiative* will target the policy level and focus on strengthening the capacity of institutions to identify threats and opportunities and adjust to changing climate circumstances over time in an integrated fashion. It will also provide support at the national level to institutions seeking options to finance climate adaptation and low-carbon development activities.

Based on regional consultations including impact analysis and capacity assessment, the *Arab Climate Resilience Initiative* will focus on addressing four key challenges, being i) water scarcity, ii) sea-level rise, iii) energy inefficiency, iv) gaps in knowledge and dialogue.

#### A. Fighting Water Scarcity -- Strengthening Water Governance

Water scarcity has long been one of the greatest development challenges facing the Arab States, and projections of the impact of climate change show that this challenge will grow in severity, and quickly. Water managers in the region are accustomed to dealing with difficult challenges, but their focus has in many cases been driven by the supply side of the equation. There is an urgent need to increase policy attention to the demand side as well.

Integrated Water Resources Management (IWRM) is increasingly regarded as the most effective way to manage water resources in a changing environment with competing demands. IWRM essentially involves three major components: explicit consideration of all potential supply-side and demand-side actions, inclusion of all stakeholders in the decision process, and continual monitoring and review of the water resources situation. IWRM is an effective approach in the absence of climate change, and there already are many good reasons for it to be implemented. With its drastic negative effects on water supply and precipitation rates, climate change serves only to make it all the more urgent that the already-water-scarce Arab countries develop capacities for IWRM.

Adaptation to climate change to reduce vulnerability in the water sector should involve far more than just water managers. Increasing social vulnerability to water stress (in terms of drought and flood) in many parts of the region reflects a wide range of pressures, many of which are outside the domain of water managers. In this respect, the water resources component of achieving climate resilience will require the full support of political leaders and policy coordination across



the full range of institutions and sectors. The *Arab Climate Resilience Initiative* will seek to foster improvements in water governance in multi-sectoral processes with support by national institutional leadership.

Interventions in the area of water security are also intended to address food security. The “food crisis” of 2007 and 2008 made very clear to stakeholders in the Arab countries that food security will be on top of the policy agenda for decades to come. Climate change will stiffen the challenge of food security by constraining the productivity of agriculture in the Arab countries.

### **B. Dealing with the Rising Sea – *Moving toward Integrated Coastal Zone Management***

Coastal areas figure among the most vulnerable of all environments to global climate change. Projected impacts from global warming include rising sea levels, intensification of tropical cyclones, larger storm surges, increasing sea-surface temperatures, and growing acidification of surface waters. For coastal ecosystems and coastal communities, the consequences of such developments could be considerable, threatening the health, livelihoods, and welfare of millions of people. More frequent and severe storms can inundate low-lying coastal zones, destroying infrastructure and displacing populations.

Continuing sea level rise and higher wave surges can contribute to accelerated shoreline erosion and retreat. Mounting sea levels can also exacerbate saltwater intrusion into the already-scarce rivers and aquifers that furnish freshwater in the Arab countries. Warming water temperatures and acidifying oceans risk degrading the ecology of coral reefs and may threaten the artisanal and commercial fisheries that nourish many seaboard communities.

Climate threats to coastal regions reverberate well beyond the shoreline. Farmland subject to saltwater incursion and fisheries facing higher ocean acidity feed populations distant from the water’s edge. Ports and other facilities that could be damaged or destroyed by cyclones and storm surges serve producers and consumers located far inland. Refugees fleeing coastal flooding may be driven into neighboring countries or even further afield.

Many of the coastal countries most vulnerable to global warming in the Arab region have limited capacity and few resources to counter or cope with prospective damages. Many Arab countries have begun to take action on the coastal challenge, but policies and interventions tend to be sector-specific and focused on physical engineering. While engineering is no doubt important, the *Arab Climate Resilience Initiative* will aim to develop capacities of local and national stakeholders to take a broader approach to coastal zone management, an integrated approach that not only seeks to protect coastal zones from a rising sea but also seeks to promote the sustainable use of the economic and ecological services of coastal areas for sustainable human development.

### **C. Energy Efficiency**

Energy is at the heart of most critical economic, environmental and development issues facing the world today. Developing countries in particular need to expand access to reliable and modern energy services if they are to reduce poverty and improve health outcomes while also increasing productivity, enhancing competitiveness and promoting economic growth.

At the same time, the global energy system – supply, transformation, delivery and use – is the dominant driver of climate change, representing around 60% of total current greenhouse gas emissions.<sup>11</sup> Current patterns of energy production and consumption are unsustainable and threaten the environment on both local and global scales. Reducing the carbon intensity of energy – that is, the amount of carbon emitted per unit of energy consumed – is a key objective in reaching long term climate goals.

The process toward increased energy efficiency will have different contours in countries of differing profiles. In the Arab region, low-income countries still need to expand access to modern energy services substantially in order to meet the needs of the people who experience severe energy poverty in terms of inadequate and unreliable access to energy services and reliance on traditional biomass.

Middle-income countries in the Arab region need to tackle energy system development in a way that enables them progressively to decouple growth from energy consumption through improved energy efficiency and reduce energy-related GHG emissions through gradually shifting toward the deployment of low-GHG emission technologies.

High-income countries in the Arab region face unique challenges. As the large infrastructure investments made in previous decades begin to reach the end of their economic lives, they present opportunities to further decarbonize their energy sectors through new investments in lower-carbon generation capacity. In addition, they will need to reach a new level of performance in terms of energy use. Progress of this type is of special importance to the hydrocarbon-exporting Arab countries, which can stand to benefit in the future from investments in energy efficiency made today.

All countries in the region will need to move toward energy efficiency without compromising job growth; indeed, there is a need to create new jobs within the low-carbon growth path. With a regional official unemployment rate of 14.4%, the employment challenge is high on the regional policy agenda. The impacts of climate change threaten jobs, particularly in the agricultural sector, which in several Arab states accounts for over half of all jobs. Climate resilient development means securing the viability of productive sectors like agriculture in the face of climate change, while also expanding employment in promising low-carbon sectors such as renewable energy.

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<sup>11</sup> United Nations (2010). Energy for a Sustainable Future. The Secretary General's Advisory Group on Energy and Climate Change.



## D. Knowledge and Policy Dialogue

As noted above, there is a great deal of knowledge on climate change and its impacts at the global level, but there remain critical gaps to be filled at regional, national and local levels. While this is true around the world, it is even more the case in the Arab region, given that so much of the global stock of knowledge is not available in the region's main languages, Arabic and French.

The UNDP Regional Bureau for Arab States has considerable experience in supporting stakeholders in the region in processes to build knowledge and to foster public dialogue, including through the platform of the well-known *Arab Human Development Report*.<sup>12</sup> Through the *Arab Climate Resilience Initiative*, UNDP will leverage its experience, network and convening power to lead an effort to increase the amount and rigor of knowledge available to regional stakeholders, ranging from global to regional to national and local, and in the local languages of the region in addition to English.

Connected to the process of knowledge generation, the *Initiative* will support processes of regional policy dialogue that provide momentum for stakeholders in the region to move from assessment of threats to the promotion of concrete policies and programmes for climate resilience. One of the key challenges identified by consultations so far is the lack of political commitment to acting on climate change. By supporting high-level and well-informed dialogue the *Arab Climate Resilience Initiative* will be well-positioned to engender the needed commitment.

## IV. The Process

The experiences of the UNDP Regional Bureau for Arab States have proven unequivocally that in order for regional initiatives to be truly impactful they have to be based on deep consultation with stakeholders, lively exchange of points of view, connection to world-class and region-specific bodies of knowledge, and engagement of policy leaders, academia and the media.

The build-up to the *Arab Climate Resilience Initiative* will be driven by this momentum-building project methodology. The pre-launch phase will consist of a series of regional consultations to help Arab countries develop integrated strategies to address climate change challenges. It seeks to at the same time to raise awareness and understanding of the issues at hand and set the pace for policy dialogue while mobilizing key actors at the highest level to address the related policies and strategic actions. The consultative process is even more relevant as countries are preparing

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<sup>12</sup> UNDP-RBAS's sponsorship of the *Arab Human Development Report (AHDR)* provides key entry points for convening leaders and engaging the media in advocating for policy change. The AHDR 2009 has been downloaded over 500,000 times, and written about in over 450 news articles. UNDP-RBAS has partnered with Al-Jazeera, BBC Arabic and Al-Arabiya on televised policy dialogues, yielding key insights into opportunities for policy change, and broadening the constituency for sustainable human development. [www.arab-hdr.org](http://www.arab-hdr.org)

for the Mexico Summit on Climate Change, where it is expected that the Arab countries will express a more coherent and informed position.

In these processes UNDP will seek to foster an understanding and a build-up of resolve to address climate change through an integrated approach that takes on the perspective not only of adapting to ongoing impacts, but also preserving and expanding economic growth and human development.

A major first step in this regard has been the convening of a *Human Security Dialogue* on Climate Change as follow up to the *Arab Human Development Report 2009*.<sup>13</sup> The *Dialogue* brought forward a range of expert and opinion leader viewpoints, galvanizing a strong shared sense that there is a need for international cooperation in order to stimulate the climate policy dialogue and develop capacity to address the challenge in the Arab countries.

Building on that momentum, from June - September 2010 UNDP-RBAS will convene a series of thematic sub-regional consultations focusing on national priorities as well as opportunities for cooperation among Arab countries in the response to climate change. While mainstreaming key development issues such as governance, gender, and youth, the conferences will seek to foster dialogues and build knowledge around the four priority intervention areas around which the *Initiative* will be focused. Due to its particular acuteness, each session will include a module focusing on the water security challenges. In addition each consultation will include respectively a focus on one of the four sub-themes, and will be led by the following countries:

- **Egypt** will lead a regional consultation on **sea level rise** and its impact on economic and human development.
- **Syria** has expressed interest in leading a regional consultation on **water security**, drought and desertification and its impact on economic and human development.
- **Bahrain** with other Gulf countries will leading a **regional consultation on energy efficiency**, focusing on renewable energy R&D and innovation, financing mechanisms, the role of the private sector, and climate-resilient cities.
- **Morocco** will lead a regional consultation on the **territory-based approach** to climate change adaptation.

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### ***High-level launch event***

On the basis of these consultations, as well as on specially-commissioned studies by regional and international experts, UNDP-RBAS will prepare a high-level event at which to formally validate and present the outlines of the *Arab Climate Resilience Initiative*. The event will be a two-and-a-half day conference with a range of sessions, covering such topics as climate change overall, a preview of the Mexico Climate Conference, and thematic sessions on the four focus areas of the *Initiative*. The event will also include a field visit to a promising project in the area of climate change adaptation or mitigation.

The Government of Morocco has agreed to host the *High-Level Event* in October. On the basis of discussions between UNDP-RBAS and the Government of Morocco the expectation is that the *Event* will bring together regional and global experts, media personalities and opinion leaders, officials of the United Nations and the World Bank, representatives of bilateral cooperation agencies, and a grouping of high-level policymakers and national leaders representing Arab countries. The belief of UNDP-RBAS is that such a high-level event that brings together actors from different perspectives and covers a range of vital challenges – and opportunities – will be key in ensuring that the *Arab Climate Resilience Initiative* gains the knowledge, momentum and support needed to truly make an impact in supporting Arab countries in their integrated response to the climate challenge.

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*The UNDP Regional Bureau for Arab States (RBAS) supports and oversees the UNDP offices in the Arab States, including offices and country programmes in Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Libya, Lebanon, Morocco, Occupied Palestinian Territory, Saudi Arabia, Somalia, Sudan, Syria Tunisia, United Arab Emirates, and Yemen. In addition UNDP-RBAS implements a Regional Programme that works with partners on issues of trans-border or multi-country concern through dedicated initiatives involving capacity development, knowledge building and fostering development dialogue.*



**Regional Bureau for Arab States**

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