



منتدى التغيرات المناخية

Forum sur les changements climatiques  
Climate Change Forum



## Collaborative Framework on Food Security-related Sectors' Adaptation to Climate Change in the Near East and North Africa Region

**Changing Climate Elements.** According to the information available so far, the NENA region is exposed to four key climate change hazards: long-term climatic desiccation; increased variability, extremes and uncertainty; sea-level rise; and rising temperature. Vulnerability to each of these hazards varies between countries depending on their socio-economic situation and technological development. In addition, there are high sub-regional variations with regard to these hazards.

**Climate Change Threats.** The climate change-induced threats to agriculture and other food security-related sectors have not been fully assessed, but preliminary investigations reveal that they are alarming and call for urgent action. Water shortage, already a problem in most countries of the region, will be exacerbated. Changes in temperature, rainfall, climatic extremes and sea level rise will increase the vulnerability of the agriculture sector.

Rangelands and livestock are likely to be most vulnerable to climate change as they are located mostly in marginal areas, impacting the nomadic system which spreads over a wide area and changing livestock pest and disease distribution and their transmission patterns with increased probability of epidemics outbreak.

Soil moisture depletion will likely cause the productivity of major forestry species to decline and the extinction of sensitive species, to increase fire risks and to change the spread patterns of pests and diseases. The resulting changes in habitats will induce changes in wildlife population.

In the fisheries sector, the effects on macrophyte communities and spread of warmer water species due to increased temperatures already have been observed in the Mediterranean, as have changes in populations, trophic interactions and migratory patterns of fish populations. These patterns are likely to be exacerbated in the future and to result in fisheries production and quality decline

Human health and comfort will be affected by heat stress, with possible spreading in vector-borne diseases and indirect impacts resulting from decreases in water availability and food production.

Many valuable ecosystems could be lost as species fail to keep up with the shift in climate boundaries. Desert oases would face the threat of drying, salinization and desertification, and wetland sites will face the dual threats of drying out and sea level rise.

These threats will in turn result in huge economic losses that overshadow development efforts and increased human insecurity, regional conflicts over water and other resources, mass migrations and other social problems.

**Gaps in Addressing Climate Change in NENA.** Several gaps hinder the capacity of NENA countries to address climate change threats. These include:

1. The regional nature of the climate change problem calls for regional and international cooperation as an essential element in assessing and managing climate change-associated risks. However, such cooperation is lacking at the NENA level.
2. There is a high level of uncertainty in climate change projections in the region
3. Climate change-unrelated factors exacerbate the problem
4. The NENA region has a weak adaptive capacity despite relatively good resilience to dry climatic conditions.

**Proposed Collaborative Framework for addressing Climate Change in NENA.** To address the above-mentioned climate change issues, FAO is proposing the following collaborative framework of action and has already drafted a profile for it.

**Goal** – The overall goal is to assist NENA countries to build and maintain a knowledge base, adapt to CC impacts, contribute to mitigating its causes and achieve sustainable development, focusing on the regional dimension of the CC agenda.

**The main pillars** of the framework are: 1) strengthening scientific assessment; 2) setting up observation and monitoring; 3) institutional capacity-building and education; 4) support to policy planning and national development; and 5) effective public information and awareness-raising.

### **Framework Approach**

**Dimension:** A regional and sub-regional approach for tackling climate change-related issues

**Multidisciplinary:** Collaborative strategy among natural and social scientists, stakeholders and decision-makers to build and develop an integrated approach that enables effective response

**Collaborative:** FAO, IFAD, WB, WFP, Others

### **Framework Strategy**

- Build on past and on-going CC-related initiatives in the region through e.g. Mapping of on-going initiatives
- Review progresses, gaps and opportunities identified through earlier research on natural resource management, sustainable development and information systems in the region
- Consider creating an institutional framework for climate change adaptation in the region, including through networking between existing national institutions and establishing a specialized regional centre
- Build capacities at different levels, particularly at policy makers level
- Promoting scientific cooperation in data generation and use, assessment and monitoring, capacity-building and education
- Link climate change impacts to other environmental issues characterizing the region such as desertification and soil degradation, biodiversity loss, poverty, conflicts
- Link CC to Rural Development and Energy
- Give due consideration to gender role and disparities

### **Expected Outputs**

- Improved capacity of NENA to respond and adapt to climate change impacts on Agriculture and food security
- NENA early warning and monitoring systems and mechanisms to prepare for and respond to extreme climatic events established
- Local institutions strengthened, community participation enhanced, and indigenous knowledge incorporated
- Institutional and policy frameworks necessary for decision-making, planning adaptation, networking and coordination are established
- Effective information and awareness-raising achieved at all levels

### **Financial support for CC adaptation measures**

- Various UNFCCC designated funds available to support countries' adaptation measures, including three administered by GEF
- Climate Investment Fund (CIF)
- NENA countries' own resources

For more information on FAO's proposed collaborative framework, contact:

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