

Submission by the Arab Republic of Egypt on 2018 Facilitative Dialogue /Talanoa Dialogue

Where do we want to go?

Egypt's NDC and SDS 2030 provide a general framework for climate change adaptation and mitigation interventions. In the context of the NAP process, they present several opportunities. The NCCC with its Adaptation Task Force are institutional anchors for coordinating adaptation planning. National research institutions working on climate change-related issues provide operational support in terms of data collection, analysis and monitoring in several sectors/fields, including agriculture, water resources, coastal zone, and meteorology. These should continue to be well capacitated. The updating of the SDS 2030, which is underway, is an opportunity to mainstream climate change into national strategies, which will lead to better national budget allocation across key development sectors. As well as ensure the accessibility to international funding such as GCF.

Egypt's short term vision for adaptation and mitigation

1. Adaptation

a. Water Resources

Several measures are currently being considered to adapt to decreasing water resources or increasing Nile flows with a vision to ensure sustainable management of the water resources. These primarily include:

- Maintaining water level in Lake Nasser
- Increasing water storage capacity
- Improving irrigation and draining systems
- Changing cropping patterns and farm irrigation systems
- Reducing surface water evaporation by redesigning canal cross sections
- Developing new water resources through upper Nile projects
- Rain water harvesting
- Desalination
- Treated wastewater recycling
- Increased use of deep groundwater reservoirs. In addition, public awareness is being raised on the need for rationalizing water use, enhancing precipitation measurement networks in upstream countries of the Nile Basin, encouraging data exchange between Nile Basin countries, and developing Circulation Models to predict the impact of climate change on local and regional water resources.

b. Agriculture

There is an urgent need for further studies on the climate change impacts and required

adaptation measures in the agriculture sector in order to update existing adaptation strategy and overcome the barriers that appears during the implementation. These barriers include limited scientific information and strategic visions, and lack of financial resources. The following are the main adaptation measures according to the (NAS 2011)

- Changing sowing dates and good management practices are among the important adaptation measures oriented to adapt to climate change.
- Changing cultivars to those that are more tolerant to heat, salinity and pests, and changing crop pattern are the most promising adaptation measures at the national level.
- Using different multi-level combinations of improved surface irrigation systems and applying deficit irrigation are successful means of increasing surface irrigation system capacity in traditional lands to overcome the negative impacts of climate change.
- Improving the current low productivity of cattle in addition to improving feeding programs are being considered. No clear adaptation options are defined for fishery wealth.

c. Coastal Zones

Adaptation options for coastal zones are highly site-dependent. However, changes in land use, integrated coastal zone management, and proactive planning for protecting coastal zones are necessary adaptation policies. Providing job opportunities in safe areas (in locations that are not impacted by climate change) is an important priority to successfully absorb affected population.

d. Additional Adaptation Policies and Measures

Egyptian authorities are currently focusing on the following additional policies and procedures:

- Building institutional capacities of comprehensive collection and analysis of monitoring and observations and geographic data;
- Identifying indicators and conducting full assessment of vulnerable sectors and stakeholders;
- Enforcing environmental regulations;
- Identifying and applying protection measures of vulnerable touristic and archaeological sites and roads against extreme natural phenomena such as floods, dust storms and extreme weather conditions;
- Building capacities for using regional water circulation models
- Proactive planning and integrated coastal zone management
- Risk reduction; and
- Increasing awareness of stakeholders for energy and water utilization

- **Adaptation Action Packages**

- **Coastal Zones:**

- 1- Reduce climate change associated risks and disasters.
- 2- Capacity building of the Egyptian society to adapt to climate change and associated risks and disasters.
- 3- Enhance national and regional partnership in managing crises and disasters related to climate change and the reduction of associated risk.

- **Water Resources and Irrigation:**

- 1- Increase investments in modern irrigation systems.
- 2- Cooperate with Nile Basin countries to reduce water evaporation and increase river capacity.
- 3- Develop national policies to encourage citizens on water use rationalization.

- **Agriculture Sector:**

- 1- Build an effective institutional system to manage climate change associated crises and disasters at the national level.
- 2- Activate genetic diversity of plant species with maximum productivity.
- 3- Achieve biological diversity of all livestock, fishery, and poultry elements to protect them and ensure food security.
- 4- Develop agro-economic systems and new structures to manage crops, fisheries and animal production, which are resilient to climate changes.
- 5- Increase the efficiency of irrigation water use, while maintaining crop productivity and protecting land from degradation.
- 6- Review of new and existing land use policies and agricultural expansion programs to take into account possibilities of land degradation in Delta and other affected areas resulting from Mediterranean Sea level rise.
- 7- Develop systems, programs and policies to protect rural community and support its adaptive capacity to the expected trend in land use change, plant and animal production, and internal migration due to climate change.

- **Health Sector:**

- 1- Identify potential health risks as a result of climate change.
- 2- Raise community awareness about climate change risks and means of adaptation.
- 3- Increase the efficiency of healthcare sector and improve the quality of health services in dealing with climate change.
- 4- Support Ministry of Health efforts to improve the social and economic status and population characteristics.

- **Rural Areas, Population, and Roads**

- 1- Draw a baseline scenario for the optimal regional distribution of population and

economic activities within the geographical boundaries of Egypt up to the year 2100, taking climate change into consideration. Tourism Sector

- 2- Reduce climate change risks in touristic areas.
- 3- Engage users in supporting the proposed strategy.
- 4- Support periodical monitoring and observations systems and follow-up bodies. 4- Raise environmental awareness.
- 5- Cooperate with international bodies.
- 6- Incorporate disaster risks within the plans to promote sustainable tourism in Egypt.
- 7- Capacity building of local communities in touristic areas.

o **Energy Sector**

- 1- Conduct comprehensive studies to assess the impact of climate change on the energy sector, propose appropriate adaptation measures, and estimate the economic cost of the proposed adaptation measures. In addition, these studies should determine the safe locations for the construction of power generation projects.
- 2- Build institutional and technical capacities of different units in the energy sector in climate change issues.
- 3- Support research and technological development to enable the electricity sector to deal properly with climate change.

In addition, essential next steps are needed to advance adaptation planning and implementation in Egypt include the development of a fully integrated capacity development plan and sectoral action plans. Climate tracking needs to be integrated into the domestic budget. Climate projections should be developed under the various IPCC scenarios. Sectoral vulnerability assessments should be conducted, and regularly updated. A continual and iterative monitoring and evaluation process must also be integrated into adaptation projects.

2. Mitigation

Egypt has started developing a Low Emission Development Strategy to guide mitigation actions in the context of the national Sustainable Development Strategy "Egypt's Vision 2030" which serves as a roadmap for the country to achieve its desired sustainable development goals. Egypt's vision 2030 promotes the optimum use of available resources, enhancement of Egypt's competitiveness and revival of its historic leading role in the region. Moreover, it aims at fulfilling the aspirations of the Egyptian people regarding their right to a decent standard of living. The goals outlined in the strategy are in line with the global sustainable development goals (SDGs).

With regard to the Mitigation Policies, the Egyptian NDCs have included that:

The key for Egypt to mitigate GHGs emissions is to provide appropriate foundations for the development of low emission energy systems. Pathways to achieving high CO₂ mitigation levels comprise the following:

- Widespread diffusion of locally-appropriate low-emission energy production technologies, with substantial reductions in energy intensity
- Comprehensive mitigation efforts covering all major sources of emissions
- Locally-appropriate technology transfer and financial flows from developed countries to support carbon emission abatement according to the UNFCCC principles, which acknowledges that developed countries should provide required support to developing countries in this regard.

Policies targeting development that is more sustainable rely upon five main pillars:

- 1- More efficient use of energy, especially by end users;
- 2- Increased use of renewable energy as an alternative to non-renewable energy sources;
- 3- Use of advanced locally-appropriate and more-efficient fossil fuel technologies, which is less-emitting, in addition to new generations of nuclear power;
- 4- Energy efficiency is the cornerstone to be targeted by policy makers to decouple demand on energy and economic growth; and
- 5- Reform energy subsidies. This policy is implemented using four pillars, set different prices for petroleum products based on energy generation efficiency; increase the efficiency of energy use; provide support to certain sectors to promote switching from conventional energy sources to clean energy sources; and apply the fuel subsidy smartcard system to ensure that subsidies are received by target beneficiaries.

The degree to which efficiency improvements can limit energy demand growth is one of the main distinguishing characteristics of greenhouse gas reduction pathways. Energy efficiency could be improved radically through a combination of behavioral changes and rapid introduction of stringent efficiency regulations, technology standards, and environmental externality pricing, which mitigates rebound effects.

Renewable energy technologies, which are relevant to the local context, will play a very important role in reducing GHG emissions, but they would not suffice to keep climate change manageable. However, renewable energy may provide a number of opportunities since it also addresses sustainable and equitable economic development, energy access, secure energy supply, and reduced local environmental and health impacts.

There are four key technology-related requirements essential for transformation: (i) continued support of energy conversion efficiencies, (ii) carbon capture and storage “CCS” as a technology alternative that can be used in the future if proven economically feasible, (iii) co-utilization of fossil fuel and biomass in the same plants, and (iv) utilization of co-generation plants.

Using advanced generations of nuclear reactors could be important to fill the gap between reducing fossil fuel dependence and the deployment of renewable energy. In addition, nuclear energy can be an important contributor in the future energy mix to stabilize CO₂ levels as energy demand continues to grow.

Additional mitigation measures include the increase of the country’s CO₂ absorptive capacity through plantation, maintaining suitable types of trees along road sides, the middle-island of inter-city and urban roads, and on irrigation and drainage canal banks. In addition, increase existing use of treated wastewater for wood forests irrigation in order to increase Egypt’s CO₂ removals.

In light of what has been submitted above, Egypt would like to take this opportunity to share the following recommendations:

- The principles of equity and CBDR should be implemented across the Paris Agreement Work Program.
- We also believe that the entire process should be cognizant of the priority accorded by developing countries to achieving sustainable economic growth and eradication of poverty.
- It is important to maintain a simple approach to the discussion of Talanoa Dialogue in order to ensure inclusivity to all, where the key task of preparatory phase is to process and synthesize the inputs, where inputs from Parties, official national reports, and reports from intergovernmental organizations should be prioritized, it is also important to benefit from experiences shared by non-Party stakeholders.
- The key messages from the inputs from all contributors should be reflected precisely and in a balance manner in the outcomes of the process.
- While arranging the agenda of the dialogue every effort must be made to avoid conflicts with other negotiating tracks in order to ensure maximum participation in this important endeavor. Furthermore, we wish to recall that the objective of the dialogue is essentially facilitative and hence should not result in any excessive burden on parties.

- The outcome of the Talanoa Dialogue should reflect the discussions in a balanced manner, with a focus on feasible, practical and realistic solutions to address climate change challenges.
- The summary of the political phase should capture the key messages from the roundtables, with a view to promoting more ambitious actions with regard to both sustainable development and combating climate change.
- It is imperative to establish a clear process for monitoring progress and reporting of financial support and identifying ways to further scale up funds with balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties.
- The need to focus on technology development and transfer as a primary means for addressing climate change and removing all barriers that may hinder it.
- Assess and enhance pre-2020 commitments and actions.