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# NATIONAL STRATEGY FOR MAINSTREAMING GENDER IN CLIMATE CHANGE IN EGYPT



## **NATIONAL STRATEGY FOR MAINSTREAMING GENDER IN CLIMATE CHANGE IN EGYPT**

Produced through a multi-stakeholder process on behalf of the Egyptian Environmental Affairs Agency (EEAA) by:

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National workshop with representatives from the Egyptian Environmental Affairs Agency (EEAA), women organizations, Ministries of Water Resources and Irrigation, -Agriculture and Land Reclamation, the League of Arab States, the United Nations Development Program (UNDP), USAID, Global Environmental Facility (GEF), League of Arab State, academic and research institutions, media, civil society, NGOs and CEDARE, held from the 17th to the 19th of May in Cairo, Egypt. We thank all these governmental institutions and individuals for their commitment and dedication in producing this national strategy.

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## ACRONYMS

<b>CAPMAS</b>	Central Agency for Public Mobilization and Statistics
<b>CBO</b>	Community Based Organization
<b>CDM</b>	Clean Development Mechanism
<b>CEDARE</b>	Centre for Environment and Development for the Arab Region and Europe
<b>CEDAW</b>	Convention on the Elimination of All Forms of Discrimination Against Women
<b>CIHEAM</b>	Centre International de Hautes Etudes Agronomiques Méditerranéennes
<b>CoP</b>	Conference of Parties
<b>CO<sub>2</sub></b>	Carbon Dioxide Equivalent
<b>CZM</b>	Coastal Zone Management
<b>CoRI</b>	Coastal Research Institute
<b>CS</b>	Civil Society
<b>EEAA</b>	Egyptian Environmental Affairs Agency
<b>EEPF</b>	Egyptian Environmental Policy Framework
<b>FAO</b>	Food and Agriculture Organization
<b>GTZ</b>	German Technical Cooperation
<b>GDP</b>	Gross Domestic Product
<b>GEF</b>	Global Environment Facility
<b>GHG</b>	Greenhouse Gas
<b>GIZ</b>	German Organization for International Cooperation and Development
<b>GIS</b>	Global Information System
<b>GoE</b>	Government of Egypt
<b>ICZM</b>	Integrated Coastal Zone Management
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>IUCN</b>	International Union for Conservation of Nature
<b>INC</b>	Initial National Communication
<b>INGOs</b>	International Non-Governmental Organizations
<b>MALR</b>	Ministry of Agriculture & Land Reclamation
<b>MDGs</b>	Millennium Development Goals
<b>MENA</b>	Middle East and North Africa
<b>MFTI</b>	Ministry of Foreign Trade & Industry
<b>MoA</b>	Ministry of Agriculture
<b>MoF</b>	Ministry of Finance
<b>MoFP</b>	Ministry of Family & Populations
<b>MoH</b>	Ministry of Housing
<b>MoHE</b>	Ministry of Health
<b>MoIC</b>	Ministry of International Cooperation
<b>MoTR</b>	Ministry of Transport
<b>MoT</b>	Ministry of Tourism
<b>MoWI</b>	Ministry of Water and Irrigation
<b>MSEA</b>	Ministry of State for Environment Affairs
<b>NAS</b>	National Agricultural Strategies
<b>NE</b>	Nuclear Energy
<b>NC</b>	National Communication
<b>NCW</b>	National Council for Women
<b>NEAP</b>	National Environmental Action Plan of Egypt 2002/17

<b>NEEDs</b>	National Environmental and Economic Development Study for Climate Change
<b>NGOs</b>	Non-Governmental Organizations
<b>NWRP</b>	National Water Resource Plan
<b>RE</b>	Renewable Energy
<b>ROWA</b>	IUCN Regional Office for West Asia
<b>SFD</b>	Social Fund for Development
<b>SMME</b>	Small, Medium and Micro Enterprises
<b>SNC</b>	Second National Communication
<b>SPA</b>	Shore Protection Authority
<b>SWDS</b>	Solid Waste Disposal Sites
<b>TNC</b>	Third National Communication
<b>ToT</b>	Training of Trainers
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Program
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>UNEP</b>	United Nations Environmental Program
<b>USAID</b>	United States Agency for International Development
<b>WHO</b>	World Health Organization

## EXECUTIVE SUMMARY

Climate change will affect all countries in all parts of the world, but the impacts of climate change will be differently distributed amongst regions, generations, age classes, income groups, occupations and genders<sup>1</sup>. The poor, the majority of whom are women living in developing countries, will be most disproportionately negatively affected. Because climate change affects women and men differently, a gender perspective - firmly rooted in the principle of gender equality - is essential when considering policy development, decision-making, and in the development and implementation of strategies concerning mitigation and adaptation.

Gender disparities remain among the deepest and most pervasive of all inequalities and, in fact, hinder the best of development efforts profoundly. Gender inequality can worsen the impacts of climate change; conversely, taking steps to narrow the gender gap and empower women can also reduce these impacts. Climate change and gender inequality are therefore inextricably linked.

Women are, however, powerful agents of change and not just helpless victims. Their leadership is critical. Women can enhance strategies related to integrated coastal management, agriculture, water, tourism, health, energy and transport, urbanization, and waste<sup>2</sup>, for example.

Today, the Egyptian Constitution guarantees the same rights to all citizens, men and women alike. Article 40 of the Constitution states that citizens “... are equal in front of the law and equal in rights and duties, and that there shall be no discrimination between them based on gender, origin, language or belief.”

Despite this provision, neither the Initial National Communication (INC), nor the Second National Communication (SNC) produced by the Government of Egypt for the United Nations Framework Convention on Climate Change (UNFCCC) to date, has incorporated gender considerations. The Egyptian Environment Affairs Agency (EEAA) is therefore presently addressing this shortcoming by including gender as a crosscutting topic in the Third National Communication (TNC), currently under development. The TNC will build on the outputs of the INC, the SNC and other relevant studies and national reports to identify priorities for interventions in this regard, and to further translate assessments into concrete sector-based policies, measures and actions with gender and hence forth also sustainability at its core.

This National Strategy for Mainstreaming Gender in Climate Change in Egypt is the result of collaboration between the IUCN Gender Office, the IUCN Regional Office for West Asia (ROWA), the Center for Environment and Development for the Arab Region and Europe (CEDARE), the Global Gender Office of the International Union for Conservation of Nature (IUCN) and other key national institutions in Egypt to develop a national policy framework on gender and climate change, and integrate these strategically into the TNC.

The Strategy is the result of a series of inputs, including interviews with policy makers, stakeholder consultation and research, and a stakeholder workshop held from 17 – 19 May 2011 in Cairo, Egypt (see annex list of participants, Annex 3), amongst others. It has been drafted on the basis of an analysis of the current national priorities concerning climate change and prioritized with regards to vulnerability, which according to both the INC and the SNC by the Government of Egypt (GoE), are identified as: 1) water resources, 2) agriculture and 3) coastal zones.

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<sup>1</sup> IPCC. 2001. Summary for Policymakers. Climate Change 2001: Impacts, Adaptation, and Vulnerability. Report of Working Group II of the International Panel on Climate Change. IPCC. Switzerland.

<sup>2</sup> Sectors prioritized based on vulnerability.

Following the thematic outline of the draft TNC, this Strategy elaborates on eight (8) priority focus areas, each comprising sub-sections on women as agents of change, a situation analysis and the state of gender, a set of recommendations and examples of selected action on implementation in each of the following sectors:

Priority Area 1:	Integrated Coastal Management
Priority Area 2:	Agriculture
Priority Area 3:	Water
Priority Area 4:	Tourism
Priority Area 5:	Health
Priority Area 6:	Energy and Transport
Priority Area 7:	Urbanization
Priority Area 8:	Waste Management

Finally, the document concludes with a set of Institutional imperatives required to be in place to ensure optimal benefit and delivery.

## SECTION A: CONTEXT AND METHODOLOGY

### I. Overview

#### *Geographical description*

1. The Arab Republic of Egypt is situated in northeastern Africa and bordered by the Mediterranean Sea to the north, Israel, the Gaza strip and the Red Sea to the east, Sudan to the south, and Libya to the west. The principal geographic feature of the country is the Nile River.
2. Egypt has a maximum length from north to south of about 1085 km (about 675 miles) and a maximum width (near the southern border) of about 1255 km (about 780 miles).
3. Egypt covers a total area of 1,001,450 km<sup>2</sup> comprising 995,450 km<sup>2</sup> of land surface and a water surface coverage of 6,000 km<sup>2</sup>, and with a coastline of 3,500 km on both the Mediterranean and Red Seas. The surface level range from 133 m below sea level in the Western Desert, to 2,629 m above sea level in Sinai Peninsula.
4. The dominant feature of the northern coastal zone is the low-lying delta of the River Nile, with its large cities, industry, flourishing agriculture and tourism. The delta and the narrow valley of the Nile comprise 5.5% of the area of Egypt, but carry over 95% of its people and its agriculture.

#### *Climatic Regions*

5. Egypt is predominantly uninhabited. Only 35,000 square kilometers or 3.5% of the total land area is cultivated and permanently settled. Most of the country lies within the wide band of desert that stretches from Africa's Atlantic Coast across the continent and into southwest Asia.
6. The general climate of Egypt is dry, hot, and arid, with a mild winter season with rain over the northern coastal regions, and a hot and dry summer season.
7. Egypt's geological history has produced four major physical regions: the Nile Valley and Delta, the Western Desert, the Eastern Desert (also known as the Arabian Desert), and the Sinai Peninsula. The Nile Valley and Delta is the most important region because it supports 99 percent of the population on the country's present cultivable land.

#### *Population*

8. According to the Central Agency for Public Mobilization and Statistics (CAPMAS), the midyears population estimate (1997 – 2010) for Egypt was 78,728,000 of which 38,478,000 were female and 40,250,000 male<sup>3</sup>.
9. If the fertility rate of the country remains unchanged, the projection for Egypt's population is 100 million by 2020 and 119 million by 2030. On the other hand, if the population control strategy is successfully implemented, the population of Egypt is expected to be 92 million by 2020 and 104 million by 2030. These high rates of natural population growth have placed profound pressures on both the environment and the economy, given the limited available natural resources.

<sup>3</sup> See annex CAPMAS. 2010. Population Estimates By Sex & Governorate 1/7/2010. Retrieved from the World Wide Web: <http://www.capmas.gov.eg/pdf/egypt10/pop10/6.pdf>.

In the water and agricultural sectors, this situation is reflected by:

- Encroachment on the limited agricultural land by more inhabitants and a higher population density. For 2005, cultivated land amounted to 8.3 million acres, with a cultivated land area being 0.1 acre per capita;
- Serious regression of the per capita annual share of water. Considering Egypt's fixed share of Nile water (55.5 billion m<sup>3</sup> annually), the share of fresh water per capita in the early nineties was 1000 m<sup>3</sup>, and it is estimated to reach 554 m<sup>3</sup> by 2020 and 468 m<sup>3</sup> by 2030, assuming the population growth rate remains unchanged;
- Handicapping size of the national budget necessary for basic population needs such as housing, clean water supply and sanitation, job creation, education, roads, transportation, energy, electricity, etc.;
- Difficulty to ensure basic food supply and the implementation of poverty alleviation programs<sup>4</sup>.

### **Urbanization**

10. Since 1947, urban growth rates have averaged around one percentage point higher than was the case for rural areas. Thus, for forty years, the urban population has been expanding at the rate of 4% annually. Cairo, the country's capital and largest city, has been affected the most by this urbanization. Between 1947 and 1986, the city's population grew from 1.5 million to more than 6 million (within the city's corporate limits) and this led to a rapid expansion of the informal employment sector, as urban economies have not adequately adjusted to the rising demand for jobs. As much as 60 percent of the Egyptian economy is concentrated in the informal sector.

11. According to the last statistics, the urban population is 43.4% of total population (2010) with rate of urbanization: 2.1% annual rate of change (2010-15 est.)<sup>5</sup>.

12. Slum dwellers comprise around 828 million people or 33 percent of the world's urban population. In Egypt, a high portion of the urban population live in slums, amounting to more than 1/3 the population. As in many other parts of the world, these slum dwellers experience varying deprivations and risks, which can include a lack of durable housing, overcrowding, insufficient access to clean water, poor sanitation, and threats of forced evictions.

## **II. Climate Change in Egypt**

13. According to both the Initial National Communication (INC) and the Second National Communication (SNC) by the Government of Egypt (GoE), the vulnerable sectors in the country to climate change are identified as: 1) water resources, 2) agriculture and 3) coastal zones.

14. Sea level rise is the cause of the most serious of climate change impacts, threatening the densely populated Nile Delta that include both extensive infrastructure and fertile agriculture lands. Sea level rise is expected to encroach on large areas of low lying lands in the this area and sea water intrusion will increase water logging conditions and negatively affect soil salinity in other lands.

<sup>4</sup> EEAA. 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo, Egypt..

<sup>5</sup> CAPMAS. Base Population Data.2011. Retrieved from the World Wide Web: <http://www.capmas.gov.eg/>.

15. There is also a high degree of uncertainty regarding the climate change impacts on the annual Nile flood. An expected decline in precipitation along the North Coast and a projected increase in the population are estimated to be between 115 and 179 million by 2050. Moreover, temperature rise is expected to reduce the productivity of major crops, increase crop water requirements coupled with auxiliary water stress and loss of some lands and fertility in the Nile Delta. Consequently, the overall food production might be significantly reduced. Climate change risks could therefore seriously impact on both Egypt's efforts to achieve the Millennium Development Goals (MDGs) and to face those threats<sup>6</sup>.

16. With regards to the health sector, it is expected that climate change will add to the burden of diseases in Egypt, both in a direct and indirect manner. Direct impacts include heat strokes and heat-related phenomena (especially to the elderly and children), skin cancers, eye cataracts and deaths. The indirect impacts of climate change are linked to water shortages and a diminishing agricultural land, leading to a shortage of essential foods and increasing the likelihood of malnutrition. Increased incidence of diseases associated with climate change includes transmittable diseases such as parasitic-, bacterial- and viral diseases, and non-transmittable diseases such as cardiovascular- and respiratory diseases, cancers, as well as malnutrition<sup>7</sup>.

#### **Possible Impacts of Climate Change on Egypt:**

- **Shortage in water** resources due to increasing population and increasing evaporation due to increasing temperatures;
- **Lower yields** of major crops (wheat and maize);
- **Erosion of beaches** on the Nile Delta;
- **Decreasing quality of fresh water** due to salinization;
- **Deterioration of ecosystems** as direct result of climate change;
- **Sea level rise** of 0.5% - 1% over 100 years, leading to the sinking of 30% of the regions in the city of Alexandria;
- **195,000 jobs will be lost;** and
- **Economic losses** estimated at USD 35 billion will be suffered in the event of failure to take any action on climate change.

Source: Arab League. Arab Framework Action Plan for dealing with issues of climate change (in press).

17. Neither the INC, nor the SNC produced by the Government of Egypt to date has incorporated gender considerations. The Egyptian Environment Affairs Agency (EEAA) is

<sup>6</sup> Handoussa, H. 2010. Situation Analysis: Key Development Challenges Facing Egypt. UNDP- Ministry of International Cooperation. Cairo, Egypt.

<sup>7</sup> EEAA. 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo, Egypt..

presently addressing this shortcoming by including gender as a crosscutting topic in the Third National Communication (TNC), currently under development.

18. The TNC will build on the outputs of the INC, the SNC and other relevant studies and national reports to identify priorities for interventions in this regard, and to further translate assessments into concrete sector-based policies, measures and actions with gender and hence forth also sustainability at its core.

19. The TNC will become a key tool for decision-making and provide a framework for implementation at all levels. It will contribute to a deepened understanding of the value of incorporating gender in both the development and implementation of policies and measures relating to adaptation and mitigation. It will also demonstrate the potential contribution to the sustainable development of the principal economic sectors in Egypt, and facilitate the integration of gender-sensitive climate change considerations into national, regional and local sector-specific policies and programs.

20. The TNC will provide the GoE with an opportunity to use this National Strategy on Gender and Climate Change in Egypt in various practical ways, for example: (i) as a TNC policy paper; (ii) to inform decision-makers on integrating gender considerations in TNC; (iii) to integrate climate change into new national policies on women; (iv) to identify and hire national gender expert(s) to conduct research and participate in the TNC process; and (v) to include women and women's organizations as stakeholders participating in the Project Steering Committee. More specific recommendations on integrating gender considerations in enabling activities for the preparation of Egypt TNC in Annex 2.

### III. Rationale for Developing a Gender Perspective in a Climate Change Strategy<sup>8</sup>

21. Climate change will affect all countries in all parts of the world, but the impacts of climate change will be differently distributed amongst regions, generations, age classes, income groups, occupations and genders<sup>9</sup>. The poor, the majority of whom are women living in developing countries, will be disproportionately negatively affected.

22. Because climate change affects women and men differently, a gender perspective - firmly rooted in the principle of gender equality - is essential when considering policy development, decision-making, and in the development and implementation of strategies concerning mitigation and adaptation.

23. Gender inequality can worsen the impacts of climate change; conversely, taking steps to narrow the gender gap and empower women can also reduce these impacts. Climate change and gender inequality are therefore inextricably linked. By exacerbating inequality overall, climate change slows down progress towards gender equality and henceforth impedes efforts to achieve wider goals such as poverty reduction and sustainable development.

24. Gender inequality also intersects with climate risks and -vulnerabilities. "Women's historic disadvantages – their limited access to resources, restricted rights, and a muted voice in shaping decisions – make them highly vulnerable to climate change. The nature of this vulnerability varies widely, cautioning against generalization. But climate change is likely to magnify existing patterns of gender disadvantage"<sup>10</sup>.

<sup>8</sup> Aguilar, L. 2009. Training Manual on Gender and Climate Change. IUCN-GGCA. San José, Costa Rica.

<sup>9</sup> IPCC. 2001. Summary for Policymakers. Climate Change 2001: Impacts, Adaptation, and Vulnerability. Report of Working Group II of the International Panel on Climate Change. IPCC. Switzerland.

<sup>10</sup> UNDP. 2007. Human Development Report 2007 - 2008. Fighting climate change: Human solidarity in a divided world. UNDP. USA.

25. Women are, however, powerful agents of change and not just helpless victims. Their leadership is critical.

26. Women can enhance strategies related to integrated coastal management, agriculture, water, tourism, health, energy and transport, urbanization, and waste<sup>11</sup>, for example.

27. Incorporating a gender perspective successfully and effectively requires that men and women understand the process of climate change, and share information on counteracting its negative impacts on an equal basis to both women and men. It is important that women have equal access to knowledge, awareness, capacity building, resources and technology, which are prerequisites in influencing climate change. Likewise, it is fundamental that women participate more actively in decision-making and policy development at all levels.

28. Two complementary principles that are accepted globally underlie this Strategy: (i) gender equality and (ii) the empowerment of women<sup>12</sup>.

29. Building on the understanding as set out above, this Strategy acknowledges gender mainstreaming as the primary methodology employed, seeking to recognize and bring to the fore the diverse roles, needs and contributions of both women and men in the sustainable development agenda. Rather than merely adding women's participation onto existing strategies and programs *post facto*, mainstreaming gender aims to transform unequal social and institutional structures by recognizing the promotion of gender equality as a central driving principle - reducing vulnerability - enhancing significantly the efficiency, effectiveness and overall implementation of programs and projects.

30. To date, many efforts to mainstream gender have too often been confined to simplistic, ad-hoc and short-term technical interventions that have failed to challenge inequitable power structures and, therefore, also failed to ensure optimal implementation. Gender disparities remain among the deepest and most pervasive of all inequalities and, in fact, hinder the best of development efforts profoundly.

31. According to the 2005 United Nations Development Program (UNDP) Human Development Report, gender continues to be "one of the world's strongest markers for disadvantage" and reducing inequality would be instrumental in making progress towards achieving the Millennium Development Goals (MDGs). Such inequalities span all sectors and are equally pervasive in the environment sector.

#### IV. Mandates, Frameworks on Gender in Egypt

32. The Egyptian Constitution guarantees the same rights to all citizens, men and women alike. Article 40 of the Constitution states that citizens "... are equal in front of the law and equal in rights and duties, and that there shall be no discrimination between them based on gender, origin, language or belief."

<sup>11</sup> Sectors prioritized based on vulnerability.

<sup>12</sup> **Equality** between women and men is a principle that ensures human development while, at the same time, is a fundamental objective in the fight against poverty. Women and men play different roles and have different responsibilities in their families, in their community or in society. They participate in different ways in the social, cultural, economic and political life of their countries and communities. Understanding these differences allows a more focussed intervention when developing policies, programmes and projects meant to improve the condition of people. Above all, what is intended is that these differences do not generate or worsen conditions of inequality and exclusion.

**Empowerment** is a process for women to gain power and have more control over their lives and is an effective route leading to gender equality and also to reducing poverty. It involves consciousness raising, building self-confidence, improving health and wellbeing, and broadening options and opportunities. Empowerment is an important strategy to transform power structures in all spheres: legislation, education, institutions and in any entity, whether public or private, that predominates, in this case male, and is detrimental to women's social condition.

33. The Government of Egypt is furthermore also a signatory to, and member of, a number of key international agreements that already commit the country to gender mainstreaming. These include chapter 24 of Agenda 21 (United Nations Conference on Environment and Development, 1992); the Johannesburg Plan of Implementation (World Summit on Sustainable Development, 2002); paragraph K of the Beijing Platform for Action (Fourth World Conference on Women, 1995); the World Conference on Human Rights (1993); the International Conference on Population and Development (1994); the World Summit for Social Development (1995); the Millennium Declaration (2000); and the requirements and agreements set out in the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).

### CEDAW, Climate Change and Egypt

Egypt ratified CEDAW in 1981. In its preamble, CEDAW states that State Parties are bound to guarantee men and women equal opportunities in terms of economic, social, cultural, civil, and political rights <sup>13</sup>.

- In a provision that has great relevance to the regulation of issues relating to climate change, CEDAW obliges State Parties to take “all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, **on a basis of equality of men and women, that they participate in and benefit from rural development**” and “participate in the elaboration and implementation of development planning at all levels”, and “in all community activities” <sup>14</sup>.
- CEDAW also recognizes that women should have equal rights to “obtain all types of **training** and education, formal and non-formal, including [...] the benefit of all community and extension services, in order to increase their technical proficiency” <sup>15</sup>.
- CEDAW furthermore requires State Parties “to take all appropriate measures to eliminate discrimination against women in other areas of economic and social life in order to ensure, on a basis of equality of men and women, **the same rights**” <sup>16</sup>.
- In particular, and in relation to financial mechanisms, there is a need to ensure that women have “access to **credit and loans, marketing facilities, and appropriate technology** [...]” <sup>17</sup>, as well as the “the right to bank loans, mortgages and other forms of financial credit” <sup>18</sup>.
- The **cumulative effect of these provisions is to place obligations on countries** to ensure that women are granted equal opportunity and that the necessary conditions exist to enable their:- (i) participation in decision making; (ii) negotiation on climate change agreements; and (iii) equitable participation in, and access to, financial mechanisms and technologies.
- These may also be interpreted as to require States to ensure the **fullest possible participation of women in law and policy making at international level**, where such laws and policies are deemed necessary to prevent discrimination.

34. In 2004, the “National Strategy for Women Empowerment” was developed through a multi-stakeholder process convened by the National Council for Women (NCW). Cabinet endorsed the

<sup>13</sup> Article 2(a).

<sup>14</sup> Article 14.2.

<sup>15</sup> Article 14.2(d).

<sup>16</sup> Article 13.

<sup>17</sup> Article 14.2(g).

<sup>18</sup> Article 13(b).

Strategy and integrated principles thereof in various policies and programs emanating from different Egyptian government institutions.

35. Gender equality is also of primary concern to the Egyptian Environmental Affairs Agency (EEAA). Policy guidelines for the Egyptian Environmental Policy Framework (NEAP) call for "... A holistic, gender sensitive and participatory approach". A Gender Unit was established in EEAA in 2002 with the objective: "To mainstream gender issues, particularly the rights of women to access employment opportunities and get a proper education, through good governance and adopting democracy and popular participation".

36. The main activities of the gender unit are to:

- a. Educate women on environmental problems and health-related topics;
- b. Enable women to perform their productive functions while preserving and conserving the environment;
- c. Empower women to assume responsibility of community development to promote sustainable development; and
- d. Cooperate with NGOs concerned about women and environment issues.

37. The National Environmental Action Plan of Egypt 2002/17 acknowledges the importance of women as a key part of Egypt's social structure and recognizes that the environment affects women differently as a direct result of their relationship to nature, their age and/or certain cultural aspects. It furthermore also states that the promotion of women's participation is one of the major premises for social and economic development and that there is a need to create an enabling environment for women to play an effective role in establishing projects and executing activities which support their families and positively change their environmental practices.

38. In 2008 Egypt approved its "National Strategy for Sustainable Development". The framework of the strategy addresses women challenges as part of the implementation of any action related to sustainable development, and identifies the action needed to strengthen women's role and benefit from them.

## **V. Methodology**

39. In light of the above, the EEAA, in collaboration with IUCN Regional Office for West Asia (ROWA), the Center for Environment and Development for the Arab Region and Europe (CEDARE), the Global Gender Office of the International Union for Conservation of Nature (IUCN) and other key national institutions in Egypt, engaged in the development the present "National Strategy for Mainstreaming Gender in Climate Change in Egypt".

40. The Strategy is the result of a series of inputs: interviews with policy makers, stakeholder consultation and research, among others. It has been drafted on the basis of an analysis of the current national priorities concerning climate change. A workshop with male and female stakeholder representatives was convened from the 17th to the 19th of May in Cairo, Egypt (see annex list of participants, Annex 3).

41. The main objectives of the workshop were to:

- a. Identify and understand the importance and interconnectedness of gender and climate change;
- b. Develop a national strategy on gender and climate change for Egypt, identifying appropriate entry points, policy- and other recommendations and actions; and
- c. Considering both adaptation and mitigation, mainstream gender into the Third National Communication in a coherent, integrated and sustainable manner.

42. The Strategy defines the role that the EEAA will play in initiating and facilitating these efforts internally, as well as with strategic partners at the national, regional and international levels. It seeks to mainstream gender in climate change action as outlined in the Third National Communication, to overcome constraints - and take advantage of opportunities - that promote gender equality, as well as strengthen the role of the gender unit in the EEAA in specific topics such as climate change.

43. The framework for integrating a gender perspective in climate change efforts in Egypt covers the period 2011–2016. It establishes objectives, outlines substantive activities with reachable indicators within the ambit of eight priority sectors as identified by participants, integrated coastal management, agriculture, water, tourism, health, energy and transport, urbanization, and waste.

44. The EEAA has the mandate for implementation of this Strategy. Several institutional imperatives are indicated that could be considered in the successful implementation of the strategy and the EEAA will do so in collaboration with various strategic partners.

45. The development of this Strategy was made possible with the generous financial support from the Government of Finland.

## SECTION B

### VI. General objective of the Strategy

**To mainstream gender considerations into national climate change initiatives and policies**, so that both men and women have equal opportunity to understand, participate, and decide effective measures to implement mitigation and adaptation activities and henceforth benefit from various climate change programs and-funds, contributing to the national economic, environmental and social sustainability.

### VII. Priority Sector 1: Integrated Coastal Management

#### Women as Agent of Change: Integrated Coastal Management

- Women play a fundamental role in **enhancing cooperation** amongst various stakeholders, especially where these have conflicting interests. They have a deep understanding that the livelihoods of their families depend on the coastal and marine resources and that conflict can negatively affect this.
- Women living in coastal areas can be **instrumental in disaster risk reduction and -recovery** and can lead improved community welfare both during and after disasters. Women are therefore an important group to include in identifying and preparing safe areas for villagers to escape floods, and to establish local early warning-, monitoring- and communication systems.
- Women are instrumental in the **successful implementation of climate change adaptation** strategies in coastal zones.
- Women are **guardians of indigenous resilience practices** that can help the poor reduce risks associated with hazards.
- If provided with access to emergency loan funds, women can be **fundamental in ensuring community survival and reducing poverty** in coastal zones.
- If provided with credit, training and leadership development skills, women's role in coastal zone management can have **increased sustainability, efficiency and profitability**.
- Women extension workers and research assistants in coastal management projects ensure **better access to a range of locations and activities** involving women who gather aquatic products.

- Women have **specific needs and preferences** in relation to access to land and other wetland resources and reliable water transport of market goods and women's perspectives have to be included in wetland planning decisions.

### **Situation Analysis: Integrated Coastal Management Sector**<sup>19</sup>

46. The coastal zones of Egypt extend for more than 3,500 km along the Mediterranean- and Red Sea coasts. Climate change will adversely impact on coastal zone management in Egypt and the most significant impact along the coast will be that of sea level rise.

47. Urban settlements on the Egyptian coast are especially vulnerable to sea level rise due to the Mediterranean shoreline's relative low elevation compared to the land around it. Sea level rise will impact on the Nile Delta region and will involve inundation of as much as 10-12% of the northern low lands. The Delta and its north coast are hosts to several main towns and cities such as Alexandria, Port Said, Damietta and Rosetta, collectively accommodating several million people, as well as large investments in industrial, tourism- and agricultural activities and the infrastructure serving these activities.

48. Apart from sea level rise, an increase in the frequency and severity of storm surges along the coast will also impact this coastal infrastructure such as harbors, urban settlements and roads, amongst others, negatively. These direct and indirect impacts are expected to lead to the immigration – and re-settlement - of 6 to 7 million people from the Nile Delta.

49. Sea level rise also impacts on agricultural areas, subsequently affecting crops and henceforth also threatening food security, posing considerable challenges for women and men.

50. It is expected that the increase in sea temperature due to climate change will cause fish distributions to shift northwards and/or to go into deeper, cooler, waters - impacting detrimentally on fishing industry along the coast, and impacting directly on the livelihoods of people who's living depend on it<sup>20</sup>.

51. Increased water salinity in the coastal lakes in Egypt is also expected to affect fish species and will also impact negatively on fresh water supply (see water).

### **Gender in the Coastal Management Sector**

52. Women and men living on the coast and the Nile Delta will be differently impacted by climate change, especially when it relates to hazards.

53. Adaptation and vulnerability to hazards is a social issue and need to be considered within a gender context.

54. Women can be more vulnerable to the negative impacts of natural hazards due to their socio-economic position in Egyptian society. Political and social factors include initial conditions of a person, the resilience of their livelihood, the opportunities for self-protection, and their access to social protection and social organization. Therefore it is fundamental that in vulnerability studies and assessment of risks and potential hazards a gender analysis is conducted.

<sup>19</sup> EEAA. 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo, Egypt.  
Handoussa, H. 2010. Situation Analysis: Key Development Challenges Facing Egypt. UNDP- Ministry of International Cooperation. Cairo, Egypt.

<sup>20</sup> AQUAMAPS. 2010. AquaMaps (08/2010): Standardized distribution maps for currently 11,500 species of fishes, marine mammals and invertebrates. Retrieved from the World Wide Web: <http://www.aquamaps.org>.

55. In Egypt, women are more vulnerable due to:

- a. Physical and biological differences that can handicap their initial response to natural hazards;
- b. Social norms and given roles (related to the expected behavior of women) that affect the way they react to a disaster; and
- c. An inequitable distribution of aid and resources as a result of social hierarchies.

56. For example, according to the 2006 Population Census, an estimated 37.3% of women are illiterate with a ratio of 1.67 women to 1 man<sup>21</sup>. Women with lower literacy levels are less likely to respond to written early warning announcements and instructions. Poor education leads to less involvement in decision-making, as well as less representation in disaster response organizations and -training. All of these factors lower the capacity of women to respond to disasters effectively.

57. Although women are disproportionately impacted by disasters and sudden environmental changes, women also contribute to curbing the impacts of climate change. Women's knowledge and responsibilities related to natural resource management have proven critical to community survival.

58. In fishing communities, women are - and have always been - present in the fishing industry. In most instances their participation is neither socially acknowledged nor economically remunerated. This is largely due to the fact that the stages at which women become or are involved, are often not the most visible or apparent.

### **Recommendations: Integrated Coastal Management Sector**

59. In Egypt, there has been a general lack of information and understanding concerning the extent to which women participate economically in small-scale fisheries sector countrywide. It is therefore fundamental to generate knowledge about the differentiated roles that women and men have in coastal areas in order for adaptation efforts to reach both of them successfully.

60. Actions that can contribute towards promoting gender equity and equality in adaptation measures undertaken in coastal regions, include:

- a. National studies should produce gender-differentiated data on the impacts and vulnerabilities of climate change and emphasize the capacities of men and women to adapt. Studies should also determine the advantages of implementing gender-sensitive adaptation projects in coastal zones and the Nile Delta;
- b. The Government should understand and use the knowledge and specialized skills of women in natural disaster survival and management strategies and these should be recognized and included in the design and implementation of any integrated coastal zone management strategy.
- c. Recognize that women are powerful agents of change and that their leadership is critical;

<sup>21</sup> CAPMAS. 2010. Distribution of Population (10 years & over) by Sex & Educational Status According to Final Results of 2006 Population Census. . Retrieved from the World Wide Web: <http://www.capmas.gov.eg/pdf/egypt/finalpop/12.pdf>.

- d. Improve women's access to, and control over, natural resources in order to reduce poverty and vulnerability, manage and conserve natural resources more effectively and ensure that women have resources to adapt properly;
- e. In fishing communities consideration should also be given to the different points of view, needs and interests of women and men, which does, at the same time, involve working in a differentiated manner with these groups, granting particular relevance and visibility to women;
- f. Development of training and educational programs for women and girls (particularly in vulnerable communities) that provide general information about hazards, and provide strategies to cope with these. More attention should be given to fishermen and fishing areas when setting adaptation strategies to climate change. Since around 20% of the sample knows about the climate change and its effects, awareness programs should be directed to the people around the wet land areas to start adaptation projects to eliminate the climate change effects on the local communities;
- g. Gender sensitive programming should be giving more weight especially in the fishing areas; and
- h. Activation of the local radio and television roles as one of the most important sources of information for fishermen and their families, with emphasis in training.

### **Selected Action on Implementation:**

Including gender in implementation of Integrated Coastal Management (ICM)

Objectives	Action steps	Indicators of success	Responsible
<b>To develop economic and social valuations of natural resources and its impact on women</b>	<ul style="list-style-type: none"> <li>• Stocktaking of natural resource assets related to CZM disaggregated by sex</li> <li>• Analysis of economic and social valuation of the natural resources disaggregated by sex</li> </ul>	<ul style="list-style-type: none"> <li>• Gender disaggregated map indicating economic and social value of resources</li> <li>• Report includes economic and social valuation of those resources and entry points for women</li> <li>• Policies implemented to support women in CZM sector</li> </ul>	<ul style="list-style-type: none"> <li>• EEAA and SPA</li> <li>• EEAA, SPA, MOP and MOF</li> </ul>
<b>To strength a gender perspective relating to CZM through establishing sustainable patterns of cooperation among women</b>	<ul style="list-style-type: none"> <li>• Analyze the current conflict patterns related to resources use and to conservation, and development</li> <li>• Conflict resolution process in place with women's participation</li> <li>• Enhance women's participation in CZM issues</li> <li>• Establish networks of women NGOS and CBOs for the management of coastal zone in selected areas</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of conflicts</li> <li>• Number of potential entry points to identify women's</li> <li>• Number of awareness campaign conducted to women for CZM</li> <li>• Number of women participating in CZM initiatives</li> <li>• Number of women trained in each geographical area</li> <li>• Number of families benefiting from women participation in CZM</li> <li>• Number of networks established for management of CZ</li> </ul>	<ul style="list-style-type: none"> <li>• EEAA</li> <li>• EEAA/NGOs</li> <li>• NGOs</li> <li>• EEAA/NGOs</li> <li>• NGOs</li> <li>• EEAA</li> <li>• NGOs</li> <li>• Private sector</li> </ul>
<b>To establish a sustainable</b>	<ul style="list-style-type: none"> <li>• Restructure the ICZM national committee to include 1/3 of its members as women</li> </ul>	<ul style="list-style-type: none"> <li>• Number of women represented in the committee</li> </ul>	<ul style="list-style-type: none"> <li>• EEAA</li> </ul>

<b>institutional and regulatory framework for CZM taking into account women's participation in the decision making process</b>	<ul style="list-style-type: none"> <li>Conduct regular 3-4 committee meetings annually</li> </ul>	<ul style="list-style-type: none"> <li>Mapping of women's roles and responsibilities in the committees</li> <li>Number of decisions impacting positively on women in CZ</li> </ul>	<ul style="list-style-type: none"> <li>EEAA</li> </ul>
<b>To develop a sustainable financial mechanism to fund gender projects in CZM</b>	<ul style="list-style-type: none"> <li>Identify and make available financial mechanism that fund and support women's projects and their participation in CZM</li> <li>Establish women's national fund for adaptation in CZM</li> </ul>	<ul style="list-style-type: none"> <li>Increase in funds access y women</li> <li>National fund established</li> <li>Number of projects successfully implemented</li> </ul>	<ul style="list-style-type: none"> <li>MOP</li> <li>SFD</li> <li>MOF</li> <li>EEAA</li> <li>SPA</li> </ul>
<b>To enhance the resilience in fishing communities in relation to the effects of climate change</b>	<ul style="list-style-type: none"> <li>Built awareness in coastal and Delta communities on the impacts of climate change in the fishery industry and marine ecosystems</li> <li>Develop adaptation strategies with women and men in coastal communities</li> <li>Conduct workshops to improve women's role and activities in the fishery sector</li> <li>Sustainable fishing farming</li> <li>Processing of marine resources</li> </ul>	<ul style="list-style-type: none"> <li>Number of people with knowledge in relation to climate change and CZM</li> <li>Adaptation strategies in place in the most vulnerable communities</li> <li>Improvement in the fishery industry</li> <li>Increase number on non-traditional projects in CMZ</li> <li>New jobs associated with the fishery sector for women</li> <li>Increase food consumption from fish protein</li> </ul>	<ul style="list-style-type: none"> <li>MOP</li> <li>SFD</li> <li>MOF</li> <li>EEAA</li> <li>SPA</li> </ul>

	<ul style="list-style-type: none"> <li>• Empower women to seek new opportunities within the fishery sector</li> </ul>	<ul style="list-style-type: none"> <li>• Increase family income</li> </ul>	
<b>To enhance DRR measures by mainstreaming gender considerations</b>	<ul style="list-style-type: none"> <li>• Coordinate with the National Risk Management Center to incorporate gender consideration in climate related hazards</li> <li>• Develop awareness in women and women organizations in relation to climate change effects on CZ</li> <li>• Fund adaptation strategies targeting women to cope with hazards associated to climate change</li> </ul>	<ul style="list-style-type: none"> <li>• DRR in Egypt incorporated gender considerations</li> <li>• Number of women trained in DRR and climate change</li> <li>• Number of initiatives conducted by women to adapt to climate change effects in CZ</li> </ul>	<ul style="list-style-type: none"> <li>• National Risk Management Center</li> <li>• Women NGOs</li> <li>• Local governments</li> </ul>

## VIII. Priority Sector 2: Agriculture

### Women as Agent of Change: Agriculture

- Women **ensure nutritional status of their families**, are responsible for family diet and food provision, processing, and purchase; and have an important role in agricultural production.
- In rural areas, women are responsible for making decisions on how much and what kind of food crops will be planted. By choosing climate change resilient crops, women can be fundamental in **ensuring food security** and increasing agricultural yields.
- Women farmers work in all stages of agricultural production, especially in plowing, cultivating, weeding, harvesting, packing, and storing, and are instrumental in **ensuring sustainable agricultural production**.
- Women use chemical and organic pesticides, insecticides, and fertilizers; they can be fundamental in implementing climate change adaptation strategies directed at **controlling growing numbers of harmful insects and diseases**, contributing to sustaining agriculture and food security.
- Women are primarily **responsible for daily care and handling of livestock**, including poultry, cattle, sheep, goats, and in some instances camels, and can be instrumental in climate change adaptation strategies.
- Women farmers are custodians of **traditional knowledge and indigenous coping strategies** that can be essential in reducing the impacts of climate change.

### Situation Analysis: Agriculture Sector

61. The contribution of the agriculture sector in Egypt exceeds 13% of the GDP and generate over 30% of employment opportunities. About 57% of the total population furthermore also lives in rural areas, where poverty prevails and where other opportunities are minimal.

62. For the agriculture sector, climate change studies predict a reduction in the productivity of especially two major crops in Egypt, i.e. wheat and maize, predicting a loss of 15% and 19% by 2050 respectively. Losses in crop productivity are mainly attributed to the projected temperature increase, crop-water stress, pests and disease, as well as the inundation and salinization of 12% to 15% of the most fertile arable land in the Nile Delta area as a result of sea level rise and subsequent salt-water intrusion<sup>22</sup>.

63. Climate change studies indicate a reduction in rangeland that will impact on animal production where women are responsible and this will affect her as well as her community and family.

64. Nearly 70% of the poor or food-insecure in Egypt live in rural areas. A large share of these people depend very much on agriculture for their food supplies (produced locally) and for

<sup>22</sup> EEAA. 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo. Egypt.

generating incomes. The increase in food and fuel prices and the avian influenza epidemic, as well as existing poverty and unemployment, has diminished the coping capacity of families with limited incomes. The average consumption of persons in the poorest decile<sup>23</sup> is 1,466 Egyptian Pound - less than half of the national average - and only 15% of consumption of persons in the richest decile. This underscores the need for targeting the poor and responding to the challenge of food security<sup>24</sup>.

65. As such, enhancing sustainable agricultural and rural development as a means to reduce poverty and food insecurity within the expected climate changes is therefore a prerequisite for sustainable social and economic development.

66. Soil erosion and soil pollution also occur due to waste from factories that are established near the agricultural areas.

### **Gender in the Agricultural Sector<sup>25</sup>:**

67. In most Egyptian societies, women play an important role in agriculture, despite the variations in division of labor from one cultural setting to the other.

68. In Egypt, 70% of the women farmers and agricultural workers do not earn wages for work and just 10% allocated to them from their income.

69. The percentage of illiterate women working in agriculture (aged 15-45 years) comprises 40.3% of the total illiteracy in Egypt for the same age.

70. Female agricultural workers comprise 23% of the total workers in this sector, and 58% of total female rural workers.

71. Land ownership records do not always exist in some countries and are seldom disaggregated by gender. In the case of Egypt, however, many studies point to the fact that women rarely own land. Only 5.7% of landowners in Egypt are women<sup>26</sup> and much of this land tend to be relatively small. Moreover, when women actually do own land, a male member of the family often controls such land until marriage, and after marriage her husband or son controls it.

72. Women take part in all agricultural stages, especially tasks such as storing, marketing, cultivating and harvesting.

73. In rural areas, females are mostly employed in the informal sector, comprising 71.6% of all women workers in these areas with little or no social and other benefits.

74. Malnourished women are at higher risk for developing iron-deficiency-anemia during climate related food shortages. In Egypt, 26% of males compared to 35.6% females in group age 11-19 year were diagnosed with anemia in 2005. Rates of anemia are higher in rural than urban areas in Egypt.<sup>27</sup>

### **Recommendations: Agricultural Sector**

<sup>23</sup> In descriptive statistics, a decile is any of the nine values that divide the sorted data into ten equal parts, so that each part represents 1/10 of the sample or population.

<sup>24</sup> Handoussa, H. 2010. Situation Analysis: Key Development Challenges Facing Egypt. UNDP- Ministry of International Cooperation. Cairo, Egypt.

<sup>25</sup> Afaf Marei, A. 2009. Second Shadow Report for the CEDAW Coalition Egypt. The Egyptian Association for Community Participation Enhancement (EACPE). Cairo, Egypt.

<sup>26</sup> Report on the economic deprivation and legal exclusion of rural women in Egypt. The Egyptian Organization for Development Rights. Cairo, Egypt.

<sup>27</sup> World Bank. 2003. Arab Republic of Egypt Gender Assessment. Retrieved from the World Wide Web: <http://siteresources.worldbank.org/INTMNAEGTOPGENDER/Resources/CGA.pdf>

<sup>27</sup> CAPMAS. 2005. Health Statistics. Retrieved from the World Wide Web: <http://www.capmas.gov.eg/>

75. There is a need to improve the capacity of officials and technicians in the agricultural sector on the importance of gender so that policies, and initiatives benefit women and men.
76. Protection on conditions of women's agriculture work needs to be assured, because women have an important role in agriculture in Egypt, however, they work long hours in manual labor, nearly half of women agriculture workers are illiterate, earn limited wages or do not earn any wages for their work, do not have health benefits or social protection, and often work in hazardous agriculture crops and materials.
77. Access to decision-making, technology, credit, and awareness-raising on agricultural techniques need to be provided to women farmers, in order for them to realize their full potential in agriculture and related climate change adaptation.
78. Women need to be provided with information on climate change and nutrition, so that they can demand local foods contributing to reduction of emissions.
79. Women extension workers and advisory service providers have to be made available, as they are crucial in reaching women farmers, delivering the messages in a good way for women, and giving them proper guidance at the right time; they have important role in the communities they work with and can be imperative for implementing climate change adaptation strategies.
80. Training needs to be provided to women, including both perspectives on behaviors that should be stopped because of climate change impacts, and at the same time providing alternative behaviors and tools that are readily available.

### **Selected Action on Implementation:**

Including gender in implementation: Agriculture

Objectives	Action steps	Indicators of success	Responsible
<b>To increase women participation in adaptation projects/programs related to agriculture</b>	<ul style="list-style-type: none"> <li>• Raise awareness amongst women about the benefits of planting drought resistant and salt tolerant trees and crops</li> <li>• Improve efficiency of the water storage system through construction of small dams and rehabilitation of the springs</li> <li>• Introduce agricultural practices among women to increase sustainable production and productivity</li> <li>• Introduce low cost technologies for woman and communities on managing plant, livestock production and water resources</li> <li>• Adopt efficient, cost-effective and sustainable use of food processing</li> <li>• Train woman to adapt to climate change through introducing new technologies related to agricultural activities</li> </ul>	<ul style="list-style-type: none"> <li>• Number of women using drought resistant and salt tolerant trees and crops</li> <li>• Number of small chains and earthen dams constructed</li> <li>• Number of springs rehabilitated</li> <li>• Number of projects developed and implemented by rural woman</li> <li>• Food and nutritional security improved</li> <li>• Improvement of soil quality</li> <li>• Number of women trained on new technologies</li> <li>• Number of women using the new technologies</li> <li>• Increase number of women participating in food processing</li> <li>• Number of women trained</li> </ul>	<ul style="list-style-type: none"> <li>• Agricultural Extension of MoA</li> <li>• Agricultural Research Center</li> <li>• NGOs</li> <li>• MoWI</li> <li>• Farmers' associations</li> <li>• Agriculture Development and Credit Bank</li> </ul>
<b>To increase women participation in decision-making and implementation related to food security and agricultural programs or projects</b>	<ul style="list-style-type: none"> <li>• Raising awareness of whole rural community about importance of women participation in decision making in natural resources management</li> <li>• Promote women's participation in decision-making positions at local levels</li> </ul>	<ul style="list-style-type: none"> <li>• Number initiatives undertaken by women</li> <li>• Implement pilots per governorate</li> <li>• Number of agricultural lands owned by women</li> </ul>	<ul style="list-style-type: none"> <li>• MoA</li> <li>• Ministry Solidarity and Social Justice</li> <li>• IUCN</li> </ul>

	<ul style="list-style-type: none"> <li>• Give priorities for supporting to organization that women participate actively in decision making</li> <li>• Promote woman participation in small-scale enterprises and food processing transformation industries.</li> <li>• Capacity Building on Communication and leadership skills</li> </ul>		<ul style="list-style-type: none"> <li>• NGOs</li> <li>• MoWI</li> <li>• CARE International</li> <li>• CEDARE</li> <li>• UNDP</li> <li>• Farmers' associations</li> </ul>
<b>To increase participation of local communities in adaptation projects/programs related to agriculture</b>	<ul style="list-style-type: none"> <li>• Enhance efficiency of local NGOs and committees by: <ul style="list-style-type: none"> <li>• Raising awareness of stakeholders/committees on how to adapt to climate change</li> <li>• Revive the use of traditional knowledge and practices</li> <li>• Establish development and advocacy association for women and community mobilization</li> <li>• Promote community participation in decision-making at local level</li> <li>• Encourage the investment by women in animal production and bio-product industries to enhance job opportunities and minimize waste</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Number of new platform for women</li> <li>• Number of adaptation projects about agriculture/climate change developed and implemented by rural communities</li> <li>• Number of community leaders represented in NGO's, municipality (disaggregated by sex)</li> <li>• Number of awareness and media campaigns for public</li> <li>• Number of animal production and bio-waste enterprises established by women</li> <li>• Contribution of sector to GDP</li> </ul>	<ul style="list-style-type: none"> <li>• CEDARE</li> <li>• UNDP</li> <li>• MOA</li> <li>• NGOs</li> <li>• Private sector</li> <li>• Media</li> <li>• International Centre for Agricultural Research</li> </ul>
<b>To contribute to the</b>	<ul style="list-style-type: none"> <li>• Involve women in conception and implementation of projects/programs</li> </ul>	<ul style="list-style-type: none"> <li>• Projects about climate change developed and implemented by rural women</li> </ul>	<ul style="list-style-type: none"> <li>• MOA</li> </ul>

<b>empowerment of women and local communities, through access to agricultural technologies (machineries and harvesting, seeding) other activities for mitigation and adaptation to climate change and sustainable use of natural resources</b>	<p>related to climate change and sustainable use of natural resources</p> <ul style="list-style-type: none"> <li>• Ensure that governmental incentives targeted women</li> <li>• Promote women's access to decision making-entities and the risk management, natural disaster management, and community natural resource management committees of the governorate and district local councils</li> <li>• Conduct awareness building campaigns on gender, agriculture and climate change, for the local authorities and rural women that are members of local councils, to explain the benefits for both parties in the access and control of the technologies for mitigation and adaptation to climate change, and to natural resources</li> </ul>	<ul style="list-style-type: none"> <li>• Number of women having governmental incentives</li> <li>• Women representation at the district- and governorate councils</li> <li>• Number of awareness Campaigns</li> <li>• Number of women attends the awareness campaigns</li> <li>• Training materials used targeted women needs and situation</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs</li> <li>• Private Sector</li> <li>• Media</li> <li>• MoWI</li> <li>• International Center for Agricultural Research</li> <li>• Agriculture Development and Credit Bank</li> </ul>
<b>To ensure that plans, strategies, programs and budgets of government bodies, funding agencies and NGOs promote gender equality, access to natural resources and advance mitigation and adaptation to climate change</b>	<ul style="list-style-type: none"> <li>• Assign a Gender Focal Point (GFP) for the national (inter-ministerial) level committee</li> <li>• Revisit the National Agricultural Strategies NAS, and legislations to ensure that gender and climate change are taken into consideration</li> </ul>	<ul style="list-style-type: none"> <li>• NWRP assigned GFP</li> <li>• National policies and NAS include gender and climate change considerations</li> </ul>	<ul style="list-style-type: none"> <li>• MoA, MoP, MoF and EEAA</li> <li>• Gender units in each Ministries</li> <li>• International Center for Agricultural Research</li> <li>• National Committee</li> </ul>

			<ul style="list-style-type: none"> <li>• NGO's</li> <li>• With support from CEDARE, UNDP, IUCN, GEF</li> </ul>
<b>To improve the capacity of officials and technicians in the agricultural sector on gender</b>	<ul style="list-style-type: none"> <li>• Develop a training protocol for the agricultural sector</li> <li>• Conduct trainings on gender, agriculture and climate change</li> <li>• Conduct research on women's role in agriculture</li> <li>• To examine policies, programs, and projects and to analyze them from a gender perspective and to redraft them, if necessary, in a way, that secures higher access of women to resources in rural and remote districts</li> </ul>	<ul style="list-style-type: none"> <li>• Number of officials and agricultural extension engineers trained</li> <li>• Data available on women and agriculture in Egypt</li> <li>• Number of policies revised</li> </ul>	<ul style="list-style-type: none"> <li>• MOA</li> <li>• Ministry Solidarity and Social Justice</li> <li>• IUCN</li> <li>• NGOs</li> <li>• Care International</li> <li>• CEDARE</li> <li>• UNDP</li> </ul>

## IX. Priority Sector 3: Water

### Women as Agent of Change: Water

- Women are primarily responsible for the collection and management of water for household use, and **can make choices and decisions that are key to sustainability**, and that can significantly increase the efficiency and effectiveness of water allocation.
- Women farmers involved in irrigation **can contribute to sustainable water use in agriculture and safe agriculture waste disposal**, if provided with the necessary information.
- Women ensures household sanitation and they can - if given the right guidance and information about alternative naturally sustainable sanitation techniques, access to decision-making and funds - **improve both the quality and purity of main water sources**.
- Women benefit from improved water management, sanitation infrastructure and techniques and **they provide a crucial perspective** once they have access to decision making.
- Women prioritized issues that **increase health and the social wellbeing** of the entire community.

### Situation Analysis: Water Sector

81. The largest part of Egypt's freshwater resources is limited to the natural flow of the River Nile and presents around 95% of the country's water. The remaining 5% are constituted from groundwater and rainfall<sup>28</sup>.

82. The total annual water budget in Egypt amounts to a total of 77 billion m<sup>3</sup> of available water for use per year and does not meet demand, particularly by the agricultural sector. Recycling of some used water is therefore carried out with the objective of covering the deficit between Egypt's water supply and demand.

83. Egypt's water budget is composed of 58 billion m<sup>3</sup> of fresh water, 15 billion m<sup>3</sup> of recycled water and 4 billion m<sup>3</sup> of treated sewage water. Agriculture is the main consumer of water in Egypt, using about 62 billion m<sup>3</sup> per year, which represent about 80% of the country's water budget. Drinking water, consumed by more than 95% of the Egyptian population, uses almost 8 billion m<sup>3</sup> per year, and represents about 10% of the country's water budget<sup>29</sup>.

84. Egypt's SNC states that water resources are very vulnerable to climatic change. Several expected effects as a result of climate change would aggravate the current situation in the country and include, amongst others, the size and intensity of expected impacts. Although these have not yet been fully assessed, this will translate as follows:

- Changes in river flows, which could cause water shortage (in case of decreased rainfall) or flooding (in case of periodic increased rainfall);

<sup>28</sup> EEAA. 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo, Egypt.

<sup>29</sup> Ibid.

- Deterioration of ground water quality;
- Change in rates, duration, places and intensity of rainfall; and
- Change in wind direction.

85. The MDG Progress Report produced by Egypt in 2010 furthermore also considers the vulnerability of Egypt's water resources to climate change as an emerging challenge and one that has to be addressed urgently to ensure sustainable development. This is due to the growing per capita demand for fresh water as a result of Egypt's population growth. Importantly, however, the report does not take into account the effects of climate change that will place further strain on water resources.

### **Gender in the Water Sector:**

86. Egypt views social concerns within the water sector as an important factor contributing to the economic efficiency and environmental protection of the country. However, there is no particular attention given to the need for the participation of women.

87. The formulation of specific policies to support the inclusion of women in planning and decision-making processes remains a pre-requisite of any policy in order to prevent gender-based interests engulfed in water management policies.

88. The total amount of water that women manage is 21.331 billion m<sup>3</sup> that represents 38% of the total Egyptian share of water from the Nile River (55.5 billion cubic meters). This percentage represents women who share irrigation activities with men, but who do not own agricultural lands by themselves (16.934 billion cubic meters). On the other hand, women who own agricultural lands manage 16% of the total amount of water managed by women<sup>30</sup>.

89. Most studies show that female members are restrained in their participation through cultural barriers and stereotypes, for example when awareness and management committee meetings are conducted at unsuitable times for women (i.e. usually late at night or during the midday), whereas in remote areas the social barriers are due to lack of education, experience and lack of information, leading to female members are overlooked, marginalized and excluded.

90. Various projects implemented on water management found that female<sup>31</sup> farmers often have difficulty in approaching water management officials, as only women from influential families and/or female officials are allowed to address public meetings. Leaders furthermore also pay little attention to the interest of small farmers and female-headed households.

<sup>30</sup> CIHEAM. 2007. Mainstreaming Gender Dimensions in Water Management for Food Security and Food Safety. Options Méditerranéennes, Serie A n.77. Sagardoy, J.A., Lamaddalena, N., Quagliarillo, R., Chimonidou, D., Geulloubi, R. and Pinca, V. (eds). Larnaca, Cyprus.

<sup>31</sup> Afaf Marei, A. 2009. Second Shadow Report for the CEDAW Coalition Egypt. The Egyptian Association for Community Participation Enhancement (EACPE). Cairo, Egypt.

### **Recommendations: Water Sector**

91. When developing water relates policies it is advisable to have a gender team/group of experts participating in the processes.
92. It is fundamental that climate change and gender are integrated in the National Water Resources Plan (NWRP) and, in policies and strategies and adaptation measures proposed.
93. It is of the utmost importance to increase coordination between gender focal points in related ministries (e.g. water, agriculture, housing, industry, environment) in order to enhance planning for water needs, -saving and -management.
94. It is imperative to acknowledge that women have special needs with regards to water management, and that they require a voice in decision-making, in order for women to fully participate in meetings and decision-making on issues that impact on, and seeks to address the special needs of women.
95. Capacity building is required to increase women's public participation in decision-making, building their confidence and allowing them to engage fully.
96. The capacity of women and men in the local communities on water savings needs to be enhanced.
97. Raise awareness and build the capacity of officials to effectively deal with women in the water sector and hence take on board their recommendations.

**Selected Action on Implementation:**

Including gender in implementation: Water Management

Objectives	Action steps	Indicators	Responsible
<b>To ensure that climate change and gender are integrated in the National Water Resources Plan (NWRP) and, policies and strategies and adaptation measures proposed</b>	<ul style="list-style-type: none"> <li>Assign a Gender Focal Point (GFP) for the national (inter-ministerial) level committee</li> <li>Strengthen the role of women's participation in regional negotiation such as Nile basin</li> <li>Revisit the NWRP, strategies, and legislations to ensure that gender and climate change are taken into consideration</li> <li>Develop different funding scenarios for integration of gender issues in water management programs and projects</li> </ul>	<ul style="list-style-type: none"> <li>NWRP assigned GFP</li> <li>Number of women participating in regional strategic negotiations</li> <li>National policies and NWRP include gender and climate change considerations</li> <li>Number of meetings/ delegations include women's participation</li> <li>Amount of funds assigned for promotion gender equality</li> </ul>	<ul style="list-style-type: none"> <li>Ministry of Water Resources and Irrigation (MWRI)</li> <li>EEAA</li> <li>National Committee</li> <li>NGO's</li> </ul> <p>With support from CEDARE, UNDP, IUCN, GEF</p>
<b>To assure that officials and technicians of all the components of the water sector understand the concept of climate change impact on gender and their role as agents of change</b>	<ul style="list-style-type: none"> <li>Enhance the role of the gender unit (within MWRI)</li> <li>Capacity building needs assessment</li> <li>Conduct training activities on transversal issues at all levels</li> <li>Provide refresher courses on water and gender issues at top management level</li> <li>Awareness campaign on the impact of climate change on women and their role in adaptation</li> </ul>	<ul style="list-style-type: none"> <li>Number of training sessions conducted including gender dimension in climate change</li> <li>Number of technicians trained</li> <li>Number of initiatives, projects that mainstream gender</li> </ul>	<ul style="list-style-type: none"> <li>MWRI</li> <li>EEAA</li> <li>National Committee</li> <li>NGO's</li> </ul> <p>With the support of CEDARE, UNDP, IUCN, GEF</p>
<b>To enhance the capacity of women and men in the local communities on water savings</b>	<ul style="list-style-type: none"> <li>Expand the training activities undertaken by academic institutions and government and NGOs to include a gender perspective in research, planning, monitoring and evaluation exercises</li> <li>Developed a non-conventional media</li> </ul>	<ul style="list-style-type: none"> <li>Number of training activities incorporating a gender perspective.</li> <li>Amount of gender disaggregated data available for use.</li> </ul>	<ul style="list-style-type: none"> <li>MWRI</li> <li>MOA</li> <li>National Committee</li> </ul>

	<p>campaign directed to women in relation to water scarcity and climate change (e.g. street theater, radio soap operas, etc.)</p> <ul style="list-style-type: none"> <li>• Raise awareness amongst women and agricultural association about the benefits of planting low water requirement crops and irrigation systems</li> <li>• Training of trainers for women leaders at local levels and religious leaders</li> </ul>	<ul style="list-style-type: none"> <li>• Number of program converge for women role</li> <li>• Number of messages targeted women's needs and situation</li> <li>• Number of sessions conducted at top management level.</li> <li>• Number of women leaders and religious leaders trained</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs</li> <li>• Donors</li> <li>• With the support of CEDARE, UNDP, IUCN, GEF, Care International</li> </ul>
<b>To build the capacity of local communities on water management</b>	<ul style="list-style-type: none"> <li>• Prepare short courses for community environmental educators with woman participation</li> <li>• Promote the development, validation, dissemination and transfer of technologies for the efficient use/ low cost technologies at household level with particular focus on vulnerable populations (through engaging NGOs and CBOs)</li> <li>• Value traditional knowledge through the creation of an experience exchange networks</li> <li>• Educate women and communities in issues related on minimizing use of chemicals, pesticides, river pollution (ground water) climate change and sustainable use of natural resources</li> </ul>	<ul style="list-style-type: none"> <li>• Number of courses conducted</li> <li>• Percentage of women participation in courses</li> <li>• Number of women participating in the dissemination sessions</li> <li>• Number of new technologies being used by women and men</li> <li>• Number of exchange networks functioning effectively</li> <li>• Number of women trained</li> <li>• Number of pollution complains reduced</li> </ul>	<ul style="list-style-type: none"> <li>• MoWI</li> <li>• Water User Association</li> <li>• Higher Municipalities</li> <li>• NGOs</li> <li>• Donors</li> </ul>

## X. Priority Sector 4: Tourism

### **Women as Agent of Change: Tourism**

- Women are **community leaders and get involved in entrepreneurial and local tourism initiatives**, specifically when they are provided with training and access to credit.
- Women improve local living conditions and broaden and strengthen women's **economic autonomy** if provided with the opportunity to get involved in new non-traditional occupations in eco-tourism.
- Women are primarily responsible for **hand-made crafts production**, which they sell at local markets.
- Women **work at home** in small scale, flexible enterprises based on family labor in sustainable tourism.

### **Situation Analysis: Tourism Sector**<sup>32</sup>:

98. The potential and value of tourism in efforts to facilitate socio-economic development is immense, particularly in developing countries. However, for all its benefits, the tourism industry is also extremely fickle. Tourism is a labor-intensive industry generating an estimated 12.6% of Egypt's employment the provision of jobs in hotels and other related tourism services, especially for manual and young laborers and in areas where other economic opportunities are limited.

99. The growth performance and resilience of Egypt's tourism sector over the year 2009 confirms that tourism is a principal generator of income and foreign exchange earnings which contributes around 11.3% of GDP directly and indirectly.

100. Climate change directly impacts on tourism, especially where it is related to nature. Coral reefs and other marine ecosystems, constituting a major attraction in Red Sea resorts, are highly vulnerable to climate change. On the other hand, sea level rise on low elevations such as those on the Mediterranean coast will also experience losses of beaches. The impact of increasing temperatures and frequencies and severity of extreme events are also expected to negatively impact the archaeological heritage in Egypt.

101. A further benefit of an integrated tourism strategy is that it allows women to enter non-traditional areas of employment, such as those in the SMME sector, retail, catering, conference services, and many others.

### **Gender in the Tourism Sector:**

102. The extent of occupational segregation by gender is clearly apparent in the tourism labor market. Most women are confined to low-level jobs, and they are often relegated to traditional

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<sup>32</sup> Handoussa, H. 2010. Situation Analysis: Key Development Challenges Facing Egypt. UNDP- Ministry of International Cooperation. Cairo, Egypt.

professions or support functions while at the same time tending to be underrepresented in professional and managerial positions.

103. A study was commissioned by the Egyptian Tourism Federation took a random sample of 25,000 employees in the tourism sector; it indicated that almost 25% of the women employees hold a university degree and another 60% have intermediate or higher intermediate education levels. The share of women among managers is almost 24% of middle managers and 15% of high-level managers<sup>33</sup>.

104. According to the CAPMAS<sup>34</sup>, women accounted for 22–28% of the total tourism workforce in 2008 with a total share of women personnel in employment in hotels and restaurants ranging between 8% and 13%. Some publications reveal even lower percentages, varying between 5% and 6%.

105. Poor reporting and failure to capture the casual jobs that are often carried out by women, as well as marginal forms of employment in small family restaurants and non-classified hotels such as cleaning staff, kitchen, dining room and café assistants, and many other low-skilled occupations in small enterprises, makes it hard to interpret official figures accurately.

106. In Egypt, better-educated women are more attracted by employment in the tourism sector, with much lower representation of women in lower ranking positions than their male counterparts, but with marginally better representation (24%, i.e. 1:4) at middle management- and higher levels.

### **Recommendations:**

107. There are significant opportunity for women to be taken up in the tourism industry relatively quickly through for example, providing opportunities in eco-tourism, and by encouraging and making it attractive for women to enter non-specialized positions in lower paid positions within the formal tourism sector such as in hotels, and so forth.

108. Tourism is a sector that allows women to enter the job market relatively quickly and obtain relatively stable employment, despite possible handicaps in education. This is particularly important where there is a high dependency of other family members on her income, and/or where she is the single head of the household.

109. Encourage women involvement in eco-tourism. Egypt has 24 protected areas covering 15% of the country's surface area.

110. Build awareness and develop adaptation strategies in women and women organizations in the tourism sector informing them of the effects of climate change.

111. Encourage civil society women groups to monitor CO<sup>2</sup> emissions and to take the necessary corrective measures.

112. Disseminating women indigenous knowledge and success stories related to tourism industries through education programs and public awareness campaigns.

113. Due to the unpredictable nature of tourism, it is imperative to ensure that the income of women remain predictable and stable. This can be achieved by enhancing the capacity of women

<sup>33</sup> El Feiky, A. 2007. Problems Facing Female Participants in The Egyptian Labor Force. Dissertation. American University of Cairo. Egypt.

<sup>34</sup> CAPMAS. 2010. Status of Man & Woman in Egypt. Retrieved from the World Wide Web: [http://www.msrinternet.capmas.gov.eg/pls/educ/wom\\_man\\_e?lang=0&lname=free](http://www.msrinternet.capmas.gov.eg/pls/educ/wom_man_e?lang=0&lname=free)

to enter other formal sector employment opportunities and could include training in, for example, financial management, human resource management, etc.

**Selected Action on Implementation:**

Including gender in implementation: Tourism

Objectives	Action Steps	Indicators	Responsibility
<b>Build awareness and develop adaptation strategies in women and women organization in the tourism sector about the effects of climate change</b>	<ul style="list-style-type: none"> <li>Develop updating campaigns for women in tourism</li> <li>Use tourism fairs to spread messages about climate change</li> <li>Develop an adaptation strategy with women organizations working on tourism</li> </ul>	<ul style="list-style-type: none"> <li>Number of women as direct beneficiaries of the campaign</li> <li>Strategy funded and implemented</li> </ul>	<ul style="list-style-type: none"> <li>Egyptian Minister of Tourism,</li> <li>Egyptian Tourism Authority</li> <li>EEAA</li> <li>Private sector</li> </ul>
<b>To create an enabling environment that support and encourage women to enter the formal tourism sector</b>	<ul style="list-style-type: none"> <li>Conduct a gender audit of the tourism sector to identify opportunities for entry</li> <li>Develop capacities in women to engage in different positions within the formal sector</li> <li>Negotiate a quota system with companies in the formal tourist sector for job that requires less skilled jobs<sup>35</sup></li> </ul>	<ul style="list-style-type: none"> <li>Gender audit completed</li> <li>Strategy developed</li> <li>Increase amount of women working in the formal tourist sector</li> <li>Increase income in household</li> </ul>	<ul style="list-style-type: none"> <li>Egyptian Minister of Tourism,</li> <li>Egyptian Tourism Authority</li> <li>EEAA</li> <li>Private sector</li> </ul>
<b>Create new models of tourism which women can find alternative job opportunities, especially in eco-tourism</b>	<ul style="list-style-type: none"> <li>Establish a pilot project to provide new job opportunities and give a model of new touristic initiative</li> <li>Train women on new models of job opportunities in Eco-tourism</li> <li>Data and information should be available to M/F who was affected by climate change and works in the touristic industry</li> </ul>	<ul style="list-style-type: none"> <li>Establish an electronic platform to provide data and info. For M/F</li> <li>Number of visitors M/F to the electronic sites</li> <li>The variety of new adaptive activities in the pilot project</li> </ul>	<ul style="list-style-type: none"> <li>Egyptian Minister of Tourism,</li> <li>Egyptian Tourism Authority</li> <li>EEAA</li> <li>Governmental Bodies</li> <li>Civil Society</li> <li>Private Sector</li> </ul>

<sup>35</sup> Household services, waiters, kitchen staff, cleaning staff, among others.

			<ul style="list-style-type: none"> <li>• International Organizations.</li> </ul>
<b>Open market for innovative touristic resources in unrecognized areas with different Programs (health, religious, rural and desert tours)</b>	<ul style="list-style-type: none"> <li>• Female involvement on marketing process</li> </ul>	<ul style="list-style-type: none"> <li>• Number of new touristic sites that was not on the touristic map</li> <li>• Number of population M/F engaged in these sites</li> <li>• The variety of activities creates in the new sites</li> </ul>	<ul style="list-style-type: none"> <li>• Private Sector</li> <li>• Ministry of Tourism, Culture and Economics</li> </ul>

## XI. Priority Sector 5: Health

### Women as Agent of Change: Health

- Women are the guardians of health within the family, and they can educate and **disseminate good health practices**, if they are provided with information skills and associated tools, and the right environment.
- Women are essential for the **nutritional status of families**. If they are granted access to resources, women can ensure proper nutrition during pregnancy and early childhood to **prevent early childhood malnutrition** and **decrease incidences of underdevelopment** and stunting.
- In desert areas, women are responsible for fetching water, cleaning food, and waste disposal, and they can **prevent the spread of infectious diseases**.
- Women are primarily responsible **caretakers of the elderly and children** who, at higher risk of heat related illness and if given preventative information and hygiene guidance can reduce the incidence of heat strokes and heat related illnesses.
- As the principal caregivers women are responsible for the survival of vulnerable populations, such as children, elderly and disabled, and at the same time respond to challenges of rescuing others during extreme climate events. If given proper training and resources, **women are instrumental in successful disaster risk reduction and recovery**.

### Situation Analysis: Health Sector

114. Climate change is projected to affect the lives and wellbeing of Egyptian people in the coming decades, putting men and women at increased risk though direct and indirect threats to human health. Climate change will impact health in Egypt directly though heat strokes and heat related phenomena, and deaths and injuries in climate change events; and indirectly though malnutrition and underdevelopment due to decreased food availability and quantity, and limited water availability and quality.
115. Informal settlements and the millions living in them under unhygienic conditions, with minimal or no basic infrastructure services, further increase the magnitude of environmental health hazards – exasperated by climate-related phenomena.
116. Other, indirect, health impacts of climate change - related to reduced access to clean water, poor sanitation, decreased air quality and a higher number and variety of insects/vectors/rodents - include increases in transmittable diseases (parasitic such as malaria and schistosomiasis, bacterial such as diarrhea and cholera, and viral) and non-transmittable diseases (cardiovascular diseases, respiratory diseases, and cancers<sup>36</sup>).
117. Furthermore, climate change will gradually build-up pressure on the economic and social systems that sustain health, which are already under stress in Egypt<sup>37</sup>. Climate change

<sup>36</sup> EEAA. 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo. Egypt.

<sup>37</sup> Egyptian Organization for Development Rights. 2011. Report on the economic deprivation and legal exclusion of rural women in Egypt. The Egyptian Organization for Development Rights. Cairo, Egypt.

impacts on health in Egypt will depend on age, socioeconomic class, occupations and gender; putting the vulnerable populations such as rural people relying on natural resources for their livelihood and food, the poor, women, elderly, and children, at increased risk<sup>38</sup>.

118. Whilst there are some efforts to reduce the impacts of climate change in some sectors, currently, however, there are no efforts to cope with the different direct and indirect impacts of climate change on health and even less so from a gender perspective. Moreover, building institutional capacity must be pursued vigorously in order to deal adequately with the necessary adaptation measures, providing the country with both a strategy. Furthermore, trained capacity to implement the required measures is also required, establishing clearly the linkages between climate change, health and gender at the grassroots level.

### **Gender in Health Sector**<sup>39</sup>

144. In Egypt, women are impacted by malnutrition and increased incidences of underdevelopment and stunting, especially in times of food shortages during and after a crisis. The prevalence of stunting in children under 5 was estimated to be 23% in 2005, however, increased due to food shortages (associated with avian and swine flu outbreak and world food shortages) to 29% in 2008, including 14% severely stunted children.
145. Women have higher ecological vulnerability in Egypt due to negative effects of malnutrition and stunting of infectious diseases that may associated with climate change, because they are responsible for are responsible for collecting and managing water as well as taking care of underdeveloped children and adults, increasing their burden, poverty, and hardship.<sup>40</sup>
146. Climate change has been recognized as an emerging challenge to maternal health in Egypt. Maternal mortality rate is 55 per 100 thousand live births in 2008 in Egypt. Maternal health has been improving over the years in Egypt due to improved accessibility, the adoption of an integrated maternity care, within the primary health care system.

### **Recommendations: Health Sector**

119. Improve the national technical and scientific knowledge on the link between climate change, climate variability and public health and ensure gender mainstreaming in this sector.
120. Obtain disaggregated data on the impacts of climate change and health towards better implementation of projects and identifying of target groups
121. Having a gender focal point in the targeted ministries to ensure implementation of mainstreaming gender in policies, plans of actions activities within this sector.
122. An understanding of climate change and its gender differentiated impacts and its implications for health and health-seeking behavior should be incorporated into training of health professionals and development of health sector responses to climate change.

<sup>38</sup> Costello, A., M. Abbas, A. Allen, S. Ball, S. Bell, R. Bellamy, S. Friel, N. Groce, A. Johnson, M. Kett, M. Lee, C. Levy, M. Maslin, D. McCoy, B. McGuire, H. Montgomery, D. Napier, C. Pagel, J. Patel, J. A. Puppim de Oliveira, N. Redclift, H. Rees, D. Rogger, J. Scott, J. Stephenson, J. Twigg, J. Wolff and C. Patterson. 2009. Managing the health effects of climate change: Lancet and University College London Institute for Global Health Commission. *The Lancet*, 373 (9676):1693–1733.

<sup>39</sup> IPCC. 2001. Climate change 2001: The Scientific Basis. Houghton, J. T., Ding, Y., Griggs, D.J., Noguer, M., van der Linden, P.J., Dai, X., Maskell K., and Johnson, C.A. (eds.). Working Group I to the Third Assessment Report of the IPCC. Cambridge University Press, Cambridge, United Kingdom.

<sup>40</sup> Ministry of Economic Development. 2010. Egypt's Progress towards Achieving the MDGs. Cairo. Retrieved from the World Wide Web: [http://www.mep.gov.eg/PDF/2010%20MDGR\\_English\\_R51.pdf](http://www.mep.gov.eg/PDF/2010%20MDGR_English_R51.pdf)

<sup>41</sup> UNDP and Institute of National Planning. 2010. Egypt Human Development Report. Cairo. Retrieved from the World Wide Web: <http://www.undp.org.eg/Portals/0/EHDR%202010/NHDR%202010%20english.pdf>

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123. Empowerment programs for women and trainings on health, hygiene, the prevention of transmittable and non-transmittable diseases should be implemented with the help of community health extension workers.
  124. Addressing gender inequalities in contamination from infectious diseases in an integrated manner is needed, along with awareness rising campaigns for women to take steps necessary for reducing opportunities for infectious disease transmission.
  125. Training campaigns are required for women to understand the risk from extreme climate events and disaster risk management strategies; as well as, establishing networks of women and local stakeholders to design and implement disaster risk reduction, management and recovery plans for their community and gender disaggregated vulnerability assessment.
  126. Financial resources need to be provided for pregnant women and women with young children to ensure proper nutrition, especially in a time of crisis.
  127. Establish a mathematical model or/ and geographic information system mapping the hot spots and endemic diseases and set up a regional prescription for each community to preserve them from catching these diseases.

**Selected Action on Implementation:**

Including gender in implementation: Health

Objectives	Action steps	Indicators of success	Responsible
<b>Build the technical and scientific capacity of national and professional institutions in the area of climate change and health with gender perspective</b>	<ul style="list-style-type: none"><li>• Identify the differentiated effects between men and women on climate related diseases</li><li>• Conduct researches and intervention measures to protect people from potential diseases that results from climate change</li><li>• Define the recommendations and results with disaggregated data</li><li>• Support professional training in medicine and medical entomology, ensuring that the academic curricula include methodologies to identify the climate change related diseases</li><li>• Validate methodologies to determine the effects of GHG emission on public health i</li><li>• Validate methodologies to determine the effect of firewood stoves on the incidence of respiratory diseases in fire-wood using households, identify adequate technological changes</li></ul>	<ul style="list-style-type: none"><li>• Number of scientific researches and interventions conducted</li><li>• Number of training workshops</li><li>• Number of validated methodologies</li><li>• Number of awareness classes and training conducted how to us the alternative technologies</li><li>• Usage of new alternative technologies used by women</li><li>• Number men and women affected</li><li>• Decrease of patients with respiratory diseases</li></ul>	<ul style="list-style-type: none"><li>• National NGOs</li><li>• International NGOs</li><li>• Media</li><li>• MoH</li><li>• EEAA</li><li>• MoIC</li></ul>

<b>Build a general knowledge and vision on the gender issue related to both climate change and health</b>	<ul style="list-style-type: none"> <li>• Carry out training courses on impacts of climate change on health and gender for all related stakeholder</li> <li>• Conduct awareness campaigns to the local communities targeting women in particular</li> <li>• Ensure the media coverage and messages based on women needs</li> </ul>	<ul style="list-style-type: none"> <li>• Number of training workshops and trainees targeted</li> <li>• Number of focal points through the health sector</li> <li>• Number of gender strategies and plans, produced for the issues on climate change and health</li> </ul>	<ul style="list-style-type: none"> <li>• Gender Departments on all Ministries</li> <li>• Gender institutions and organizations</li> <li>• MoH</li> <li>• EEAA</li> </ul>
<b>Design policies to reduce the risk of vector-borne and GHG emission related diseases with gender perspectives</b>	<ul style="list-style-type: none"> <li>• Secure resources to identify the most vulnerable areas and redefine the financial resources allocated to vector- borne diseases prevention</li> <li>• Review and adjust existing policies in order to increase the access of vulnerable populations to health particularly women and populations in either poverty conditions or below the poverty line</li> <li>• Increase education and communication levels regarding fighting vector-borne diseases, particularly in vulnerable population</li> <li>• Prepare educational package on health issues with gender perspectives (mainly vector- borne diseases)</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage increase in allocated financial resources in that regard</li> <li>• Policies reviewed and adjusted</li> <li>• Number of poor women accessible to health care</li> <li>• Inclusion of combat vector-borne diseases courses in education curricula gender perspectives and communication tools</li> </ul>	<ul style="list-style-type: none"> <li>• MoF</li> <li>• MoH</li> <li>• MoHE</li> <li>• Academia</li> <li>• Research institutes</li> </ul>

<b>Build the institutional capacity of Ministry of Health regarding medical entomology sector to increase the most vulnerable population access to health</b>	<ul style="list-style-type: none"> <li>• Secure adequate resources to implement policies on health for Egypt, with particular emphasis of the strategic objectives</li> <li>• Increase the mobile campaigns to the isolated areas and vulnerable grass roots (women and children) to ensure their access to knowledge and protection</li> </ul>	<ul style="list-style-type: none"> <li>• Increase of resources allocated to implement health policies for Egypt</li> <li>• Number of campaigns</li> </ul>	<ul style="list-style-type: none"> <li>• MoH</li> <li>• EEAA</li> <li>• MoF</li> <li>• MoHE</li> <li>• Medical Research Institutions</li> </ul>
<b>Raise awareness on the linkages between health and climate change</b>	<ul style="list-style-type: none"> <li>• Radio messages, TV lashes and spots on climate change in regards to health and climate change</li> <li>• Short films produced for public awareness</li> </ul>	<ul style="list-style-type: none"> <li>• Number of provided messages (especially the popular)</li> <li>• Number of TV channels and private media provided the climate change and health material</li> <li>• Number of films targeting locals and grass roots</li> </ul>	<ul style="list-style-type: none"> <li>• EEAA</li> <li>• MoF</li> <li>• MoHE</li> <li>• Medical research Institutions</li> <li>• Media</li> </ul>
<b>Build cooperation with NGOs and civil society working on the field of health</b>	<ul style="list-style-type: none"> <li>• Implement projects and interventions within the local within the local NGOs for the impact of climate change on health with a gender perspectives</li> <li>• Provided a technical and awareness training for women on methods of protection in the area of diseases and alternatives technologies in cooking, firewood</li> </ul>	<ul style="list-style-type: none"> <li>• Number of projects on the field of climate change and health with a gender perspective</li> <li>• Number of awareness campaigns conduct on climate change related diseases alternative techniques</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs</li> <li>• Ministry of Social Solidarity</li> <li>• MoH</li> <li>• EEAA</li> </ul>

## XII. Priority Sector 6: Energy and Transport

### **Women as Agent of Change: Energy and Transport**

- Women are primary decision-makers in household consumption and if provided with information and incentives, can be **instrumental in lowering emissions**.
- If women are provided with information and good practices, they can play a fundamental role in **saving energy** by adjusting their daily routine.
- Women can **educate** their children and **promote green** energy-use behavior, thereby reducing emissions.
- Women can be influential actors in **switching to renewable energy** sources and technologies, especially at the household and local level.
- Women have specialized knowledge and needs and can provide valuable input during the **design of household energy technology**, considerably enhancing their effectiveness and efficiency.
- Professional women in the energy sector can be **role models** and support initiatives to enhance the role of women in renewable energy.
- If women are encouraged to use public transportation in a manner that is convenient to them their contribution in lowering GHG is considerable.

### **Situation Analysis: Energy and Transport Sectors**<sup>41</sup>

128. Domestic energy consumption in Egypt is rapidly increasing as a result of ongoing economic growth. Recent and forecasted consumption patterns signal an alarm to those responsible for the country's future economic development and energy security.

129. At present, petroleum products and natural gas represent the main sources of primary energy in Egypt and also represents the main sources of GHG emissions in the country. Hydrocarbons (oil and gas) represent over 90% of Egypt's energy resources (a situation that is expected to continue for at least the next 20 years) with natural gas slowly replacing crude oil. Since the early 1990s, large amounts of natural gas reserves have been discovered and there has consequently been a trend to substitute petroleum products with natural gas as an alternative fuel.

130. Energy efficiency and renewable energy resources are also expected to play a critical role in meeting the increased demand for energy in future. There is a massive untapped potential in the renewable energy sector, but this is held back by very little commercialization for renewable energy installed capacity.

<sup>41</sup>EEAA. 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo, Egypt.  
Handoussa, H. 2010. Situation Analysis: Key Development Challenges Facing Egypt. UNDP- Ministry of International Cooperation. Cairo, Egypt.

131. Renewable energy sources currently include hydropower (representing about 11% of energy production in Egypt for 2006/07) and generated mostly through hydro-powered stations and wind energy. Solar energy (solar thermal and solar photovoltaic) in areas such as al-Koraemat, Beni Suef Governorate, and biomass energy also hold significant potential going forward.

132. Awareness remains a vital challenge for renewable energy. This includes the lack of information on the benefits of renewable energy to different categories of society and appropriate applications of each category, even at the level of households in rural and desert areas, such as the use of biogas units.

133. In 2008 and 2009, the overall energy subsidies in Egypt were larger than the entire fiscal allocation towards education and health. The richest quintile in Egypt accounts for a disproportionately large share of the energy subsidy and compensating the poorest two quintiles would only cost a tiny fraction of the entire energy subsidy.

134. A set of key issues need to be dealt with as a matter of urgency. These include:

- Promotion and implementation of energy efficiency programs in supply transmission demanding and emphasizing women needs.
- Restructuring of the energy pricing to guard against abuse and inefficiencies;
- Rationalizing energy consumption in the demand sectors without reducing service levels or negatively impacting economic development targets;
- Diversifying the energy supply resources by increasing renewable resources such as wind, solar and bio-energy; and
- Allocating the country's natural resources in a manner that maximizes the economic and social development mandates.

135. To this end, energy efficiency and renewable energy are now becoming critical to Egypt's energy resource planning, and if properly designed and applied, energy efficiency can be the most cost-effective tool to managing demand, deferring future energy supply investments and contributing to global climate change mitigation efforts.

136. With regards to the transport sector, the SNC indicates that energy intensity in this sector in Egypt is particularly high due to the low efficient-engines using hydrocarbons fuels, and the fact that it relies heavily on road transport as the main means of transportation in Egypt<sup>42</sup>.

137. Based on a Cabinet of Ministers decision, the Ministry of Transport adopted a strategy for improving national transport and urban traffic, in addition to achieving the control of exhaust emissions from road-going vehicles. The strategy includes improving public transport; improving energy efficiency; fuel switching; the development and use of new propulsion technologies; the development of rail transport and new methods for freight transport; the development of power train technologies; shifting from diesel to electrified railways; and the development and use of fuel cells technology.

<sup>42</sup> EEAA. 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo. Egypt.

### **Gender in the Energy and Transport Sectors<sup>43</sup>:**

138. There are significant differences between women's transport demands and experiences, as opposed to those of men—differences in access to private transport, in patterns of commuting and employment, in child-care and elderly care responsibilities, in basic attitudes to private and public transport - to justify treating women separately.

139. Within that group 'women' there are highly important distinctions which depend - for example - upon income, age, household, elder- and child-care responsibilities, ethnicity, employment status, degree of disability, location, class and education

140. Transport plays a significant role in either exacerbating or improving the relative disadvantage of women. Transport poverty is very evident in many parts of Egypt and this compounds the many other difficulties associated with living on a low income. Poor transport options limit access to employment and social support networks, and to health, recreational and sports facilities, restricting both quality of life and 'life chances'.

141. Transport or the lack of it can also impact directly on women's physical and emotional wellbeing. There are obvious health risks associated with waiting for long periods in inclement weather, particularly for older women, and respiratory problems triggered by traffic pollution and poor air quality.

142. Some of the problems of travelling by public transport affect women's wellbeing by producing strong, negative emotions. Long waits after a tiring day produce frustration and anger. Overcrowding on public transport involves invasion of personal space that many find distressing, and which renders women vulnerable to sexual abuse. Fear of harassment and attack produces high levels of anxiety.

143. Air pollution caused public transport vehicles that are not properly maintained or environmentally friendly, can also seriously impact on a woman's maternal health. All of these, particularly the last, can act as a strong deterrent to women travelling at all.

144. Similarly, energy-related planning regarding electricity generating capacity and energy delivery systems are not gender neutral; men and women are affected differently by energy policies wherever their home, work, and community roles differ. It is important to identify the energy services of primary importance to women and consider options for improving the efficiency and effectiveness of such services.

145. Mainstreaming gender-sensitivity into energy and climate-related policies and projects requires a paradigm shift that recognizes women's contributions to climate change responses and promotes the development of new opportunities for women in the energy sector. To accomplish this goal, women generally need to gain greater confidence and expertise in business management to build their capacity to undertake new economic activities. They may also require technical training to enable them to operate, manage and market new energy equipment.

146. Innovative financing and credit schemes for expansion of energy services can serve as a catalyst for new entrepreneurial activities for women, if energy access is effectively linked with income-generating opportunities. Women could use equipment for their own activities, plus also

<sup>43</sup> Hamilton, K. 2001. Gender and Transport in Developed Countries. Background Paper for the Expert Workshop "Gender Perspectives for Earth Summit 2002: Energy, Transport, Information for Decision-Making" Berlin, Germany. University of East London. United Kingdom. Retrieved from the World Wide Web: [www.unedforum.org](http://www.unedforum.org) and [www.earthsummit2002.org](http://www.earthsummit2002.org) Workshop website [www.earthsummit2002.org/workshop](http://www.earthsummit2002.org/workshop).

sell energy services to earn income, or actually learn to build, sell, maintain or repair energy technologies.

147. Furthermore, emission reduction credits under the Clean Development Mechanism (CDM) could potentially be used to improve energy efficiency in ways that would provide benefits to women in poor areas, but so far it has been used mainly for efficiency gains in large facilities, and the transaction costs have generally been too high for small-scale projects led and implemented by women. However, there are special provisions for 'bundling' small projects, and projects can also be aggregated as 'Programs of Activities'.

### **Recommendations: Energy and Transport Sectors**

148. Collection of gender-disaggregated data on energy demand, supply and consumption patterns is needed for energy efficiency and renewable energy programs to be successfully mainstreamed in the national planning process.

149. Energy efficiency and renewable energy programs should be mainstreamed in the national planning process through appropriate entry points on gender.

150. Create gender sensitive set of energy related goals.

151. Training program for women to teach them that renewable energy is more beneficial and effective than non-renewable energy in reducing emissions and saving money.

152. Training program for women is needed to educate them that renewable energy is more beneficial and effective than non-renewable energy in reducing emissions and saving money.

153. Actively involve women in the design of new technologies for renewable energy and energy efficiency.

154. Introduce and promote green energy alternatives, and provide women with access to technology, financial mechanisms, and incentives.

155. The capacity of officials and decision makers must be enhanced to recognize the differentiated needs of women and men in transport, and this understanding needs to be reflected in policy.

156. A sustainable transport strategy is furthermore needed to take into account the sector's impact on climate change, e.g. on the environment and air pollution, energy conservation, traffic congestion, and passenger safety, taking into account the special requirements of women.

157. Enhance public transportation systems and provide access to public transportation for women and men. The particular balance among these will vary from area to area, and it is therefore essential for policy makers and transport operators to gather information locally in line with best gender balancing practice in order to understand the characteristics of women when they consider sustainable transport initiatives to combat climate change.

158. Opportunities should be identified where women can be included in the transport economy.

159. The needs of women should be included in the design and implementation of public transport spaces.

**Selected Action on Implementation:**

Including gender in implementation: Energy and Transport

Objectives	Action steps	Indicators of success	Responsible
<b>Disaggregated data on energy supply, consumption and demand by gender available</b>	<ul style="list-style-type: none"> <li>• Development of studies in the energy sector</li> <li>• Coordinate with research institutes to conduct studies both in rural and urban areas</li> <li>• Revision of national legislation on energy in order to ensure that gender considerations are taken into account</li> </ul>	<ul style="list-style-type: none"> <li>• Disaggregated database established</li> <li>• National policies and programs on energy are gender sensitive</li> </ul>	<ul style="list-style-type: none"> <li>• Universities,</li> <li>• Research Centers</li> <li>• Ministry of Energy</li> <li>• High Council of Energy</li> </ul>
<b>To encourage women and men in their communities to reduce the emission of GHG at household level</b>	<ul style="list-style-type: none"> <li>• Development of public awareness campaigns in schools, community centers and places of worship to bring about behavioral change</li> <li>• Development of public campaigns to encourage citizens to reduce amount of electricity consumption</li> <li>• Introduce a program for measuring carbon footprint within the household</li> <li>• Develop and introduce carbon taxes and incentives for energy saving</li> <li>• Introduce an eco-labeling system</li> <li>• Develop training campaigns on eco-labeling with women and women organizations</li> </ul>	<ul style="list-style-type: none"> <li>• Number of training courses held to rise women's capacity</li> <li>• Number of communities involved in campaigns</li> <li>• Reduction of per capita consumption</li> <li>• Water saving per household</li> <li>• Amount of Co2 reduction per household</li> <li>• Reduction in energy bills</li> <li>• Number of women trained on eco-labeling</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Energy</li> <li>• High Council of Energy</li> <li>• EEAA</li> <li>• Gender Unit</li> <li>• National Council for Women</li> <li>• NGOS</li> </ul>
<b>To promote the participation of women and men in renewal energy efforts at household level through the introduction of efficient, innovative and</b>	<ul style="list-style-type: none"> <li>• Promote the participation of women and men in renewal energy efforts at household level</li> <li>• Campaigns to encourage families to switch to solar panels or wind energy</li> <li>• Conduct a program to promote solar heaters in</li> </ul>	<ul style="list-style-type: none"> <li>• Number of solar panels installed</li> <li>• Number of wind technologies used by women</li> <li>• Increase number of energy efficient bulbs used from 6 to 80 millions in</li> </ul>	<ul style="list-style-type: none"> <li>• EEAA</li> <li>• Gender Unit</li> <li>• National Council for Women</li> </ul>

<b>sustainable systems of energy use</b>	<p>rural areas through women</p> <ul style="list-style-type: none"> <li>• Training course for women and men for maintenance and management of PV panels and wind technologies</li> <li>• Introduce composting as an alternative to produce energy and to eliminate waste</li> <li>• Establish financial mechanism (energy fund for women) to assist in having efficient household appliances</li> </ul>	<p>three years</p> <ul style="list-style-type: none"> <li>• Reduction of wood consumption</li> <li>• Number of houses using composting</li> <li>• Kind of technologies available for women</li> <li>• Number of women accessing funds</li> <li>• Number of women working in official energy units &amp; projects on cleaner production.</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs</li> </ul>
<b>To create awareness on the relation between climate change and transportation in women and women groups</b>	<ul style="list-style-type: none"> <li>• Design and conduct training course for women and women groups</li> <li>• Develop initiatives and programs that encourage women to use public transportation</li> </ul>	<ul style="list-style-type: none"> <li>• Number of women trained</li> <li>• Reduce emissions</li> <li>• Number of women car-pooling</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Transport</li> <li>• Women NGOs</li> <li>• Committee for Sustainable Transport</li> <li>• EEAA</li> </ul>
<b>To build awareness and influence decision makers on the relationship between transportation policies and programs and gender</b>	<ul style="list-style-type: none"> <li>• Revision of transportation policies and programs to reflect women's needs</li> <li>• Assess the viability and put in place an innovative public transportation system through the Nile in hands of the women</li> <li>• Identified possible women NGOs or Unions</li> <li>• Design of the system</li> </ul>	<ul style="list-style-type: none"> <li>• Gender-sensitive transportation policies in place</li> <li>• Innovative system to reduce GHG emissions, in hands of women</li> <li>• Number of women as concessionaries of "water taxis" in Cairo</li> <li>• Increase in income in household and</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Transport</li> <li>• Women NGOs</li> <li>• Committee for Sustainable Transport</li> <li>• EEAA</li> </ul>

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		a reduction in electricity bills.	
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<p><b>To take into account and integrate both gender and the principles of a Green Economy, renewable and efficient energy use, in the development and implementation of this Strategy</b></p>	<ul style="list-style-type: none"> <li>• Incentivize conversion projects to renewable energy</li> <li>• Integrate gender mainstreaming into the strategy and raise awareness</li> <li>• Calculate and track savings gained through conversion of energy</li> <li>• Calculate and track women involved in conversion of energy</li> </ul>	<ul style="list-style-type: none"> <li>• Number of projects operated by or converted to renewable energy and lead by women</li> <li>• Number of women and men adapting this new strategy</li> <li>• Number of houses operated by/converted to renewable energy</li> <li>• Reduction of energy subsidies per year in United States Dollars</li> </ul>	<ul style="list-style-type: none"> <li>• MSEV</li> <li>• MSEA</li> <li>• Ministry of Education,</li> <li>• Ministry of Culture</li> <li>• Cabinet</li> <li>• Media</li> <li>• Civil Society</li> <li>• Local Authorities</li> </ul>
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### XIII. Priority Sector 7: Urbanization

#### **Women as Agent of Change: Urbanization**

- When urban design and services— including water, sanitation, transport and markets—address women empowerment and promote equal opportunities, **greater social and economic benefits** can be achieved.
- Women can and do **contribute to disaster management and the creation of resilient communities**. Promoting women's equal leadership in adopting more environmentally sound practices—for example, around fuel use (for cooking and lighting) and in materials for home reconstruction—can reduce the negative impact of disasters.
- Women play a strong role in **mobilizing communities** in post-crisis reconstruction, and their contributions should be further encouraged.
- As women gain more equality in the economic sphere, **the effects of poverty on families can also be reduced**. The World Bank states that studies from developing and developed countries “consistently show that when mothers have greater control over resources, more resources are allocated to food and to children's health (including nutrition) and education.”
- Unleashing the full potential of the female labor force in urban areas can bring **economic benefits** that go far beyond a single town or city. The Food and Agriculture Organization (FAO) highlights the “major role” of female urban migrants in “reducing rural poverty by sending money back to their home villages.”
- UN-HABITAT's Global Report on Human Settlements 2005: Financing Urban Shelter notes that micro-credit institutions, which have largely focused on giving small entrepreneurs the credit they need to **set up and expand their businesses**, have recognized “the importance of home-based income-generating activities, particularly for women.
- When urban design and services— including water, sanitation, transport and markets—address gender discrimination and promote equal opportunities, **greater social and economic benefits** can be achieved.
- With more of them expanding into loans for housing, “they have become **key partners** in municipal initiatives to improve the living conditions of poor households in both urban and rural areas”.

#### **Situation Analysis: Urbanization**

160. Climate change is one of the most dangerous threats ever faced by humankind. Fuelled by two powerful human-induced forces that have been unleashed by development and manipulation of the environment in the industrial age, the effects of urbanization and climate change are converging in ways that threaten to have unprecedented negative impacts on urban quality of life, and economic and social stability.

161. Egypt's cities are growing fast and will continue to grow. Although Egypt is the only large country to have become less urban in the last 30 years, according to the World Bank<sup>44</sup>.

<sup>44</sup> World Bank. 2011. World Development Indicators. Retrieved from the World Wide Web: <http://data.worldbank.org/data-catalog/world-development-indicators>

nonetheless the current level of urbanization in Egypt is 50.4% of total population living in cities, and is expected to rise to 59.6% in 2025<sup>45</sup>. The urban population growth rate is predicted at 2.41% for 2010 to 2015 and is expected to decrease to 2.08% for 2020 to 2025<sup>46</sup>.

162. With an annual national population growth rate of 2.2–3% over the past decades, Egypt has approximately 1 million new citizens to house every 8 months. Population growth combined with rural to urban migration cause staggering rates of population increase of almost 4% annually in Egypt's urban centers<sup>47</sup>.
163. In 2008, Cairo, Egypt's capital had a population of an estimated 18 million people. The city has been deeply transformed by global dynamics of urbanization that have increased its population by more than six times in the last 60 years. While the in-migration of rural population has represented one of the major fueling factors for this urban expansion, recent studies have shown that this is no more the case. While in 1960 35% of Cairo's inhabitants were born outside the city, by 1996 this number had reduced to 12%<sup>48</sup>. The capital's growth is now due mainly to natural population increase and to the incorporation of surrounding villages and rural populations<sup>49</sup>.
164. Cities around the world are responsible for up to 70% of the world's harmful greenhouse gas emissions. If these cities don't take action for a sustainable change, there will be a deadly collision between urbanization and climate change, according to the United Nations Human Settlements Program (UN-Habitat)<sup>50</sup>.
165. Egypt's growing population also puts pressures on available land, and urbanization poses a serious threat to agricultural land resources in Egypt. Population growth and extension of inhabited areas increase the waste disposal causing deterioration of river water quality<sup>51</sup>.
166. Coastal cities that are at risk from storms will be doubly at risk as sea-level rise increases hazards from coastal flooding and erosion. The scale of the risk from these extreme weather events is much influenced by the quality of housing and infrastructure in that city, the extent to which urban planning and land-use management have successfully ensured risk reduction within urban construction and expansion, and the level of preparedness among the city's population and key emergency services.
167. Urban areas therefore have a pivotal role in both climate change mitigation and adaptation, including both threats as well as an equally compelling set of opportunities.
168. The concentration of people, industries and infrastructure in cities in Egypt, as well as other social and cultural activities, can make urban areas vehicles of innovation, where strategies can be catalyzed to reduce greenhouse gas emissions and to improve coping mechanisms and reduce vulnerability to climate change impacts.

<sup>45</sup> UN Habitat. 2011. Egypt- Statistics. Retrieved from the World Wide Web: <http://ww2.unhabitat.org/habrdd/conditions/nafrica/egypt.htm>

<sup>46</sup> UN Habitat. 2011. Egypt- Statistics. Retrieved from the World Wide Web: <http://ww2.unhabitat.org/habrdd/conditions/nafrica/egypt.htm>

<sup>47</sup> GIZ. 2011. The Participatory Development Program in Urban Areas, Egypt, <http://egypt-urban.net/context/urbanisation-in-egypt>

<sup>48</sup> <sup>1</sup> Vignal, L. and Denis, E. 2006. Cairo as Regional-Global Economic Capital? In: Singerman, D. and Amar, P., *Cairo Cosmopolitan: Politics, Culture and Urban Space in the New Globalised Middle East*. American University in Cairo Press, Cairo.

<sup>49</sup> Development Planning Unit, University College London, and Urban Training Institute. 1999. An Overview of the Water Supply and Sanitation System at Metropolitan and Peri-Urban Level: The Case of Greater Cairo Region. Unpublished Draft Paper, Cairo, Egypt. Retrieved from the World Wide Web: <http://www.unhabitat.org/downloads/docs/GRHS2011/GRHS.2011.Abridged.English.pdf>

<sup>50</sup> UN Habitat. 2011. Egypt- Statistics. Retrieved from the World Wide Web: <http://ww2.unhabitat.org/habrdd/conditions/nafrica/egypt.htm>.

<sup>51</sup> EEAA. 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo. Egypt.

## **Gender and urbanization** <sup>52</sup>

169. The processes of urbanization and the nature and scale of rural-urban migration have to some extent been shaped by gender roles and relations.
170. Urban planning has to date focused, to a large extent, on physical and spatial aspects of urban development. However, there is increasing recognition of the discrimination women face in relation to access to employment, housing, basic services etc., and the need more effort by some governments and international agencies to reduce this<sup>53</sup>.
171. Women in cities often suffer disproportionately, not only because they are, on average, poorer than men (three-fifths of the world's one billion poorest people are women and girls), but often also because they experience greater difficulty in accessing resources and services tailored to their needs, and decision-making opportunities.
172. At the same time many of those forced to live in slums and informal settlements that are often built on marginal or dangerous land that is not deemed suitable for permanent residential structures, such as steep slopes, flood plains or industrial areas. Faulty construction methods and missing or inadequate infrastructure design contribute further to slope degradation. These populations are even more vulnerable to the impacts of climate change, such as heavy rain, flash floods and landslides.
173. Even in cases where woman-headed households do not necessarily suffer worse conditions than other slum dwellers, shelter is a good place to start for empowering women. For women, the home is often not only a place to live, but where they raise their children and perhaps work to earn their living.
174. Many development agencies have noted that women tend to have lower rates of decision-making and participation in disaster management activities. Yet, they are often severely affected.
175. Over the last few decades, there has been substantial progress in women's access to power and decision-making, but there is still persistent under-representation by women in politics. Women make up only 9 per cent of mayors and 21 per cent of female councilors in the world. Only 18 per cent of members of parliament are women.
176. Women are most often caregivers for the elderly. But with increased urbanization and greater numbers entering the workforce, women are less likely to be at home during the day to spend time with older relatives. While governments promote more gender equitable work places, they should also invest in gender-responsive programs and services for older people, providing not only care but also support for them to stay active.

## **Recommendations: Urbanization**

177. A gender equality perspective of urban poverty is important because men and women experience and respond to poverty in different ways. Access to income and assets, housing, transport and basic services is influenced by gender-based constraints and opportunities. Gender-blind urban services provision may not meet the needs of women if their priorities are not taken into consideration.

<sup>52</sup> Women Watch. 2010. Gender Equality and Sustainable Urbanization. Retrieved from the World Wide Web: <http://www.un.org/womenwatch/feature/urban/>

<sup>53</sup> Rachel Masika, R., de Haan, A. and Baden, S. 1997. Urbanization and Urban Poverty: A Gender Analysis. BRIDGE No. 57. Institute of Development Studies University of Sussex Brighton. United Kingdom.

178. Successful responses to the challenges of climate change will require changes in how urban areas in Egypt operate. Such responses also demand closer coordination between local governments, civil society, community and private sector stakeholders, while at the same time building new connections between central power structures and marginalized segments of urban populations.
179. Attention to gender issues in the design and implementation of urban water and sanitation programs can bring wide health, social and economic benefits to women and their communities.
180. A growing number of urban governance programs and tools have been developed to improve women's participation and empowerment, targeting diverse groups of women from the grassroots to technical experts to the highest levels of academia and politics. By empowering citizens and enabling them to request greater gender equality and accountability, these initiatives play a strong role in helping towns and cities develop into vibrant and sustainable living environments, with equitable economic and social benefits.
181. In future, Egypt will therefore have to create more environmentally sustainable urban development. For urbanization to be sustainable, governments, policy makers and the development community need to understand the gender impacts of rural-urban migration, international migration, slum growth and rapid urbanization.

**Selected Action on Implementation:**

Including gender in implementation: Urbanization

Objectives	Action steps	Indicators of success	Responsible
To integrate climate change issues and gender participation in urban planning	<ul style="list-style-type: none"> <li>Following up of building code law for adoption by people assembly as priority in its agenda</li> <li>Operationalization of higher council for green building with emphasis on women participation in the council</li> <li>Endorse the coordination between different sectors (landscaping, energy, transportation &amp; waste)</li> <li>Capacity building and training for transformation towards green building</li> <li>Distributing social services (schools, hospitals, markets) in new urban areas to cover all women needs in an appropriate way</li> </ul>	<ul style="list-style-type: none"> <li>Adoption of building code law</li> <li>Start up enforcing this law</li> <li>Adequate gender representation in the council</li> <li>Concrete operational decisions taken by the council</li> <li>Number of integrated actions done by the municipality showing reduction in GHGs emission and/or adaptation and measures to climate change percentage of women share in council decision making and activity implementation</li> <li>Number of social services well distributed</li> </ul>	<ul style="list-style-type: none"> <li>MoH</li> <li>The Cabinet</li> <li>MoEE</li> <li>EEAA</li> <li>Ministry of Local Development</li> <li>MoT</li> <li>NGOs</li> </ul>
Enhancement of capacity building, public awareness for successful implementation	<ul style="list-style-type: none"> <li>Building the capacity towards adoption of green building concepts in urban planning and implementation</li> <li>Using the concept of sustainable transport within and between new urban areas (public transport, roads, traffic management, etc.)</li> <li>Amending the existing EIA template to include climate proof provisions</li> <li>Conducting public awareness campaigns</li> </ul>	<ul style="list-style-type: none"> <li>Number of trainees and attendees in green building sector and integrated urban planning</li> <li>Decreased pressure on private transport.</li> <li>Decreased number of patents with respiratory disease (public health enhanced).</li> <li>Energy saving bulbs</li> </ul>	<ul style="list-style-type: none"> <li>NGOs</li> <li>MoF</li> <li>MoH</li> </ul>

	<p>to increase the participation of women in energy efficiency, waste management in new urban areas.</p> <ul style="list-style-type: none"> <li>Integrating environmental awareness activities using different tools in different stages of education (magazines, movies, songs &amp; plays)</li> </ul>	<ul style="list-style-type: none"> <li>Number of CFL bulbs used in households and commercial centers increased.</li> <li>Recycling activities of solid waste increased.</li> <li>Number of schools applying these tools increased.</li> </ul>	
<p>To analyze women needs to be integrated in the building code regulations and law through deliberation process with women in urban areas</p>	<ul style="list-style-type: none"> <li>Ensure all women needs integrated in the building code</li> </ul>	<ul style="list-style-type: none"> <li>Women needs integrated in the building code</li> </ul>	<ul style="list-style-type: none"> <li>MoH</li> <li>The Cabinet</li> <li>MoEE</li> <li>EEAA</li> <li>Ministry of Local Development</li> <li>MoT</li> <li>NGOs</li> </ul>

## **XIV. Priority Sector 8: Waste Management**

### **Women as Agent of Change: Waste Management**

- In rural areas, the **access to sanitation infrastructure** is important for women as caretakers of the family to ensure food hygiene, clean drinking water, garbage collection, and adequate personal hygiene.
- Women are responsible for household sanitation and the disposal of wastewater and solid waste, and they therefore have an important role in ensuring **safe disposal of waste and recycling**, if given access to information and technologies.
- Women farmers are responsible for agriculture waste management and disposal, and if their capacity is built and they are allowed access to decision-making, they can increase **environmental sustainability** of agriculture production considerably.

### **Situation Analysis: Waste Management Sector**<sup>54</sup>

182. Egypt generates mainly two categories of waste, i.e. solid waste and effluent.

183. The total annual amount of solid waste generated in Egypt is about 17 million tons from municipal sources, 6 million tons from industrial sources and 30 million tons from agricultural sources, according to estimates for the year 2000.

184. The total amount of municipal wastewater generated annually is approximately 4 billion m<sup>3</sup>, according to estimates from year 2000. About 45% of the generated domestic wastewater is treated in wastewater treatment plants (see section on water), with the rest either remaining untreated or treated through on-site facilities such as septic tanks.

185. Industrial wastewater is well controlled by successive laws developed since 1962, and which limit the concentration of pollutants in the effluent. Approximately 8% of municipal solid waste is composted, 2% recycled, 2% land-filled and 88% disposed of in uncontrolled dumpsites.

186. Agricultural wastes are used in the production of organic fertilizers, animal fodder and food or energy production (biogas – see energy). A large amount of agricultural waste is openly burned in the fields and national efforts are being exerted to minimize this practice.

187. Solid waste is one of the largest sectors causing pollution in Egypt, but also a significant contributor to climate change. Solid waste contributes directly to greenhouse gas emissions through the generation of methane from the anaerobic decay of waste in landfills, and the emission of nitrous oxide from solid waste combustion facilities. Both of these greenhouse gases have high global warming potential: methane has 21 times the warming potential of carbon dioxide and nitrous oxide has 310 times the warming potential.

### **Gender in the Waste Management Sector**

188. According to CENACT<sup>55</sup> (Community Environment Action Project) both women and men (and children and youth of both sexes) are involved in the production of agricultural and domestic

<sup>54</sup> EEAA. 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo. Egypt.

waste. Likewise, they are also negatively affected by waste pollution increasing health risks and decreasing quality of life. However, women (due to their role as health keepers) suffers a double burden, as they also carry much of the costs incurred through looking after the sick, made ill by poor waste management.

189. Household members have different roles in handling different types of waste and in carrying out hygiene and cleanliness practices in the home and community.

190. Women, in particular, are key managers of household waste and cleanliness and of guiding hygiene practices of children. Woman at home acts as the enforcer of recycling. Therefore, women's support of and contribution to waste management is essential.

### **Recommendations: Waste Management Sector**

191. To develop an integrated waste management system taking into consideration gender aspects.

192. To achieve effective community waste management, municipalities and NGOs/CDAs need to understand and respond to gender differentiated roles and interests in waste management.

193. Women should be involved with men as waste management planners and decision makers, as mobilizers and awareness raisers, as discerning clients of waste management services, as receivers of social and economic benefits, and as organizers of on-going activities that builds on the achievements of successful waste management.

194. Women's role in recycling and waste management within the household includes a variety of opportunities. These include recognizing women as an important partner in reducing GHG emissions associated with waste disposal.

195. Additionally, recycling can become a profitable activity, such is the case of plastic, glass and aluminum and for which many social enterprise opportunities exist that are suitable for take-up by women, and that have the potential to increase household income.

196. Incentives are essential to promote the investments in the Integrated Solid Waste Management (ISWM) and using principles of Reject, Recycle and Reuse (RRR), in order to increase the share of women in this sector.

<sup>55</sup> CENACT. 2005. Gender Equality Strategy. Retrieved from the World Wide Web:  
<http://www.egyptpsu.com/Cida/UserFiles/Image/PDF/Gender/policies%20and%20strategies/CENACT%20GENDER%20EQUALITY%20STRATEG-latest-with%20workplan.pdf>

**Selected Action on Implementation:**

Including gender in implementation: Waste Management

Objectives	Action steps	Indicators of success	Responsible
To develop an integrated waste management system taking into consideration gender aspects	<ul style="list-style-type: none"> <li>• Analysis of waste management from a gender perspective</li> <li>• Assessment of national policies and plans from a gender perspective</li> <li>• Building capacity of implementing agencies</li> <li>• Involvement of other sector stakeholders (including academia, research centers, local governments, NGO's and private sector) in all process</li> </ul>	<ul style="list-style-type: none"> <li>• Updated gender-sensitive action plan for integrated waste management</li> <li>• Number of gender training courses for decision-makers and implementers</li> <li>• Number of stakeholders involve</li> <li>• Percentage reduction in solid waste and effluent</li> <li>• Reduction of GHG associated with waste</li> </ul>	<ul style="list-style-type: none"> <li>• EEAA</li> <li>• NGO's</li> <li>• Local Governments</li> <li>• Private Sector</li> </ul>
To enhance women's role in community waste management initiatives	<ul style="list-style-type: none"> <li>• Raise women and women NGOs awareness about waste management and related projects at urban and rural areas</li> <li>• Train women in separation from source (sorting) to facilitate recycling in urban areas</li> <li>• Support women in waste recycling programs through NGO's, local governments and private sector in urban and rural area</li> <li>• Provide technical support for new mechanisms such as: waste minimization club and raise media role for change consumption pattern</li> </ul>	<ul style="list-style-type: none"> <li>• Number of trained women in waste process</li> <li>• Number of women implementing waste management in their community</li> <li>• Number of waste management project lead by women</li> <li>• Reduction of disease associated with pollution in communities</li> <li>• Number of campaigns and clubs</li> </ul>	<ul style="list-style-type: none"> <li>• EEAA</li> <li>• NGO's</li> <li>• Private Sector</li> <li>• Local Governments</li> <li>• Health Institutions (Monitoring)</li> <li>• EEAA</li> <li>• NGO's</li> <li>• Media</li> <li>• Women NGOs</li> <li>• Local Governments</li> </ul>

<p>To encourage and support projects and initiatives on waste reduction which protect environment and have business appeal</p>	<ul style="list-style-type: none"> <li>• Identify case studies that achieve good results</li> <li>• Support projects solving problem with direct benefit for women such both in urban and rural areas as: biogas units, recycling products, and composting.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of waste projects lead by women</li> <li>• Incentives available for start up business</li> <li>• Number of female jobs created</li> <li>• Increase in income</li> </ul>	<ul style="list-style-type: none"> <li>• EEAA</li> <li>• NGO's</li> <li>• Private Sector</li> <li>• Local Government</li> </ul>
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## SECTION C: INSTITUTIONAL IMPERATIVES

197. The following institutional imperatives are build upon the existing national institutional set ups for gender and climate change issues to ensure optimal benefit and delivery.

### **XV. Intergovernmental coordination for supporting the mainstreaming of gender in climate change efforts**

198. It is highly recommended that provision should be made within the composition of the National Inter-ministerial Committee on Climate Change, to include a permanent gender expert with a dedicated Terms of Reference. This gender expert should be a person with a credible track record in gender, environment and development. The expert will be required to maintain close ties with other gender experts at the national and international level to ensure efficiency and representatively.

199. It is important to utilize the current gender focal point in EEAA and in the RBOs and other gender focal point in concerning ministries who are well trained to mainstream gender issues at the regional and local level

### **XVI. Ensure that Gender Criteria (where relevant) are Incorporated in the Development of Projects and Programs Associated with Climate Change in Egypt**

200. The Third National Communications project funded by the GEF and implemented by UNDP and EEAA is an existing platform to mainstream gender issues in programs and projects due to its mandate to prepare Egypt's future projects pipeline in mitigation and adaptation.

201. Also the planning and follow up department in EEAA could play a critical role in mainstreaming the gender issues in climate change national projects in next five years plan (2012-2017) through direct and close communication with the gender unit in the Ministry of Planning.

202. Utilized the DAG sub group on energy and environment chaired by one of the donors agencies and co chaired by EEAA to oversee the integration of gender issues in climate change donors funded projects.

203. It is also strongly recommended that a Gender Consultative Support Group to the gender expert in the Inter-Ministerial Committee be established. The necessary expertise could be drawn from gender focal points from international organizations, the gender unit in line ministries and EEAA, women organizations and donors, amongst others. Particular attention should be given to the establishment of gender-sensitive reporting, monitoring and evaluation systems.

204. It is strongly recommended to strengthen the capacity of the civil society for mainstreaming gender issues in climate change projects at the local level. As the GEF is the contributor to climate change programs and projects. It is recommended to integrate gender issues in the upcoming strategy of Small Grants Program for OP 5.

## **XVII. Strengthen Capacity of Implementers of the Strategy**

205. Climate change activities will require combined efforts from different sectors and stakeholders. Therefore there is a need to develop a common understanding on what gender considerations associated with climate change are.
206. Gender workshops or training courses should never be stigmatized as specialized courses reserved only for “Gender Specialists” or for women alone. It is important that all staff, policy advisors, and senior managers associated with the implementation of this Program should develop the capacity to promote gender equality and equity.
207. Training therefore needs to be tailored-made and targeted on specific issues, such as gender and water or gender and energy, for example. Training should furthermore be systematic, continuous, and adapted to the duties and responsibilities assigned to each person within a division or project.
208. In the case of projects undertaken in the field, it cannot be said that traditional training in gender has been particularly effective in bringing about the required changes in sustainable development and environmental interventions.
209. A learning-by-doing or experiential learning approach has, however, greatly aided program and project staff to incorporate gender issues within the project and program cycle, to distil lessons from the field, and to support bottom-up policy development.
210. Of vital importance in this capacity building process is the need to build awareness of climate change issues among women’s organizations in Egypt. This will allow participating organizations to identify opportunities for their full participation in the processes and implementation of the Convention on Climate Change.
211. The importance of the development of a specific training protocol that will form an integral part of this Program cannot be underestimated. Various institutions within Egypt can support this process, such as IUCN and UNDP.

## **XVIII. Secure on-going commitments from funders to support the Strategy for Mainstreaming Gender in Climate Change Efforts in Egypt**

212. An intensive campaign for fundraising for the full implementation of this Program will be necessary. As an initial activity, donor meetings could be conducted to present the Strategy to interested parties.
213. Bilateral meetings with important international funding mechanism such as the GEF could be pursued and have proven very successful in other instances. A useful platform for such meetings could for example be the COPs and associated negotiating meetings.

## ANNEXES

### Annex 1: Population Estimate by Sex & Governorate 2010

Population				السكان		
تقدير أعداد السكان طبقا للنوع والمحافظة 2010/7/1 *						
Population Estimates By Sex & Governorate 1/7/2010 *						
Unit : 000 Pop				الوحدة : بالآلاف نسمة		
Governorate	نسبة النوع <sup>(1)</sup> Sex Ratio	الجملة		أنثى Female	ذكر Male	المحافظة
		%	Total			
Cairo	103.2	9.2	7249	3567	3682	القاهرة
Alexandria	104.4	5.6	4400	2153	2247	الاسكندرية
Port-Said	103.7	0.8	611	300	311	بورسعيد
Suez	104.0	0.7	557	273	284	السويس
Helwan	105.8	2.3	1846	897	949	حلوان
6 October	108.7	3.9	3032	1453	1579	6 أكتوبر
Damietta	104.6	1.5	1195	584	611	دمياط
Dakahlia	103.2	6.8	5378	2647	2731	الدقهلية
Sharkia	105.3	7.4	5802	2826	2976	الشرقية
Kalyobia	105.9	5.8	4598	2233	2365	القليوبية
Kafr-El-Sheikh	102.2	3.6	2841	1405	1436	كفر الشيخ
Gharbia	102.9	5.5	4305	2122	2183	الغربية
Menoufia	106.2	4.5	3535	1714	1821	المنوفية
Behera	105.2	6.5	5155	2512	2643	البحيرة
Ismailia	103.7	1.3	1043	512	531	الاسماعيلية
Giza	104.1	4.0	3122	1530	1592	الجيزة
Beni-Suef	103.7	3.2	2505	1230	1275	بنى سويف
Fayoum	107.1	3.5	2760	1333	1427	الفيوم
Menia	104.3	5.8	4542	2223	2319	المنيا
Asyout	104.3	4.8	3749	1835	1914	أسيوط
Suhag	102.5	5.2	4070	2010	2060	سوهاج
Qena	100.6	3.4	2706	1349	1357	قنا
Aswan	101.4	1.6	1279	635	644	أسوان
Luxor	104.2	1.3	1033	506	527	الاقصر
Red Sea	154.1	0.4	310	122	188	البحر الاحمر
ElWadi ElGidid	106.1	0.3	202	98	104	الوادى الجديد
Matrouh	110.3	0.5	368	175	193	مطروح
North Sinai	108.2	0.5	379	182	197	شمال سيناء
South Sinai	200.0	0.2	156	52	104	جنوب سيناء
Total	104.6	100	78728	38478	40250	الاجملى

(1) Sex Ratio: Males per 100 Females

(1) نسبة النوع : ذكور لكل 100 أنثى

Egypt in Figures 2011

مصر في أرقام 2011

## **Annex 2: Gender Recommendation for TNC**

### **Gender Recommendations for Enabling Activities for the Preparation of Egypt Third National Communication to the UNFCCC**

- I. Integrate gender considerations in Outcome 2: Updated report on policies and measures to mitigate climate change prepared and capacity to collect this information on an on-going basis for future NCs strengthened
- II. Include gender considerations in Outcome 3: Updated assessment of climate changes, vulnerability to climate change and measures to adapt to climate change prepared; capacity to collect this information on an on-going basis for future NCs strengthened
  - a. Incorporate gender disaggregated socio-economic data in long-term climate change scenarios (Activity 3.1.4) in analysis of climate change in Egypt (Output 3.1)
  - b. Include gender consideration, collect gender disaggregated data, and include gender analysis in the assessment of vulnerability to climate change (Output 3.2) in priority areas of agriculture, water, coastal zones, and new areas, as identified in the gender and climate change strategy for Egypt: tourism, health, energy and transportation, urbanization, and waste.
  - c. Take into account new policies and research on adaptation to climate change with a gender perspective, and provide a listing of potential and current adaptation measures with a gender lens in Egypt (Output 3.3).
  - d. Integrate gender considerations in Vulnerability and Adaptation Chapter (Output 3.4). Involve gender experts in review medium-term and long-term scenarios for all priority areas and national workshop to highlight findings from the V&A study and gather comments (Activities 3.4.1 and 3.4.6)
- III. Include the National Strategy on Gender and Climate Change in Egypt as a policy paper and conduct a briefing for decision-makers on integrating gender in TNC (Output 4)
- IV. Compile and synthesize information relevant to Article 6 of the UNFCCC (education, training, and public awareness), and Article 4 (technology transfer), with gender considerations (Output 4.2) and integrate climate change into new national policy on women (Activity 4.2.2)
- V. Identify and hire appropriate national gender expert to conduct research and participate in TNC process (Output PM 1)

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- VI. Include women and women's organizations as stakeholders participating in the Project Steering Committee, and gender expert as one of the TNC project experts (Output PM 2)

### Annex 3: List of Participants

## Multi-Stakeholder Workshop to Develop a National Strategy for Gender and Climate Change in Egypt

17<sup>th</sup>– 19<sup>th</sup> of May, Cairo, Egypt

No.	Name	Organization	Title	Email
1.	Ahmed Farouk Mohamed CDR	Center of Development Service	Programme Manager	afarouk@cds-mena.org
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3.	Dr. Amr Abdel-Meguid	CEDARE	Senior Regional Specialist	
4.	Alshimaa Ahmed	EEAA		
5.	Dr. Azza Shalaby	Plan Egypt, a children's development NGO	Gender adviser	
6.	Ms. Bahiga Hussien	Media – Al Ahaly News Paper Egyptian Institution of Right for Development		tnmyaeg@yahoo.com
7.	Mr. Basem Sayed	CEOSS	Deputy Manager	
8.	Eman Ismail Abd Elaal	Ministry of Water Resources and Irrigation		
9.	Ms. Fatma El Mallah	League of Arab States (LAS)	Adviser to the Secretary General of the League of Arab States on Climate Change	
10.	Eng. Fady Ramzy	"My Egypt" Electronic Magazine	Editor in Chief	www.myegyptmag.com
11.	Eng. Galal Moawad	Care International	Senior Community Development Expert	
12.	Dr. Hala Yossery	Ministry of Agriculture and Land Reclamation	Researcher, Desert Research Center (DRC)	
13.	Hassan Baraka		Media	
14.	Ms. Heba Shawary	EEAA	Head of Agreements and International Organization	heba_shrawy@yahoo.com
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16.	Ms. Lamiaa Imam	Egyptian office for Youth and Development		
17.	Dr. Mawaheb Abou El-Azm	EEAA	Chief Executive Officer,	mawaheb@eeaa.gov.eg
18.	Dr. Mahmoud Roushdy	Research Institute for Climate Change and Environment	Researcher Ministry of Water Resources and Irrigation	
19.	Mr. Mohammed Abd Elhakim	Egyptian Institution of Right for Development	Researcher	

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23.	Dr. Mohamed Tawfik	Suez Canal University	Professor	
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25.	Ms. Mona Arishi CDR			
26.	Eng. Nagwa Al-Khashab	Ministry of Water Resources and Irrigation	General Director for water advisory	
27.	Dr. Omar El-Badawy	CEDARE	Regional Land Resources Programme Manager	
28.	Dr. Samia Abdel-Aziz Barsi CDR		Consultant	sbarsy@yahoo.com
29.	Dr. Sayed Sabry	EEAA	Project Manager The Third National Communication Project	
30.	Dr. Samir Tantawy	EEAA	Head of Mitigation in Climate Change Department	
31.	Samia El-Marsafawy	Agricultural Research Center	Agro Meteorology Climate Change Specialist	samia.mahmoud@yahoo.com
32.	Ms. Shahira Wahbi	League of Arab States (LAS)	Chief of SD & International Environmental Cooperation	shuhrayr@yahoo.com
33.	Ms. Samah Saleh	EEAA	Coordinator: EEAA Gender Unit	
34.	Ms. Vivian Fayeze	CEOSS	Deputy Manager of projects and agreements	
35.	Ms. Yasmine Fouad	EEAA	Director of Global Environment Facility (GEF) Unit	

## SUPPORT DOCUMENTS

**Afaf Marei, A.** 2009. Second Shadow Report for the CEDAW Coalition Egypt. The Egyptian Association for Community Participation Enhancement (EACPE). Cairo, Egypt.

**Aguilar, L.** 2009. Training Manual on Gender and Climate Change. IUCN-GGCA. San José, Costa Rica.

**Agrawala, S., Moehner, A., El Raey, M., Conway, D., van Aalst, M., Hagenstad, M., Smith, J.** 2004. Development and Climate Change in Egypt: Focus on Coastal Resources and the Nile. OECD. Paris, France.

**Arab League.** Arab Framework Action Plan for dealing with issues of climate change (in press).

**Aziz, N.** 2010. Integrating Gender in Water Management Projects: Egypt Case Study. Retrieved from the World Wide Web: <http://ressources.ciheam.org/om/pdf/a62/06002404.pdf>.

**CAPMAS.** 2010. Distribution of Population (10 years & over) by Sex & Educational Status According to Final Results of 2006 Population Census. Retrieved from the World Wide Web: <http://www.capmas.gov.eg/pdf/egypt/finalpop/12.pdf>.

**CAPMAS.** 2010. Status of Man & Woman in Egypt. Retrieved from the World Wide Web: [http://www.msrintranet.capmas.gov.eg/pls/educ/wom\\_man\\_e?lang=0&lname=free](http://www.msrintranet.capmas.gov.eg/pls/educ/wom_man_e?lang=0&lname=free).

**CAPMAS.** 2011. Population Estimates By Sex & Governorate 1/7/2010. Retrieved from the World Wide Web: <http://www.capmas.gov.eg/pdf/egypt10/pop10/6.pdf>.

**CAPMAS.** 2011. Base Population Data. Retrieved from the World Wide Web: <http://www.capmas.gov.eg/>.

**CENACT.** 2005. Gender Equality Strategy. Retrieved from the World Wide Web: <http://www.egyptpsu.com/Cida/UserFiles/Image/PDF/Gender/policies%20and%20strategies/CENACT%20GENDER%20EQUALITY%20STRATEG-latest-with%20workplan.pdf>.

**CIHEAM.** 2007. Mainstreaming Gender Dimensions in Water Management for Food Security and Food Safety. Options Méditerranéennes, Serie A n.77. Sagardoy, J.A., Lamaddalena, N., Quagliariello, R., Chimonidou, D., Geulloubi, R. and Pinca, V. (eds). Larnaca, Cyprus.

**Costello, A., M. Abbas, A. Allen, S. Ball, S. Bell, R. Bellamy, S. Friel, N. Groce, A. Johnson, M. Kett, M. Lee, C. Levy, M. Maslin, D. McCoy, B. McGuire, H. Montgomery, D. Napier, C. Pagel, J. Patel, J. A. Puppim de Oliveira, N. Redclift, H. Rees, D. Rogger, J. Scott, J. Stephenson, J. Twigg, J. Wolff and C. Patterson.** 2009. Managing the health effects of climate change: Lancet and University College London Institute for Global Health Commission. *The Lancet*, 373 (9676):1693–1733.

**Development Planning Unit, University College London, and Urban Training Institute.** 1999. An Overview of the Water Supply and Sanitation System at Metropolitan and Peri-

Urban Level: The Case of Greater Cairo Region. Unpublished Draft Paper, Cairo, Egypt. Retrieved from the World Wide Web: <http://www.unhabitat.org/downloads/docs/GRHS2011/GRHS.2011.Abridged.English.pdf> Egypt, SNC, 2010.

**EEAA.** 1999. Egypt Initial National Communication under the United Nations Framework Convention on Climate Change. Cairo, Egypt.

**EEAA.** 2010. Egypt Second National Communication under the United Nations Framework Convention on Climate Change. Cairo, Egypt.

**EEAA.** 2010. Egyptian Environmental Policy Framework. Retrieved from the World Wide Web: <http://www.eeaa.gov.eg/english/main/Policies.asp>.

**Egyptian Organization for Development Rights.** 2011. Report on the economic deprivation and legal exclusion of rural women in Egypt. The Egyptian Organization for Development Rights. Cairo, Egypt.

**El Feiky, A.** 2007. Problems Facing Female Participants in The Egyptian Labor Force. Dissertation. American University of Cairo. Egypt.

**GIZ.** 2011. The Participatory Development Program in Urban Areas, Egypt. Retrieved from the World Wide Web: <http://egypt-urban.net/context/urbanisation-in-egypt>.

**Guenena N., Lambert V., Radwan H.** 2010. Gender Assessment and Analysis: USAID/Egypt. USAID. Washington, USA.

**Handoussa, H.** 2010. Situation Analysis: Key Development Challenges Facing Egypt. UNDP- Ministry of International Cooperation. Cairo, Egypt.

**Hamilton, K.** 2001. Gender and Transport in Developed Countries. Background Paper for the Expert Workshop "Gender Perspectives for Earth Summit 2002: Energy, Transport, Information for Decision-Making" Berlin, Germany. University of East London, UK. Retrieved from the World Wide Web: [www.unedforum.org](http://www.unedforum.org) and [www.earthsummit2002.org](http://www.earthsummit2002.org) Workshop website [www.earthsummit2002.org/workshop](http://www.earthsummit2002.org/workshop).

**IPCC.** 2007. Fourth Assessment Report (AR4). IPCC. Switzerland.

**IPCC.** 2001. Climate change 2001: The Scientific Basis. Houghton, J. T., Ding, Y., Griggs, D.J., Noguer, M., van der Linden, P.J., Dai, X., Maskell K., and Johnson, C.A. (eds.). Working Group I to the Third Assessment Report of the IPCC. Cambridge University Press, Cambridge, United Kingdom.

**IPCC.** 2001. Summary for Policymakers. Climate Change 2001: Impacts, Adaptation, and Vulnerability. Report of Working Group II of the International Panel on Climate Change. IPCC. Switzerland.

**Masika, R., de Haan, A. and Baden, S.** 1997. Urbanization and Urban Poverty: A Gender Analysis. BRIDGE No. 57. Institute of Development Studies University of Sussex Brighton. United Kingdom.

**Ministry of Economic Development.** 2010. Egypt's Progress towards Achieving the MDGs. Cairo. Retrieved from the World Wide Web:

[http://www.mop.gov.eg/PDF/2010%20MDGR\\_English\\_R51.pdf](http://www.mop.gov.eg/PDF/2010%20MDGR_English_R51.pdf).

**OECD.** 2010. Gender Equality and Social Institutions in the Arab Republic of Egypt. Social Institutions and Gender Index (SIGI). Retrieved from the World Wide Web: <http://genderindex.org/country/egypt-arab-rep>.

**Sherman, D.** 2009. Climate Change in Egypt: Rising Sea Level, Dwindling Water Supplies. Climate Institute. Retrieved from the World Wide Web: <http://www.climate.org/topics/international-action/egypt.html>.

**UN Habitat.** 2011. Egypt- Statistics. Retrieved from the World Wide Web: <http://ww2.unhabitat.org/habrdd/conditions/nafrica/egypt.htm>.

**United Nations.** 2010. *The Millennium Development Goals Report*. New York, USA.

**UNDP.** 2007. Human Development Report 2007/2008 Fighting climate change: Human solidarity in a divided world. New York, USA.

**UNDP and Institute of National Planning.** 2010. Egypt Human Development Report. Cairo. Retrieved from the World Wide Web: <http://www.undp.org.eg/Portals/0/EHDR%202010/NHDR%202010%20english.pdf>

**Vignal, L. and Denis, E.** 2006. Cairo as Regional-Global Economic Capital? In: Singerman, D. and Amar, P., *Cairo Cosmopolitan: Politics, Culture and Urban Space in the New Globalized Middle East*. American University in Cairo Press, Cairo, Egypt.

**Women Watch.** 2010. Gender Equality and Sustainable Urbanization. Retrieved from the World Wide Web: <http://www.un.org/womenwatch/feature/urban/>.

**World Bank.** 2003. Arab Republic of Egypt Gender Assessment. Retrieved from the World Wide Web: <http://siteresources.worldbank.org/INTMNAREGTOPGENDER/Resources/CGA.pdf>.

**World Bank.** 2009. Gender and Agriculture Sourcebook. Washington, USA.

**World Bank.** 2011. World Development Indicators. Retrieved from the World Wide Web: <http://data.worldbank.org/data-catalog/world-development-indicators>.