



# **Sensitizing and Building the Capacity of Women towards Climate Change Consequences in Northern Lakes of Egypt**

**African Technology Policy Studies Network**  
**TECHNOPOLICY BRIEF | No. 33**

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# **Sensitizing and Building the Capacity of Women towards Climate Change Consequences in Northern Lakes of Egypt**

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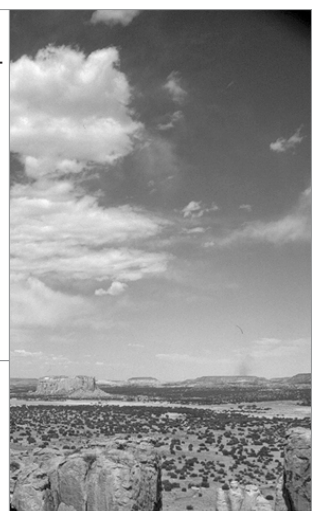
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Published by the African Technology Policy Studies Network  
P O Box 10081, 00100 GPO Nairobi Kenya

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ISBN: 978-9966-030-23-8



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# Acknowledgement

This research was conducted as part of the implementation of the African Technology Policy Studies Network (ATPS) Phase VI Strategic Plan, 2008 – 2012 funded by ATPS Donors including the Ministerie van Buitenlandse Zaken (DGIS) the Netherlands, Rockefeller Foundation, amongst others. The authors hereby thank the ATPS for the financial and technical support during the implementation of the program. The Authors specially thank the ATPS Climate Sense Program Director, Dr. Kevin Urama (ATPS); and the Program Coordinators including Prof. Francis Mutua (ATPS Kenya); Dr. George Essegbey (ATPS Ghana), Prof. Eric Eboh (ATPS Nigeria), Dr. Nicholas Ozor (ATPS), and Ms. Wairimu Mwangi (ATPS) for their technical support during the research process.'

# 1. Introduction

Egypt, like other developing countries, would be affected by the climatic changes, including possible hydrological disturbances in the Nile River, which may lead to the loss of 30 – 60% of the Nile's water resources, and consequently diminish Egypt's agricultural production. In addition, because of the rise in the Mediterranean Sea level, it is highly likely that large parts of the northern Delta, especially low-lying areas below sea level, will be submerged by water.

Egypt's Nile delta with its coastal front on the Mediterranean is considered vulnerable to the impacts of climate change. In addition to expected rise in sea level, shoreline erosion, stresses on fisheries and saltwater intrusion in groundwater create major challenges. These factors also produce stressful effects on water and agricultural resources, tourism and human settlements. Fragile and unique ecosystems such as the mangrove stands in the Red Sea, which stabilize shorelines and provide a habitat for many species, may also be threatened. The northern Egyptian lakes, which constitute about 25% of the total Mediterranean wetlands and produce about 60% of the fish products, are also highly vulnerable to the impacts of climate change. Since the lakes are relatively shallow, climate change can lead to an increase in water temperature, which could result in changes in the lake ecosystems as well as changes in yield.

The regions that are most likely to be affected are areas that lie between Alexandria and Damietta, covering a length of 180 km along the coast, and going 50 m inland. The 2006 Environment Status Report issued by the UN Framework Convention on Climate Change also refers to consequences on human health, including the emergence of new diseases as result of disease vectors moving from Sub Saharan Africa to the northern parts.

## **Overview**

The project “Sensitizing and Building the Capacity of Women towards Adaptation to the Consequences of Climate Change in Northern Lakes of Egypt” is implemented as part of the ATPS Climate Sense program. The exact location where the activities of this project are implemented is the communities of El-Burullus Lake in Kafr El-Sheikh Governorate, specifically, Lake Burullus, northern Egypt. Burullus Lake lies on the eastern side of Rosetta branch of the Nile River, occupying a central position along the Mediterranean Nile delta coast of Egypt. The only economic activity in these communities is fishing and fish trade, which

have been largely affected by extreme weather events such as very cold weather or long periods of hot waves. Among the most vulnerable groups are women working in fishing-related activities. The vulnerability of women in this sector is triggered by their lack of awareness of climate change, and its impacts combined with their negligible or lack of any economic role in their communities; very few of the women practice simple home-based fishing-related activities like fish salting. The overall project goal is enhancing the capacities of a core group of 25 women, each of whom are linked to a family with a husband, father or brother working in fishing, in areas such as food processing techniques, hygiene and leadership. The project main beneficiaries are women below the age of 45 and who have one of their close relatives, such as the husband, the father or the brother working in the field of fishing.

Participatory approaches were applied to identify the appropriate venue/s to implement the project activities with the group of selected women. The approaches used include Focus Group Discussions (FGDs), Semi-Structured Interviews (SSI), and quantitative and qualitative analysis. Four FGDs were planned on emerging and indigenous technologies for climate change adaptation in Egypt. On the ground, six FGDs were conducted with men and women (3 FGDs with each group). A total of 18 men and 19 women participated in the FGDs.

In addition to the FGDs, a full-scale survey was conducted as part of the main project activities. This survey served as the basis for identifying the women who participated in the trainings organized to build their capacities. The sample included in the questionnaire consisted of 154 people; however not all the people who were given the questionnaire answered all the questions.

The project designed and implemented training sessions for 33 women on up-to-date food processing techniques, with the help of professional short-term experts in food processing from the nearest Governorate to the project target area. The trainings topics included basic communication skills and knowledge transfer, knowledge and skills on fish processing, and leadership skills and networking. Of the 33 women, only 19 were able to invite other women to teach them the same techniques and communicate the same knowledge and skills. The training that the 19 women did took 3 days as follows:



**Day One: 3 trainers + 16 trainees (participants)**

**Day Two: 12 trainers + 60 trainees**

**Day Three: 5 Trainers + trainees**

## 2. Analysis & Findings

Fishing is the main economic activity in the community. Fishermen go on daily fishing trips and the production either consumed domestically if the catch is large enough to allow sparing some for the house, or given to the women in the house (the wife, the mother or sister) to sell it along the roads of the village. Women are burdened with the responsibility of selling the fish in very difficult conditions.

Main fish processing activities that women engage in include: cleaning and salting, and sometimes peeling shrimps. The women's biggest concern is to sell the fish they get from fishermen before the catch gets spoiled. Only farm fish can be processed in different ways, but the Lake's fish can only be salted. Peeling shrimp is not financially rewarding to women. Most of the interviewees also confirmed that this is a fair division of labor and that women's role could not be shifted.

According to the FGDs results, not more than 20% of the people interviewed know about climate change and its impacts. It is often confused with weather conditions and changes they hear on the daily weather news. Fishermen usually pay attention to daily weather conditions as it affects their fishing trips. The most common piece of knowledge shared is the rise in the sea level and the potential submerging of the Delta and the shores within 50 years. Some of the interviewees noted the recurrent floods during recent winters and the heavy rains which caused some houses to collapse.

Some people still attribute part of the changes occurring in the Lake and the fish production to building the High Dam. They believe it has contributed to stopping the flood in the Nile and accordingly the amount of water reaching the Lake through the Nile River. They also believe that if the sea level rises, the salt water fish will dominate and the fresh water fish will begin to disappear. They also fear that if Egypt's share of the Nile River decreases, it could lead to drying off the Lakes.

With regard to dealing with the impacts of climate change, such as floods, increase/decrease in the water level of Burullus Lake and reduction in fish production, most of the community members agreed that this was beyond them, and that it was the government's responsibility to provide the solutions. People blamed the government for some of the major problems they are experiencing and are accusing the government of adopting double standards. In addition, officials are overlooking the outrageous destroying of the Lake's land and taking over large parts of the land to build on or turn it to fish farms.

There is a strong disagreement among community members with regard to the existence of fish farms. Most of interviewees believe that the fish farms caused a lot of imbalance in the market. The production is high and thus the fishermen who depend on Burullus Lake are forced to sell the fish at low prices. Some community members believe that fish farms are sort of an achievement in their community. It increased fish production; and thus fulfilled the local needs and also created a lot of jobs. Those who are against fish farms and feel their profession and livelihoods are threatened by fish farms say farm traders dispose of hormones contaminated wastes in the lake. The farms' water is also contaminated with chemicals and bacteria which when disposed of in the lake's water, causes various diseases and health problems to fishermen.

Another perceived threat is catching/stealing fish fry from the lake and using it in fish farms. It is even perceived as a crime against the community and against the balance of the nature. Unemployed youth are involved in this shameful act and are causing the lake to dry off and the fish to disappear.

Many fishermen fear they could not change their profession and perhaps would not. Absent of factories and business, the community does not provide any other opportunities except fishing. Aside from small jobs such as carpentry and construction work, which fishermen can take on during the no-fishing months, fishermen are not willing to change their inherited profession.

### 3. Conclusions & Recommendations

Outreach programs to raise awareness of climate change and its impacts on the fish industry are a pressing need. This can be implemented in the form of radio and TV programs targeted at the local community, focusing on climate change impacts, as they are important sources of information for fishermen and their families to learn more about climate change impacts and adaptation strategies.

The entire fish industry in the lake needs development, through upgrading fishing techniques, equipment and tools, such as boats and nets, as well as developing associated existing fish-based food industries;

The civil sector and the fishermen's association in particular should assume a greater role in raising awareness on the issue of climate change, its impacts, and adaptation techniques;

The private sector should be approached with appropriate, well-thought out initiatives and incentives to develop initiatives that aim to prepare and qualify vulnerable groups, especially women, on techniques of processing and packing fish in a healthy way, allowing them to work in the field of food industry (fish processing) and contribute to the investments in the food industry sector in the community

Likewise, business people in the local community should be encouraged and motivated to establish and/or adopt such initiatives and projects, and emphasize the importance of having practical and realistic feasibility studies, while qualifying and training women to assume more significant roles in the future or the next phases

Executive authorities must be involved in the work planned for the next phases, to ensure smooth operation of programs and projects, and to encourage them to adopt an open-minded approach towards the climate change issue;

The local community confuses bad or extreme weather conditions with climate change induced phenomena. They interpret unfamiliar and unusual extreme conditions they are witnessing as the doing of bad weather; they do not have a clear understanding and knowledge of climate change and its impact. This calls for

immediate and extensive outreach programs to improve community members' knowledge of the issue, and introduce different adaptation mechanisms;

### **Proposed Actions**

As a general recommendation, and given the lack of tradition knowledge and local practices with regard to developing fish production, and since these knowledge and practices, when existent, are individual and rarely circulated and made common for the benefit of the fishermen's community, it is recommended to plan another phase to this project and incorporate components/activities to address this topic

At the Research Level, explore feasible and affordable technologies relating to climate change, that could be adopted by fishermen or women groups directly linked to any fishing-based activities, and consider how these technologies can be transformed to help improve their livelihoods

Also, approach local research centers and universities existing near the affected areas to take part in finding solutions for the common problems faced by the local communities in these areas. This can be achieved through introducing simple interventions to help women in their daily fish processing activities and improve their productivity. Private sector and local business people could be approached to implement these interventions or ideas at a low cost, to be made available for use by the locals.

### **At the National / Political Level**

Issue and/or review laws that regulate building and operating fish farms, to ensure that fish farm owners do not harm fishermen operating in the lakes and other groups depending on fishing in their livelihoods;

Develop coordinated plans with the participation of the local community to ensure the success and sustainability of suggested programs and projects (involve all concerned parties, including decision makers, executives, researchers, local community members... etc);

Adopt a bottom-up approach to planning developmental interventions as a proper method for policy formulation especially when it becomes action research oriented;

Increase the level of decentralization to allow for greater participation by the local communities in policy formulation, and

Apply a holistic approach while planning public policies and integrate fishery with agriculture, water availability, and economics and housing



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## Science, Technology and Innovation for African Development

ISBN: 978-9966-030-23-8