

SUSTAINABILITY OF WATER AND SANITATION SYSTEMS

Education for sustainability for remote populations

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THE NORTH SINAI GOVERNORATE is located in the North Eastern part of the Arab Republic of Egypt. It is also constituting the Northern part of the Sinai Peninsula, which works as a buffer zone between Egypt and Israel. The Governorate is known for its low and scattered population (250,000), compared to the highly populated areas of the Nile Valley and Delta. The population of North Sinai is mainly nomadic, and scattered in tribes, and centred in main cities such as El Arish (the Capital) and Bir Sabea. Sinai saw no development before its capture by the Israelis in 1967 and was considered a virgin territory. However, starting from 1982, the date of its return to Egyptian sovereignty, the Peninsula was regarded as possessing great tourist potentials. Nevertheless, it is only in 1992 that the Government started initiating a development plan according to which the Peninsula would host about 2,500,000 migrating citizens from the highly populated Delta by the year 2017. These plans include development in the areas of agriculture, industry, tourism, irrigation and infrastructure.

From this perspective, the Egyptian Environmental Affairs Agency, EEAA, and within a national strategy which intends to provide Environmental Education for each and every Governorate, initiated two projects in North Sinai: The North Sinai Governorate Environmental Education and Public Awareness Support Programme (NSEE) and The North Sinai Governorate Environmental Action Plan (NSGEAP). The aim of these projects is to provide a clear vision for the status quo of the environment in the region, specifically because of the envisaged developmental ambitions which will take place in the area. Environmental action is sought for in order to provide a quality of life for the envisaged 10 fold increase in the population of the area by the year 2017. Prevention, in this case is not looked at as the best mean for sustainability, but as the sole one.

The North Sinai Governorate environmental education and public awareness support programme (NSEE)

EEAA with the financial support of the Danish Aid Agency (DANIDA), initiated this programme which started its operational phase in November 1994 and ended by April 1995. The Technical Cooperation Office for the Environment - TCOE-, which is the international arm of EEAA, was the one responsible for the management of the Programme.In fact, NSEE was operated by two environmental education consultants who reported to TCOE for the

approval of their strategies and plans. The head of the North Sinai Governorate Environmental Management Unit-GEMU-was the local implementer of the strategies.

The programme had an aim to enhance the capabilities of the educators of the North Sinai Governorate in the field of Environmental Education. By educators we meant Environmental NGOs, public and private schools' teachers, the staff of the NS Governorate Environmental Management Unit and the students in the faculty of education in the University of Suez Canal located in El Arish, the Capital of North Sinai. The aim was to provide a decent training for the trainers in order to transfer the knowledge to the scattered nomadic population, through formal education (schools and universities) and non-formal education (NGOs, religious establishments, Directorates). The programme consisted of several components:

Environmental education and public awareness workshop

This workshop worked as a kickoff event for the Programme through inviting the Governor, the trainees and the relevant officials to attend a ceremony and a series of lectures about the envisaged programme. This event was a catalyzer for the provision of weight and gravity to the event through the attendance of the Governor, a matter which facilitates and smooths processes for the operating managers in the Governorate.

Training and production of audio visual materials and educational programmes

For a period of 8 weeks the operational managers helped in providing a practical training for a number of 50 participants, representing ENGOs, teachers, GEMU staff and NS Directorates, in order to produce the following educational material:

- Video film on illegal hunting.
- Slide presentation on environmental resources in NS.
- 16 page colour booklet on environmental resources in NS.
- Colour sticker representing the emblem designed for the project calling for a better environment.
- Slide set on important animals of NS.
- 4 different sets of colour transparencies.
- Collection of posters.
- Model representing the three different types of ecosystems in NS.
- Group of students texts.

NS needs assessment and environmental education programme design

One of the prime goals of this Programme is to identify the status-quo of environmental education in NS, so as to point out the advantages and alter the disadvantages of the system. To do that ENGOs circulated a questionnaire among a representative sample of the NS population. Also, the design of an environmental education Programme for NS is to be included in the NSGEAP as a Chapter on environmental education.

Pilot projects

The group of participants who underwent intensive training on the production of environmental educational material was divided into 6 subgroups responsible for the implementation of 6 pilot projects in the field of environmental education in NS: - Planning for a centre for environmental education and public awareness in NS. - Project on Natural Resources in NS - Project on Desertification -Women NGOs carried out projects on problems such as caring for home environment, sustainable use of resources especially water and energy, recycling wastes. - At the primary level, the theme of "Animals of NS and their protection" was thoroughly discussed and instructed. - At the intermediate level the theme of Lyman and Environmental Equilibrium" was thoroughly discussed and instructed. - Two groups were initiated in schools by schools' administrators for the schools' inner environments: "Friends of the Trees" and "Caring for the School Environment".

The idea behind these pilot projects were to generate replicable success through the implementation of these projects in other schools in the region.

Environmental arts and crafts contest

In order to advocate environmental literacy among the population, a competition was launched among students in the NS schools for drawing their impressions about their local environment. 27 students were awarded in this contest. The winning painting should occupy the cover of the NSGEAP. Also, poems about environmental preservation and protection were recited during the delivery of prizes which was attended by the students and their parents.

Equipment and supplies

In order to provide a sense of sustainability, NSEE provided NS Governorate with the following equipment and supplies, all along with adequate training on their management use:

- Overhead projector with portable projection table.
- Transparency maker.
- · Video camera.
- Silk screen printing system.
- · Binding machine.
- Transparency sheets and films.
- Transparency mounts and slide mounts.
- · Semi professional video mixer.
- · TV set.
- · Professional photographic camera.

The idea was that to provide the Governorate with suitable means for any future production of environmental education materials.

Environmental education Centre

NSEE set the blueprint for a centre for environmental education to be sponsored partly by the Governorate and partly by DANIDA. Furthermore, the success of this project was a motivation for the private sector to contribute in the centre. British Gas will help in the provision of more equipment and a better setup for the centre. The institute should be a reference for the whole Peninsula on Environmental Education.

Conclusion

The Egyptian Environmental Action Plan issued by the Government of Egypt in 1992 emphasized the need of the country to have an Action Plan for each and every Governorate. Furthermore, an equal need was admitted towards advocating environmental literacy among the citizens of each and every Governorate. The examples of NS need to be replicated in the 26 Governorates of Egypt. To do this, funding is a major problem as is the example in most of the Developing Countries.

EL Hosseiny's role in the NSEE

As I was TCOE's head of Environmental Education Department, I played the role of guiding, directing and approving the Project Coordinators strategies and plans. Also, I was the inner link between the Project Coordinator and the donor Agency DANIDA. Also, I was the representative of the EEAA, delegated to discuss with the relevant officials in NS the procedures of implementation of the Programme in the Governorate. Also, I was playing the role of quality controller, thus, ensuring that the Project Coordinator is abiding to the Terms of Reference for the job.