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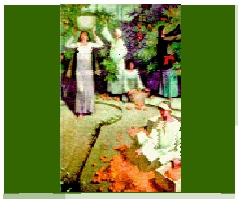

Rural Women's Environmental Behavior and Possibility of Achieving Sustainable Development

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Introduction and Research Problem:

Environment, its pollution and impact on man, animals and plants has been of great concern to the whole world. Despite the abundant writings and awareness campaigns on the subject on both the national and international levels, much still needs to be done because only little has been accomplished towards limiting the risks of environmental pollution.

It is understood that the proper management of environmental resources on the part of rural women, lead to their sustainability. Yet the lack of awareness on how to deal with these resources, and the ignorance about the negative impact of misuse of resources eventually leads to the pollution and constant deterioration of the environment. Moreover, lack of awareness about house, agricultural and animal wastes leads to more insects and the spread of diseases.

In view of the fact that most environmental problems are a result of poor behavioral patterns, attributed in turn to the low level of environmental awareness, it is essential to design strategies to preserve the environment through changing the daily behavior of individuals and groups. Thus, this study is concerned with raising the awareness of rural women, because of the important role they play in agricultural activities and decisions. Rural women play a multitude of roles both inside and outside the home and are the main actors in agricultural production. So, in order to limit their wrong practices, and ensure their effective participation in development, it is important to identify the needs of women and design a training program that include mechanisms for implementation.

Such a program should provide rural women with the required environmental information that would help them modify their behavior and preserve environmental resources. Through the assistance of an NGO concerned with the environment (CEOSS), rural women can be provided with the technical know how and expertise. The program can be adapted and replicated in other governorates in order to maximize its benefits

Objectives of the Study:

Two perspectives will help identify the objectives of the study:

First: Research goals

1.Determine women's level of information about the environment and its resources in the study site

2.Determine prevailing trends among women in dealing with the environment and their attitude towards it (degree of sympathy or neglect).

3.Identify rural women's practices in dealing with the environment and its resources: how to maintain agricultural land and water; how to prevent drainage of resources and their pollution, as well as the practices of food preparation, house cleanliness, and finally field and home protection against pollution.

4. Determine the current condition of the respondents' houses focusing on the construction materials, type of ceiling and floors, sources of water, lighting, type of kitchen and barn and hygienic practices.

5.Determine the importance of the various sources of information for rural women with regard to animal and agricultural production, house and environmental industries as well as women's participation in official and non-official social activities.

6.Identify the personal and family characteristics of the respondents such as age, educational and occupational level, marital status, and type of family, ownership of agricultural land and animals, as well as ownership of house appliances and agricultural equipment.

Second: Applied goals

1.Train coordinators from among CEOSS staff in Bani Suif to collect data from respondents

2.Train CEOSS coordinators and staff to organize awareness raising meetings based on focus group discussions

3.Design an awareness raising program based on actual training needs of rural women and test it on CEOSS beneficiaries, and present it, in its final form, for general application and use by the beneficiaries.

Methodology:

The study was undertaken jointly with CEOSS in five villages only where CEOSS is active. Four of these villages also benefit from the services of the Integrated Development Program and one only benefits from the health care services.

A sample was drawn from five villages in Bani Suif governorate, affiliated to four different administrative centers. All women above the age of 15 in the five villages were included in the sample, totaling 201 respondents. The sample included 29 respondents from Wesh al Bab village of *Markaz* Ahnasia accounting for 14.4% of the sample; forty respondents came from Bani Khalil village, *Markaz* Beba (19.9%); 58 from Al Daiabia village in Al Wasty (25.9); and 41 respondents from Al Nasir village in Samasta (19.4%). Age, education, work, marital status and type of family (simple or compound), occupancy of land, and status of work (whether or not they earn wages), were all taken into consideration. A questionnaire was designed to collect data, in addition to the organization of focus groups.

Findings:

1.Characteristics of respondents and their families:

-Age of respondents ranged between a minimum of 16 and a maximum of 80 distributed over various age groups. Ages of husbands ranged between 20 and 71.

-Rate of illiteracy reached 59.6% among respondents; the highest level of education was middle level accounting for 15.7% and the rest of the respondents fell between the two levels. Illiteracy among husbands amounted to 47.4%; those who have middle level education constituted 27% and those with high education 4%. 93% of the respondents have educated family members and 7% don’t.

-Married women constituted 81% of the sample; unmarried women 7.7%; and widows 11.3%. Women who live in simple families accounted for 79.1% and those in compound families 20.9%.

-The majority of women are housewives (93.9%); 6.1% work for no wage for others; 52% of the respondents' husbands work in agriculture; 30.5% work in agriculture and other occupations. Those who do not work in agriculture accounted for 16.6% and 98.7% of the respondents' families include individuals who work.

-Those who own animals account for 78.6% of the respondents' families; 84.1% own poultry; 58.7% own agricultural equipment; 80.3% own stoves, 46.8% have refrigerators and 60.7% have water heaters.

Participation of rural women in economic activities:

-With regard to agricultural activities, the highest percentage of women were engaged in harvesting (79.5%); storing (77%) and packaging (74.5%). Women were less involved with spraying pesticides, ploughing, and marketing which accounted for 55.3%, 52.8% and 50.3% respectively.

-With regard to animal production, women's involvement with buying animals accounted for 50.6%, while the highest percentage of women were involved with the preparation of a place for the animals (8.9%), followed by preparing animal food (84.8%).

-With regard to the production of poultry, the highest percentage of women participated in cleaning the place and buying chickens (93.5%), while the lowest rate of participation was in marketing (49.7%)

-On the participation of women in home and environmental industries, a large percentage participated in baking and making bread and pastries (87.1%) and the lowest percentage was engaged in rug and carpet making (2%).

Participation of women in social activities:

-Findings pointed to the low level of participation in official organizations (6.5%); in agricultural cooperatives (5.5%), and in parents' school boards (1.5%).

-Findings indicated the high level of respondents' participation in unofficial social activities. The highest rate was in exchanging visits with villagers (90%) and the lowest in resolving conflicts and disputes.

-With regard to the participation of women in community service projects, the level of involvement by contributing land, money, efforts or opinion declined to reach 20.9% only specifically for planting trees in the village streets.

Respondents' average environmental information:

-Findings indicated no difference in the level of environmental knowledge among the different age groups. In fact the average grade of environmental knowledge was high among housewives but higher among women who work for others in return for a wage. Knowledge was higher among married rural women compared to unmarried women, perhaps as a result of their own husbands' more superior knowledge.

- 51.5% of the respondents obtained high grades in the area of protecting the environment against pollution. There were no significant differences among the different age groups with regard to knowledge in this area.

Rural women's environmental practices:

Practices related to draining water and soil: Findings indicated that 4.7% of the total number of families who occupy agricultural land have used part of their land for construction; 1.3% let the land lie fallow, so they can sell it for construction purposes; 44.8% over irrigate their land; 17.3% do not clean their waterways, and 50,3% do not clean their water waste area. The families of 74 respondents ie 51.4% of the sample own agricultural land.

Practices that lead to the pollution of the environment can be summarized in the following:

-Findings indicated that 76.4% of the respondents use chemical fertilizers according to instructions and 75.2% use chemical pesticides according to instructions.

-Wrong practices in disposing of pesticide cans included washing and re-using them, and throwing them away

-Wrong practices with regard to disposing of agricultural waste included burning and storing on the house roofs. 75.3% of the respondents did that.

-55.7% of the respondents got rid of dead animals and poultry by burying them and 44.3% followed other wrong practices

-With regard to animal waste, 81.2% used the waste as fertilizers, 19.7% buried it, while 22.5% buried poultry waste.

Home practices that result in pollution:

-42.8% prepare food in a separate place; 65.5% used their own tap water or their neighbors' tap while 33.5% used water pumps as a source of water.

-95.9% use kerosene for fuel and 75.3% don't spray insecticides in the kitchen

-26.4% dispose of garbage using the proper way of putting it in a plastic bag and giving it to the garbage collector.; 73.6% don't follow this procedure.

Practices of preparing and selecting food

-All respondents use aluminum utensils for cooking and 35.8% eat vegetables and fruits two to five days after spraying them. Findings indicated that most of the respondents carefully select their meat, poultry, fish and eggs before eating them

Sources of environmental knowledge:

The television is the main source of information on the environment for most of the respondents (58.4%), followed by the radio (36.3%), friends (32.8%), then newspapers and magazines (23.4%). Technical bulletins were the least important of all sources of environmental knowledge mentioned by 18.4% only probably because of the predominant illiteracy.

Below are some significant applied findings:

-Training some of the female promoters as well as some male promoters who work with CEOSS to collect data

-Train promoters and CEOSS staff to hold and organize meetings to raise the awareness of rural women based on general discussions

-Design a training program to raise the awareness of rural women and enhance the level of their knowledge and keenness to preserve the environment

Components of the training program include the following topics:

The environment

Draining environmental resources in the Egyptian rural areas

Pollution by pesticides

Home pollution

Food pollution

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About the Program

The Egyptian Partnership in Development Research Program aims to inform development policies and strategies by linking those who conduct research with those who can utilize its findings to promote development in local communities. It promotes a research agenda which is responsive to the needs and priorities of local communities. The program is characterized by a multi-disciplinary, demand-driven, and participatory approach. The program began in Egypt in 1999. The program is directed by an Advisory Board of prominent members who are concerned with development issues.

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