

The Impact of Fish Farms on Rural Development

Villages in Beheira Governorate

By Dr. Mohamed Samir Mustafa Al Daly

Research problem and objectives:

Future investment in fish farming is the ideal solution for the problem of animal protein in Egypt given the country's favorable water, soil and technical environment. In the last 20 years the production of fish farms has risen from 200,000 tons to 320,000 tons in 2001 yielding EP 3 billion revenues.

This study seeks to identify the social and economic characteristics of a sample of fish farmers as well as their knowledge about fish farming and attitudes towards it. It will also attempt to identify the problems that obstruct fish farming projects and the farmers' suggestions on how to overcome them. The study will also address the economic, social and environmental returns of fish farming and will outline programs to design similar developmental projects in other governorates.

Methodology:

Two steps were undertaken to conduct the study: Field work in some villages in Beheira governorate and awareness raising meetings and seminars to spread the idea of fish farming in the villages. Two tools were used to collect data: a questionnaire and participant observation. The study took place in 21 villages in the district (*markaz*) of Rashid, Edco, Housh Issa, and Al Mahmoudia. A sample of 360 respondents was selected following a pilot study to ascertain the validity of the data collection tools.



Findings:**First: Level of knowledge and attitudes towards fish farming:**

Several fish farming methods are used including breeding in basins and farms, in cages floating on the Nile and on rice fields.

Findings pointed out that 32% of the respondents have full knowledge of those methods while 68% have partial or limited knowledge of fish farming in floating cages. Among fish farmers who use fish farms and basins, 78% had full knowledge of the technical recommendations, while 22% had no knowledge at all. With regard to fish farming in rice fields, 64% were in favor of this method, 22% were neutral and 14% were in opposition.

Second: Problems facing the implementation of fish farming projects and relevant suggestions:

The study revealed the following problems that obstruct fish farming:

- The presence of wild sea lobsters;
- laws and legislation that obstruct fish farms and fish cages,
- shortage of needs of production such as small fish,
- the spread of fish diseases,
- sale of fish at cheap prices,
- lack of technical knowledge for the production of fish,
- absence of associations and syndicates for fishermen,
- dumping sewage water in Edko lake without treatment, and
- spraying pesticides.

The researchers suggest the following:

- Setting up a syndicate or association to sell fish products and prevent overpricing;
- Raising awareness about fish farming;
- Providing small fish and food materials at reasonable prices;
- Facilitating procedures to obtain licenses to set up fish farms.

Third: Impact of fish- farming on the development of the local community and the environment:

The majority of farmers asserted the importance of creating new job opportunities, providing fish at reasonable prices, and increasing income from fish farming. They also asserted the need to enhance information and knowledge about fish farming and stressed that using pesticides causes water pollution and that contaminated fish harm human health.

Fourth: Economic study of fish breeding

Breeding fish in cages and in basins and fish farms is economically remunerative and yields returns in the ratio of 1:8.4 and 1:9.1 while the ratio on rice fields is 1:2.9. The two million feddans covered by rice in Egypt could generate EP 400 million if cultivated by fish. A program to apply this kind of farming in other governorates similar to Al Beheira has been designed.

Recommendations:

- Raise awareness on how to use rice fields for fish farming and the required tools for this kind of fishing
- Educate people on how to get small fish to adapt to life in fish farms before placing them in rice fields.
- Find solutions for the problem of wild fish which are detrimental to smaller fish.
- Raise awareness about suitable land for breeding fish in basins and fish farms.
- Increase the number of educators in the area of fish farms.
- Open marketing outlets for fish farm products.
- Set up a syndicate or an association for fishermen or individuals who undertake fish farming in Edko and Rashid.
- Pay attention to literacy programs targeting fish farmers.
- Complete the sewage water treatment project in Edko.
- Provide food materials for fish at appropriate prices.
- Raise awareness about appropriate time and ways of marketing and available markets.
- Facilitate procedures to obtain licenses to set up fish farms and fish basins.

About the Author

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