

The consultation held in the seminary NEW TRENDS IN AQUACULTURE - SECTOR STRATEGY APPROACH remarks the positive results obtained up till now by the project financed by the Italian cooperation.

The Italian and Iranian Governments are reinforcing political and economic relations in consideration of reciprocal interests in the exploitation of Iran raw materials and for exporting Italian technology, industrial products and consumer goods.

In this context it is crucial to support the civil society and the economic sectors, promoting projects and investing in local human resources, considering that the peace processes and the legal economic activities are strictly connected to development programmes.

Italian Cooperation, UNDP, SHILAT IFO and CIRSPE are managing the Aquaculture Development Project in Sistan Baluchestan Province since may 2005, with the target to reduce the social imbalance, raising the income level o the local populations and communities, through the reinforcement and dissemination of aquaculture.

The Italian Ministry of Foreing ffaris is financing the project “Aquaculture development in Sistan Baluchestan” (act n.49; 24/6/2003; N. aid 6945.01.3), identifying the UNDP as International Agency in Iran, allocating the project budget in the beneficiary Country with the modality of cost-sharing agreement. The project budget has a funds of “3.034.000.00 EURO” by grant.

In Sistan Baluchestan Province there are interesting prospects for the development of this sector, but along with the high potential recognised by the central system, which continues to invest on structures and equipment, there are unmistakable problems of growth and consolidation strictly connected to macroscopic and evident limitations in terms of technology, service and marketing.

The project begun on 19th of May 2005 and the activities planned to last 36 months and its conclusion is foreseen for May 2008.

The project consists of 2 initiatives in 2 zones of the province (Sistan and Baluchestan). The first zone of interest for the purpose of the project is that on the border with Afghanistan, around the city of Zabol. This reality, which features facilities for the fattening of trout and carp run on a family level shows a production limitation that can be traced to the fluctuating availability of seed fingerlings, an annual uncertainty that prevents these family enterprises from properly planning their activities.

In this situation the water conflict between Iran and Afghanistan (Hamun lake) is another elements of social and economic instability.

The second zone for the project activity is in the south of the Province. A large facility for the shrimps raising (600 hectares) has been constructed near the location of Gowater, roughly 110 km to the east of the city of Chabahar.

According the Project Proposal financed by the Italian Ministry of Foreign Affairs (act n.49; 24/6/2003; N. aid 6945.01.3), the project consists of:

- production initiatives both in the public facilities of the SHILAT (Zabol/Zahak hatchery) and in the private farms (Chabahar/Gowater), with the results to be transferred to the private beneficiaries (the extension service of the SHILAT, seminars, Internet/newsletter);
- training reserved for the technicians of the SHILAT/the Ministry of Agriculture, with forecast fall-out on the private operations, given that the individuals trained are employed in the extension service;
- supply of technology and items useful to the project pilot activities to demonstrate the worth of the new production strategies and, finally, testing and proposing technical packages innovative and, at the same time, appropriate to the context.

The general objective of the project is to reduce poverty and social imbalance while raising the income level of the local populations and communities in the *Province of Sistan-Baluchestan through the reinforcement and dissemination of aquaculture activities*.

The project wants to expand and reinforce aquaculture activities in terms of both production/technology and economic results; to raise the socio-economic level of the groups and populations involved.

The specific objectives, therefore, are:

- i) Identification of valid production strategies for aquaculture in Sistan-Baluchestan;
- ii) Identification of technologies that are appropriate for both the different contexts (fresh water and sea water);
- iii) Expansion of the production base and diversification of the product;
- iv) Institutional capacity building for Ministry of Jihad Agriculture and professional growth on the part of the SHILAT-Iranian Fisheries Organisation .

The project is structured in 3 components consisting of technical assistance, training and the supply of technology/equipment and the Project Proposal underlines the following expected results.

a) Operating strategies correlated to the market (species, sizes, period of sale, markets) in the 2 sectors of shrimp and fresh-water aquaculture (at least 2 strategies per sector shall be drawn up). The productive pilot activities in Gowater (Chabahar) will test different strategies based on the stocking density, feeding and fertilisation, comparing the different results both from productive and economical point of view. Attention will be given to diseases that in other region of the world and also in Iran can affect the rearing, reducing the economical sustainability of this sector. In Zabol area the project will evaluate the technical and economical sustainability of different species, such as trout, carp and other cyprinids, remarking the importance of the native species *Schizostorax zarudny* From this point of view, a new component of the project is related to Hamun lake and to the social opportunity to develop the fishery sector.

b) Innovative technological packages

Under the project, technological packages shall be prepared for fish hatchery activities and shrimp rearing within the two different contexts (Zabol and Chabahar) (at least 2 packages per sector shall be prepared and tested, for instance oxygenation system, stocking density, carp reproduction, pre-fattening etc.).

c) Expansion of the production base and diversification of production

Production diversification reduces the risks of business operations; with this in mind, new species shall be considered for aquaculture.

d) Synergies between public (SHILAT)/private sectors

Improving the capacity of the public service, necessary for the new responsibilities and assignments tied to a great dissemination of operations, with the training of personnel, especially in management and technical activities. Reinforcement of the extension service, with the undertaking of a clear-cut effort to disseminate the technologies prepared during the project activities. Specific initiatives (Internet, Newsletter, Seminars, Interviews) will be organised to donor visibility, both international and national, in part to contribute on bringing together supply and demand (technology and production).

The seminary conducted a project field activities analysis, in relation with the new aquaculture trends, having in mind the final project target to identify development sector strategy for the Sistan Baluchestan Province of the Islamic Republic of Iran, such as example of extreme and difficult area both from social and technical point of view.

The seminary achieved the following outcomes:

- A) identification of opportunity
- B) Constrains
- C) Strategies required to address the key issue;
- D) Programme contents to implement the strategy in other development projects.

A) Opportunities

The main aquaculture opportunity in Sinsta Baluchestan are as follows:

- 1) Importance to develop small scale freshwater aquaculture in rural area such as Zabol
- 2) Planing of freshwater fishery according ecological and responsible approach
- 3) Consolidation of shrim rearing activities in Chabahr complex

B) Constrains

The stakeholder consultations identiphied these main constrains related to the above sector opportunitites:

Freswater sector

- 1) cash flow for the rural aquaculturist
- 2) high quality seeds for rearing
- 3) permanent technical indications/assistance
- 4) marketing approach

Freshwater fishery

- 5) lack ecological and biological data

Shrimp sector

- 6) Need to increase PL production in Chabahr complex
- 7) Strategy to reduce production cost (ex nursery approach)
- 8) cash flow for shrimp farmers
- 9) permanent technical indication assistance
- 10) Disease permanent controll
- 11) Marketing constrains

D) Strategy

According to the above constraints the seminary indicated the following strategy

- 1) Development of microcredit action by Iranian Institution and International Donors
- 2) Improvement of hatchery activities to produce high quality fingerlings (20 gr) in Zahak hatchery and need to improve the Shilat management in this hatchery
- 3) New definition of the extension service by public and private synergies
- 4) Definition of marketing approach by offer concentration
- 5) Support to the fishermen by microcredit to collect data
- 6) Bank support/credit for hatchery rehabilitation, new construction and management
- 7) New definition of the extension service in shrimp rearing
- 8) Distribution of rearing protocol to the farmers
- 9) Marketing approach by offer concentration

E) The seminary to manage the above described strategy suggest the implementation of the following programme:

Programmes	Proposal	Execution
a) Support to aquaculture in rural area by business incubator.	a) International Donor	a) UNDP
b) Zahak hatchery improvement	b) SHILAT	b) National funds
c) Public/private agreement for extension services/technical programme	c) International Donor	c) Donor/SHILAT
c) producers associations	d) International Donor	d) International cooperation
a) Hatchery/repopulation of water bodies	a) SHILAT	a) National funds
a) Agricultural credit/grant	a) Iranian Bank	a)
b) Quality Technical control programme	b) Quality Technical control programme	b) Quality Technical control programme
c) Business incubator	c) Business incubator	c) Business incubator
d) Public/Private agreement	d) Public/Private agreement	d) Public/Private agreement
e) Local Technical Unit	e) Local Technical Unit	e) Local Technical Unit
f) Producer association	f) Producer association	f) Producer association

Example of methodology approach

Opportunities	Constrains	Strategy	Programmes
Development of small scale freshwater aquaculture in rural crucial area (Zabol)	<ul style="list-style-type: none"> a) lack of cash flow b) good seed availability c) lack of technical indications c) marketing 	<ul style="list-style-type: none"> a) Microcredit b) fingerling (20 gr) production c) Extension service c) offer concentration 	<ul style="list-style-type: none"> a) Support to aquaculture in rural area by business incubator. b) Zahak hatchery improvement c) Public/private agreement for extension services/technical programme c) producers associations
Ecological fisheries freshwater bodies	<ul style="list-style-type: none"> a) Biological data 	<ul style="list-style-type: none"> a) fishery resources support 	<ul style="list-style-type: none"> a) Hatchery/repopulation of water bodies
Consolidation of shrimp rearing in crucial area Chabahr complex	<ul style="list-style-type: none"> a) PL production b) Production cost c) Lack of cash flow d) Technical indication e) Disease control f) Marketing 	<ul style="list-style-type: none"> a) hatchery improvement b) PL/feeding quality control c) Micro credit d) Extension service e) Rearing Protocols f) Offer concentration 	<ul style="list-style-type: none"> a) Agricultural credit/grant b) Quality Technical control programme c) Business incubator d) Public/Private agreement e) Local Technical Unit f) Producer association