

Policies and Socio-economic Impacts of Aquaculture: What is Happening and What is Next?

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Recent years have seen an increasing role of aquaculture in social and economic development at national levels. This growing importance has called for the need for adequate planning to avert potential negative impacts of aquaculture and for policies that ensure a good distribution of benefits accruing from the development of the sector, thereby by ensuring its sustainability.

ON-GOING NORMATIVE WORK ON SOCIO-ECONOMIC IMPACT ASSESSMENT AND POLICY DEVELOPMENT IN AQUACULTURE

To respond to this need, the FAO Fisheries and Aquaculture Department organised two Expert Consultations in these areas in early 2008. The first consultation on “Assessment of socio-economic impacts of aquaculture”¹ debated on the many positive and negative impacts of aquaculture, including those on land and land-based habitats, water and wild species, the downstream and upstream industries of aquaculture, infrastructure, incomes, employment, food supply, food quality and safety, food access, food stability, human health, education and training, population and demography, and community and social order (Box 1), and emphasized that these impacts have profound interdependence and far-reaching socio-economic implications, which makes the task of assessing them difficult.

Experts agreed that Multi-Criteria Decision-Making (MCDM) frame-

Box 1. Framework for impact identification, with some examples of indicator categories

Natural Capital/Resources <ul style="list-style-type: none">- Land, e.g. rent- Water, e.g. rent- Wild stocks, e.g. biodiversity, biosecurity	Social Capital/Resources <ul style="list-style-type: none">- Social institutions and legal framework, e.g. property rights, customary rights, corruption, producers' organizations, community-based organizations, trade unions.- People's attitude (social acceptability)- Community cohesion and social order, e.g. morality, poaching, community organization- Cultural change- Equity- Indigenous people's well-being
Human Capital/Resources <ul style="list-style-type: none">- Employment- Health, e.g. Health Impact Analysis- Education and training- Research- Migration- Gender	Financial Capital/Resources <ul style="list-style-type: none">- Incomes, e.g. Income distribution, poverty, foreign exchange- Investment, e.g. FDI and capital flows, private and public investments- Fiscal policies, e.g. taxes, foreign exchange, international trade, subsidies- Financial institution/credit
Physical Capital/Resources <ul style="list-style-type: none">- Food security, e.g. Food supply, food quality and safety, food access, food stability- Infrastructure- Other industries	

work using Analytical Hierarchy Process (AHP) as a measurement technique is a suitable method for assessing socio-economic impacts in a situation where multiple attributes are important and cannot be easily reduced to a single monetary measure of impacts as is the case in aquaculture. However, because of the tangibles which can be evaluated in monetary terms and the intangibles which are difficult to quantify in monetary value in socio-economics of aquaculture, and given the wide range of impacts to assess as well as various circumstances, experts agreed that there is no single method which could be used to assess the socio-economic impacts of aquaculture. In addition to MCDM using AHP, they suggested that other techniques such as the Cost Benefits Analysis (CBA) could also be used depending on circumstances.

The second consultation was on “Improving planning and policy development in aquaculture”². In this context, the consultation made major strides towards the definition of the various outputs of the planning processes: policy, strategy and plan (Box 2) and produced a detailed outline of the technical guidelines in improving policy and planning in aquaculture (Box 3).

While highlighting the importance of legitimacy, participation in policy and planning processes, experts stressed the inevitability of trade-offs and the possible resort to hard-choices in specific circumstances. They emphasized that coordination was one of the most important component of the policy implementation discourse; it is needed everywhere: in research, extension, legislation, between the public and private sectors and amongst donors.

Box 2. Agreed definitions of aquaculture policy, strategy and plan

- a. An aquaculture policy consists of a broad vision for the sector, reflecting its directions, priorities and development goals at various levels including provincial, national, regional and international.
- b. A strategy represents a roadmap for the implementation of a policy and contains specific objectives, targets and instruments to address issues which might stimulate or impede the comparative advantage of the sector and obstruct its development.
- c. An action plan represents a roadmap for the implementation of a strategy, that is, to achieve its objectives and implement strategy instruments. It is time-bound, contains specific programmes and activities and details the resources required to achieve them.

WHAT'S NEXT?

The work on these two key topics in aquaculture economics and policy does not end here. Important recommendations were made for FAO to pursue its endeavour in the documentation and analysis of policy formulation and impact assessment processes. These included, amongst other, case study documentation of the use of AHP, CBA and another technique to test and compare the applicability and results of these methods in assessing socio-economic impacts of aquaculture. Building capacity in developing countries in using the identified techniques was also recommended.

Moreover, experts recommended a compilation of “best practices” in policy formulation and implementation, and a synthesis of analyses (including cost/benefit) of the efficiency of policy formulation and implementation instruments in a number of developed and developing countries. The Department will work towards responding to these recommendations. For example, the development of a user guide on the implementation of methods for assessing the socio-economic impacts of aquaculture and the creation of a repository of policy information could be a means of

building capacity in these areas in developing countries.

¹ FAO. 2008. Report of the Expert Consultation on Assessment of Socio-economic Impacts of Aquaculture, Ankara, Turkey, 4-8 February 2008. FAO Fisheries Report No. 861. FAO, Rome.

² FAO. 2008. Report of the Expert Consultation on Improving Planning and Policy Development in Aquaculture, Rome, Italy, 26-29 February 2008. FAO Fisheries Report No. 858. FAO, Rome.

Box 3. Outline of the FAO Technical Guidelines on Improving Planning and Policy Formulation and Implementation for Aquaculture Development

THEME 1: POLICY FORMULATION PROCESS

Guideline 1.1: Aquaculture policy should reflect relevant national, regional and international development goals and agreements.

Guideline 1.2: The aquaculture sector should be enabled to develop optimally and sustainably.

Guideline 1.3: A legitimate and competent authority should lead the policy development process.

Guideline 1.4: General policy formulation approaches from other relevant sectors could be adopted and adapted for aquaculture purposes.

Guideline 1.5: Consultation with stakeholders should be as extensive as possible.

Guideline 1.6: Policy development based on consensus is desirable

THEME 2: POLICY IMPLEMENTATION PROCESS

Guideline 2.1: Implementation of policy should be operationalized through a set of well-defined strategies and action plans.

THEME 3: SUPPORTING POLICY IMPLEMENTATION

Guideline 3.1: Effective implementation of aquaculture policy requires systematic coordination, communication and cooperation between institutions, tiers of governments, producers and other stakeholders.

Guideline 3.2: Where possible, decisions should be taken by the lowest level competent authority according to the principle of subsidiarity.

Guideline 3.3: The development of human and institutional capacity should reflect sectoral needs (e.g. producer, research, management, trade development, regulatory and associated societal levels).

Guideline 3.4: In order to effectively implement policy, adequate resources need to be identified and allocated.

Guideline 3.5: Policy development and implementation should be supported by a suitable legal framework.

Guideline 3.6: Incentives, where appropriate, should be used to encourage good practice throughout the sector.

Guideline 3.7: Aquaculture policy implementation should be supported by appropriate research.