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The PISCES Project

The European Forum for Aquaculture Education and Training www.pisccestt.com

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DOES AQUACULTURE POLLUTE THE ENVIRONMENT – FACTS VS FICTION

The question - "does aquaculture pollute the environment?" - can be answered by saying that aquaculture, like any other economic and social activity, does not pollute the environment because the term 'aquaculture' is a theoretical description encompassing practical applications and activities. It is possible that single farms could cause negative environmental effects, as is true of every economic activity from agriculture to the industrial sector, wherever they do not operate in compliance with the legislative regulations laid down by public authorities.

Before considering the relationship between aquaculture and the environment, and for a better understanding of these two concepts, it is necessary to focus individually on each.

The origins of aquaculture date back to the third millennium B.C., when in Egypt and China there was wide spread practice of raising of certain fish species in tanks. A representation of men fishing in a pond has been discovered in a bas-relief engraved on the tomb of Aktihetep.

Over the centuries, aquaculture activities spread all over the world and present-day breeding technologies are so sophisticated and efficient that around one third of all the fish consumed globally for food use comes from aquaculture facilities. It is important to note that over recent decades a rapid expansion of the sector has taken place.

In the same period of rapid development of the aquaculture sector, a social phenomenon has come to the fore: the growth of the so-called "ecological" movement. Nowadays, this cultural movement, which is very sensitive to environmental issues, is present all over the world with "green organizations" e.g. Greenpeace and WWF active in many countries.

It is important to point out that some environmentalists are critical - more or less constructively - of the aquaculture sector because they believe, in line with the "ecological" mindset mentioned above, that farms cause adverse effects in the environment.

It is a well-known fact that farms, along with any other economic unit, produce an environmental impact while not necessarily being a "source of pollution".

Indeed, there is a substantial difference between "pollution" and "environmental impact". The word "pollution" is used when an environmental condition has been degraded if compared to a previous optimal condition. The word always has a negative connotation. On the other hand, by "environmental impact" we refer both to the positive and negative effects of one specific activity (in terms of interaction with the surroundings from an environmental, social and economic point of view - e.g. the building or the presence of an airport, a farm, a tourist village.



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The setting up of a farm in a certain area, and its regular activity give rise to:

- *Different impacts affecting landscape, local traditions, the quality of the waters and the local economy (all these effects represent the environmental impact);*
- *A constant quantity of undesirable outputs generated by the common productive cycle which, if not adequately managed, can act as a source of pollution in the surrounding environment.*

In order to guarantee that the whole community's interests should be safeguarded, legislation is passed at a national and European level in order to provide for the environment ("ecological" norms) and consumer safety (hygiene and sanitary norms).

Today, enterprises operating in the aquaculture market, as in any other economic sector, act in full respect of the legal framework, except for some individual isolated cases.

Farmers are fully aware of the fact that the only way to reach consumers, who are more and more sensitive to environmental matters and to the quality of the product than ever before, is through responsible aquaculture (The use of the word "responsible" was introduced in 1995 in the Code of Conduct for Responsible Fisheries produced by FAO (article 9 entitled "Development of Aquaculture" illustrates the route to a responsible development of aquaculture)).

Pollution

An increasing ecological awareness has quickly spread in all EU countries after the first alarm signals about the health of our planet. In aquaculture, as in other sectors, the analysis of the relationship between production and generated pollution is of paramount importance.

Regulations in the industry

Aquaculture activities are regulated by means of legislation originating at European, national and local authority level. Most of the regulations in force concerning aquaculture activities are designed to safeguard both natural resources and consumer safety.

Industry investment in environmental concerns

In the last few years, European farmers have allocated significant resources to reducing the negative environmental impact of their activity and therefore pollution. This was done both to comply with legal regulations and to meet consumer demand. Indeed, consumers are now greatly concerned about the quality of products and they insist that production techniques must be environmentally friendly and in line with commonly accepted ethical values.

Sustainability

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Brussels, 15.5.2001 COM (2001) 264 final). This represents the foundations of the "responsible fisheries" concept as provided for by FAO and by the "Code of Conduct for European Aquaculture" produced by the FEAP (For further information visit the web site http://www.feap.info/consumer/codes/feapintro_en.asp or download the following file <http://www.feap.info/FileLibrary/6/CodeFinalD.PDF>).

For more information on this topic visit the PISCES Forum at:

http://www.piscestt.com/pisces/hottopics/pollute0_en.asp