EUS in Zambezi River: what can we do?

The recent fish disease outbreak in Zambezi River system, diagnosed as Epizootic Ulcerative Syndrome (EUS), could pose serious threats to capture fisheries, aquaculture and aquatic biodiversity and the communities dependent on Zambezi River for food and livelihood.

EUS, a serious fish disease of many countries (e.g. 15 countries in Asia-Pacific and the USA) since the first outbreaks in early 1970s, caused significant loss of income to fishers and fish farmers and negative biodiversity and social impacts. In Asia, the disease spread through various pathways, mainly through the movement of the pathogen and/or the infected fish in natural waterways. Cross-border movement of fish and ornamental fish industry also contributed to the spread of the pathogen. In Africa, disease spread pattern and pathways need to be carefully reviewed to understand the epizootiology of the disease and the environmental factors associated with its occurrence. There are currently more than 100 species of fish susceptible to EUS in Asia, many EUS-susceptible fish has been detected in Africa too.

Most communities living along the Zambezi River system are poor and vulnerable. Most of them directly depend on the river and its resources, particularly through fishing, fish farming or related activities. Besides agriculture, the main protein source of their diet comes from fish caught from the river.

Managing a disease epizootic in natural waters is not an easy task. In fact it could even be impossible. However, the direct and indirect risks of such epizootics to communities and natural biodiversity could be reduced through appropriate planning, preparedness and response, improving national capacities and by educating and increasing awareness among the communities. Although managing an epizootic in natural waters is difficult, aquaculture establishments taking water from natural sources where contamination is possible, could possibly be dealt with through adaptive management. Understanding of the disease, its manifestation, spread pattern, can help in developing management strategies to reduce the risks to culture systems. This can further reduce the risks to the communities that depend on such farming activities.

Education and awareness of communities of both affected and unaffected locations/zones on risk factors and promoting responsible trading of live aquatics are key to disease prevention; early warning, targeted surveillance and reporting are key to minimizing disease spread. Since EUS is a transboundary disease which respects no borders, regional (as well as international) cooperation will be essential to minimize the impacts of the disease.

The countries sharing Zambezi waters requested FAO for an emergency assistance to build national capacities to reduce the potential risks and threats to future epizootics and to prepare a regional emergency response plan and a strategy. FAO is working with seven countries sharing Zambezi waters to find a solution to what could be a serious problem.

Seed Resources for Sustainable Aquaculture

Seed is one of the most important resources to aquatic production, alongside with land, water, feed and human and technological resources. Harvests from freshwater aquaculture will continue to substantially contribute to global aquatic production. The freshwater seed sector is considered as one of the most essential and profitable phases in aquaculture production and particularly important to rural aquaculture. Efficient use of freshwater fish seed resources will be necessary to guarantee optimum production. A project Study and Analysis of Seed Production in Small-Scale Aquaculture was implemented through a desk study and an expert workshop to assess the status of freshwater fish seed resources and supply and its contribution to sustainable aquaculture. In order for the sector to develop in a sustainable manner, an enabling environment will be required in terms of basic production and human infrastructure, financial/business/marketing support and policy and legal frameworks. As severe challenges will be faced concerning water allocation and land use for aquaculture production, careful consideration concerning seed quality and seed certification, genetic improvement, broodstock management, seed networking, partnership with private sector and enhanced support to small-scale aquafarmers will be essential for the sustainable development of the freshwater fish seed sector. FAO Fisheries Technical Paper 501 provides details of the outcome of the desk study and the expert workshop. For further information, please contact Melba Reantaso at Melba.Reantaso@fao.org