ASIA'S LARGEST LAGOON ECOSYSTEM NOW ON SUSTAINABLE COURSE FOR THE FUTURE

WORKING FOR the communities of Tam Giang–Cau Hai lagoon in Viet Nam

WORKING TO ensure sustainable use of the entire lagoonal ecosystem

WORKING WITH fishery associations, local and provincial governments

WORKING THANKS TO Viet Nam, Italy and the Veneto region

Nowadays, new demarcation markers dot the Tam Giang–Cau Hai lagoon, designating the use local people have assigned to specific areas. They stand as visible signposts, their existence pointing to the success of the FAO Integrated Management of Lagoon Activities (IMOLA) project. Focused on putting the lagoon on a positive future course, the project is allowing the many communities who share this expanse of water to do so in a way that sustains both their livelihoods and many natural resources.

With 22 000 hectares of water surface, the Tam Giang–Cau Hai in Viet Nam's Hue province is the largest lagoon ecosystem in Southeast Asia. The body of water has 33 communities and 326 villages around its edges, home to some 100 000 people who depend on it directly for their livelihoods from capture fisheries or aquaculture. A further 200 000 depend on the lagoon indirectly for activities such as aquaculture in nearby coastal areas. In short, the lagoon provides rice, fish and income for a third of Hue's one million people.

In 2005, the largest lagoon ecosystem in Southeast Asia was in biological, social and economic disarray. Ponds were constructed illegally or in areas that constricted the lagoon's tidal circulation, mangroves had been cut to make room for aquaculture development, and unregulated fishing had led to overfishing and depletion. In short, the situation threatened the food, nutrition and income security of the 300 000 people in Viet Nam's Hue province who relied on the lagoon. Today, thanks to the response of local people, and capacity development in the FAO Integrated Management of Lagoon Activities (IMOLA) project, a lagoon-wide census has set targets for reducing the number of aquaculture ponds, and essential habitats such as mangroves are being replanted. Meanwhile fishery associations have developed plans that enable locals to manage their activities collaboratively, using approaches that allow the fish population to rebuild while still providing fishers with the catches they need.

IDENTIFYING PROBLEMS, FINDING SOLUTIONS

When the project started, there were few regulations governing the many aspects of lagoon use. Mangroves, the crucial habitat and nursery for many species of marine life, had been cut to make room for aquaculture ponds, mainly for growing shrimp. In turn, overly intensive aquaculture practices had caused pollution from excessive feed, organic waste and untreated wastewater. Many ponds had been built illegally, some in areas that interfered with the tidal circulation

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needed for mixing the waters of the lagoon with the fresh seawater beyond its inlet. Unregulated trap fishing had depleted fisheries resources to such an extent that the catch was mainly of juvenile fish.

The FAO IMOLA project began in 2005 with a "bottom-up" ecosystem approach to fisheries management. This included working with communities around the lagoon to raise their awareness – not just of the importance of establishing fisheries management plans to ensure sustainable use of their lagoonal resources, but also that their fishery and aquaculture activities were a key part of a much larger world of environmental, economic, social and governance issues.

FAO helped the local communities set up 26 fishery associations and supported the improvement of 9 that already existed, creating a means of managing activities that covered 80 percent of the lagoon's area. With Geographic Information

System (GIS) technology introduced by FAO, the fisheries associations and the government made master maps and replanned the uses of the lagoon – creating and marking areas designated for nurseries, capture fisheries and aquaculture. During lagoon mapping, they found more than 6 000 ponds built around the shores – many of them illegal, many abandoned. Thanks to the mapping and to improving governance of tenure of these areas, there is now a master plan to reorganize the ponds in a way that will allow production and growth that is both environmentally friendly and sustainable.

WORKING TOGETHER, LOOKING TO THE FUTURE

Working together, the associations have established a representative body that works with government authorities to manage people's activities and the lagoon environment. When the government granted control over fishing activities to the local associations, the latter reduced their members' capture fisheries activities by some 30-40 percent as part of their management plans. This cutback actually has allowed these resources to rebuild and now, using fewer traps, they are catching bigger fish and in a more efficient way. As people have become aware of

the interrelationships within the ecosystem – realizing that their catches are not only due to luck or skill but also influenced by factors in the hills above them and in the aquaculture ponds next to them – they have worked their way up the hillsides, and now include logging and other issues in their planning.

Although the most immediate aim of the project has been to improve the livelihoods of those who depend on the lagoon – by implementing sustainable fisheries and aquaculture management plans – adopting the plans has had an added benefit. The lagoon, and thus the people depending on it, is more resilient to the recurring natural disasters and floods that are predicted to worsen with climate change. The project's long-term legacy is that across all lagoon activities – from fishing, aquaculture and processing to the use of new information systems – this body of water will continue to provide livelihoods for the local communities in a way that will sustain its many economic, social and natural resources for the future.