

PRESS RELEASE

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THE FUTURE IS NOW: PLANNING SCENARIOS HELP WEST AFRICAN FISHERIES ADAPT TO CLIMATE CHANGE

12 May 2010, Penang, Malaysia, and Dakar, Senegal — Better understanding of the likely effects of climate change on West Africa's valuable ocean fisheries is needed to guide the sustainable development of these resources in line with the aspirations and expectations of fisher communities.

This was a finding of the workshop *Envisioning 2050: Climate Change, Aquaculture and Fisheries in West Africa*, which took place on 14-16 April in Dakar, Senegal. The event attracted experts from Ghana, Mauritania and Senegal to debate critical issues facing their fisheries in the next 40 years. Participants concluded that the future will pose dilemmas and uncertainties: Can aquaculture address both national food security and macroeconomic growth? Should regional trade be promoted or access to global markets prioritized? How will climate change affect fishery resources, especially small pelagic fish like sardines, which are an important export commodity for Senegal and Mauritania? The consensus was that understanding the implications of various possible scenarios and developing strategies to address them now is urgently needed.

In West Africa, fish is important to food security, livelihoods and trade. Fish contributes over 30% of the animal protein consumed in the region and accounts for 27.8% of West African agricultural exports, earning indispensable foreign exchange.¹ However, West African fisheries are under tremendous pressure from overfishing — pressure that may worsen with global warming. While strong evidence exists that accelerated global warming affects marine life around the world and that climate change is likely to alter West African fish-production systems, which depend on the upwelling of nutrient-rich deep ocean waters, models linking ocean-climate interactions and fish productivity in the region are still few and highly uncertain.

The organizers of the workshop — the WorldFish Center and the Leibniz-Centre for Tropical Marine Ecology — invited the experts to construct plausible scenarios for West African fisheries up to 2050. When forecasts and projections are limited and uncertainty is high, scenarios are useful tools that, by creating visions of the future, allow researchers and policymakers to develop alternative strategies to advance toward a chosen path or at least mitigate the pitfalls of possible future scenarios. The experts agreed that the best way to respond to the uncertain impacts of climate change was to work in a more coordinated way toward sharing science regionally, managing water resources more efficiently, and making every effort to develop inland aquaculture, taking into account the dual objectives of food security and income generation.

Co-funding the workshop were Canada's International Development Research Centre; the German Federal Ministry for Economic Cooperation and Development (BMZ by its German abbreviation) and

¹ Neiland AE. 2006. Contribution of Fish Trade to Development, Livelihoods and Food Security in West Africa: Key Issues for Future Policy Debate. Sustainable Fisheries Livelihoods Programme, Food and Agriculture Organization, Rome.

the international cooperation enterprise for sustainable development GTZ; and QUEST-Fish, a project funded by the United Kingdom's National Environmental Research Council.

Scenarios are often used for strategic planning in the private sector, and increasingly so in the public sector in Europe and North America, but with few such initiatives in Africa, especially regarding fisheries. Experts at the workshop expressed the desire to see this type of planning process and creative thinking more widely applied to fisheries, with special emphasis on the rigorous methods used in the workshop. Mamaodu Ngom, a Senegalese aquaculture expert, reported to the organizers how the exercise made him realize that developing aquaculture to supply globalized export markets had quite different implications than if regional trade and food security were the primary focus. Clearly, he added, these differences should be taken into account by experts developing national aquaculture strategies.

Before and during the workshop, the WorldFish Center teamed up with the Mundus Maris Initiative, a nongovernmental organization that mobilizes science and the arts to encourage young people to work toward sustaining healthy oceans and coasts. WorldFish commissioned art created by a Senegalese youth group on the topic "Visions of the future: What are young Africans telling us?". Through their paintings and presentations, four high school students from the Senegalese fishing village of Kayar voiced their concerns, which included worsening desertification in their communities and lack of safety at sea. In one of the paintings, Masek Dieng and Madike Kane explored the issues of inundation and the destruction of bridges in coastal zones. The painting aimed to raise authorities' awareness of these issues when planning future infrastructure development. "The message we want to share is that when we construct bridges we must be more careful," stated the artists. The four students were mentored by the renowned contemporary Senegalese artist Samba Laye Diop.

Under the theme "If we don't think about the future, who will?" the event provided a venue for open discussion about the future. It fostered knowledge-sharing and dialogue across countries and between youths and fisheries experts, two groups that normally do not have chances to interact. It was an opportunity to attract the attention of experts and remind participants that some of the future scenarios they were debating were already unfolding and being experienced by these youths.

The message of the workshop is that, in the face of high uncertainty, where coupled climate and fisheries models have difficulty predicting fishery productivity in upwelling regions such as West Africa, opportunities are needed to map plausible pathways and futures in a collaborative manner. This can keep countries and the region from misguidedly developing their fisheries without understanding how youths and others in fishing communities perceive their world and their future. While fishery policymakers cannot foresee the future, by taking into account the likely impacts of climate change, reducing the risks of major failures and integrating the expectations of young people into the planning equation, they stand a better chance of preparing the region to face the challenges ahead.

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The WorldFish Center is a non-profit, international research organization that reduces poverty and hunger through research to improve fisheries and aquaculture in developing countries. It is one of 15 centers supported by the Consultative Group on International Agricultural Research. WorldFish works with partners in Africa, Asia and the South Pacific to identify science-based solutions to help countries mitigate and adapt to climate change impacts on fisheries and aquaculture. Based in Penang,



Malaysia, WorldFish manages projects in over 20 countries in Asia, Africa and the Pacific through eight regional offices.

For more information, please visit www.worldfishcenter.org.

The Leibniz Center for Tropical Marine Ecology (ZMT by its German abbreviation) was founded in 1991 as an associated institute of Bremen University and became a member of the prestigious Leibniz Association (WGL by its German abbreviation) in 2009. With more than 50 scientists, the ZMT aims to provide a scientific basis for protecting and sustainably using tropical coastal ecosystems. Its activities include interdisciplinary research, capacity building and consultancy work on issues related to tropical coastal ecosystems and these ecosystems' responses to human impacts and natural changes.

For further information please visit <http://www.zmt-bremen.de/en>.

The Mundis Maris Initiative is a non-profit association that facilitates international collaboration and solidarity. It specializes in the joint mobilization of scientists, artists, schools and young people to support functioning marine and coastal ecosystems and the resilience of the people of the sea.

For further information, please visit <http://www.mundusmaris.org> (currently in five languages).

QUEST-Fish is a research project of a consortium of leading British and international institutions, including the WorldFish Center, that estimates, through a multidisciplinary approach working at multiple scales, the likely impacts of climate change on fisheries and how they affect other risks and vulnerabilities in these systems.

For further information, please visit <http://web.pml.ac.uk/quest-fish/default.htm>.