New focus on red tides & low oxygen water

The BCLME Programme is to fund important studies into red tides and low oxygen water, two environmental phenomena that have a dramatic effect on fisheries in the Benguela region, writes Claire Attwood.

The Benguela Current Large Marine Ecosystem (BCLME) Programme is preparing to award nine project contracts, worth an estimated US $450 000 (R3.6 million), which will assist scientists and fisheries managers in South Africa, Namibia and Angola, to better understand, monitor and even predict the occurrence of red tides and low oxygen events in the Benguela upwelling system.

The BCLME Programme is a multi-sectoral initiative by the three southern African nations to facilitate the integrated management, sustainable development and protection of the Benguela ecosystem. It is funded by the Global Environment Facility (GEF) through the United Nations Development Programme (UNDP), with financial and in-kind contributions by the three member countries.

The Programme recognises the need for collective regional action to address the problem of low oxygen water and red tide events (or harmful algal blooms (HAB's) as they are more correctly known).

Low oxygen water events are one of the best documented but least understood phenomena in Benguela fisheries. Events such as the catastrophic mortality of hake off Namibia in 1994 and 2000, and the mortalities of rock lobster in 1994, 1997 and 2002 in the southern Benguela, demonstrate the importance of understanding the causes and propagation of low oxygen events and their interaction with fisheries.

South Africa, Namibia and Angola all face similar problems in terms of the assessment and management of HAB's, and their impacts on the fishing and seafood industries.

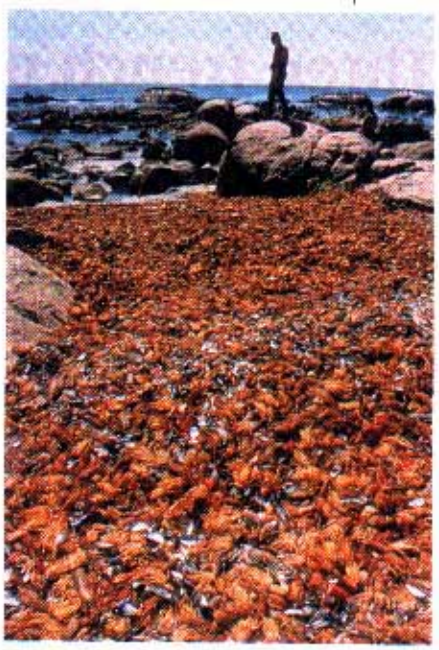
According to the BCLME Programme co-ordinator, Dr Mick O'Toole, the nine project contracts were approved by the BCLME Steering Committee in April and will be awarded by the Programme's executing agency – the United Nations Operations for Project Services (UNOPS) - in July and August. The nine projects will:

- Develop through a consultative process, regulations or guidelines pertaining to microalgal toxins, which can be applied uniformly in Angola, Namibia and South Africa. These regulations will specify methods to be used and management actions to be taken, including appropriate contingency measures.
- Design cost-effective monitoring of harmful phytoplankton species in the BCLME region with the focus on the coasts of Angola and Namibia.
- Assess the diversity and distribution of cysts of HAB's within the sediments, thereby providing a history of blooms and an indication of potential for harmful blooms within the region.
- Establish a facility for the identification of HAB species to serve Angola, Namibia and South Africa.
- Assess the viability of establishing a real-time capacity for detecting, monitoring and modeling the growth, movement and decay of HAB's.
- Assess the utility and application of models as a tool for the forecasting of major HAB's in the BCLME region.
- Develop a baseline understanding which will ultimately form the basis for modeling and forecasting low oxygen water events and their impacts on the ecosystem.
- Assess the role of transboundary fluxes on sub-regional low oxygen water variability.
- Design a simulation model for low oxygen water in the BCLME region which will provide the basis for an early warning system.

More projects in the pipeline

Dr O'Toole says that the launch of the first nine projects by the BCLME Programme will be followed by the development and funding of 70 more projects in the fields of environmental variability, marine living resources, biodiversity, ecosystem health and pollution.

Over the next four years an estimated 80 projects will be supported by the BCLME Programme with the aim of developing baseline scientific and economic information on what is known about the Benguela Current Large Marine Ecosystem, how this is changing over time and how the transboundary management problems associated with fishing, mining, oil exploration, coastal development, biodiversity and pollution can best be addressed across the entire Benguela region.



Red tide! The BCLME Programme is to fund important studies into harmful algal blooms in the Benguela region. (Photo credit: Department of Environmental Affairs and Tourism)

An important component of the BCLME Programme is the formation of an Interim Benguela Current Commission (IBBC) and a self-sustaining, permanent Benguela Current Commission (BCC) which will develop the regional managerial infrastructure, at a political and technical level, to manage the Benguela ecosystem as a whole. This will involve harmonising fishing, mining, mariculture, pollution and biodiversity legislation and policies; developing structures to implement regulations for the common benefit of all coastal and marine resource users in the Benguela; and for protection of the unique marine life within the ecosystem.

South Africa, through the Department of Environmental Affairs and Tourism, has adopted the BCLME Programme as an integral part of the New Partnership for Africa's Development (NEPAD) initiative.

For more information on the BCLME Programme visit: www.bclme.org