

## Is it possible to predict boom or bust years in the fishing industry?

According to information on the Benguela Current Large Marine Ecosystem (BCLME) website, "Permanent, continuously operating real-time regional ocean prediction systems are increasingly required to support a variety of critical activities in the ocean and coastal environments, including fisheries management, navigation and marine operations, response to oil and hazardous material spills, search and rescue, and prediction of harmful algal blooms and other ecosystem or water quality phenomena". However, implementing a viable prediction system requires advanced technologies in sensors and observing systems and numerical models and data assimilation, as well as the infrastructures to use them.

"How many fish can we catch next year is always met with the word 'depends'," joked Horst Kleinschmidt, deputy director general of Marine and Coastal Management, when he opened the international workshop on forecasting and data assimilation in the Benguela and Comparable Systems, held in Cape Town in November. More than 100 top international scientists attended the workshop where they deliberated about a viable observing and forecasting system in support of integrated and sustainable management of the BCLME.

The workshop, hosted and sponsored by the BCLME Programme, IAPSO, IUGG, IOC/GOOS, IRD (France), BENEFIT (Benguela Environment Fisheries Interaction and Training Programme) and ICSU's Scientific Committee for Oceanic Research (SCOR), took a close look at environmental variability, ecosystem impacts and the improvement of predictability and was very much in line with a key policy action of the GEF/UNDP sponsored BCLME Programme which has as the cornerstones of its policy to develop an early warning system and improve predictability of extreme events and their impacts in the BCLME.

The results will be documented in a peer-reviewed book and CD/DVD on observing systems and forecasting in the BCLME. It will be published next year.

The workshop addressed a broad range of subjects introduced on the first day and which were discussed in greater detail in specialist sessions. These included resource and ecosystem variability, large scale variability in the physical environment, forecasting low oxygen water, variability of plankton, the variability and potential for prediction of harmful algal blooms, and the variability and

change in comparable systems. The maritime industry was also accommodated and presentations relevant to the oil and gas, diamonds, shipping and fishing industries were made.

### Keynote address

In his keynote address on the 'Assessment and management of Large Marine Ecosystems - Indicators of changing states of LMEs', Dr Kenneth Sherman of NOAA said the Global Environmental Facility (GEF) had provided significant funding for the period 2002 to 2005 for issues relating to global climate change, biodiversity and international waters. At present \$650 million is invested in projects as of January 2004.

He added that the concept of ecosystems had a 20 year history and the approach was non-political and scientifically based. There are 64 large marine ecosystems on a global basis and 95% of the world's annual marine fishery catches occur in these. He referred to a paper that appeared in *Science* a few years ago, which provided a compelling case of an ecosystem impaired by fisheries, pollution and habitat - all introduced by climate change. To counteract this coastal pollution should be reduced; damaged habitat restored; and depleted fish stock recovered. It was therefore important that a country was committed to long term maintenance and assessment of marine environment and resources.

According to Dr Sherman, the Benguela current system offers promise for a predictable system. He gave an account of fisheries activities in the Benguela current system from Angola in the north to the Agulhas bank in the south and commented that variability was hugely significant and related to fishing pressure; environmental factors





which affect the biomass of species such as anchovy and localised mass mortality (eg. rock lobster walk-out at Elands Bay); and Benguela Niños which were associated with the southward shift of sardinella off Angola and sardines off Namibia. Causes that influence resource and ecosystem variability included bottom up forces; lower trophic levels which influence food quantity and quality; and climate change. Pollution has little effect.

He concluded by saying the way forward was to identify potential ecosystem states; improve understanding of control mechanisms that operate in the different states; develop and test hypotheses and identify indicators to describe and quantify these.

Speaking about the fishing industry during the specialist session on Maritime operations in the Benguela coastal ocean, Dave Japp gave an overview of activity in South African waters and commented that in the Benguela region there was a lot of potential for exploitation. Operators were questioning bottom temperatures and the impact on fish stocks and were complaining that it was affecting their operations. They need as much

information as they can get and the scientific community needed to be more proactive. He suggested that the concept of fishing vessels being used as platforms for research ought to be explored in South Africa particularly as the fishing sector was the biggest user of the marine environment.

Dave added that there was likely to be conflict in respect of the ocean and the issues needed to be addressed sooner rather than later. A survey gets underway this month (December) concerning the conflict between the fishing industry and the oil and gas industries in the inshore fishing grounds. The potential for new pipelines will impact on the fishing industry and increased amounts of hydrocarbon industry activity will affect trawling activities.

Other subjects presented were the impact of the environment on the west coast lobster fishery; the operational and forecasting metocean information needs of the pelagic fishery; sovereignty and resource protection and the Lobito oceanographic fixed station as a predictor for the Benguela ecosystem.

## Turnover down

The Oceana Group reported that it's headline earnings per share for the year to September, had decreased by 21% compared to those of the previous year. Group turnover declined by 1% and operating profit by 17%. Shareholders will be paid a total dividend for the year of 76.5 cents per share.

Oceana also confirmed that since Real Africa Holdings sale of their shareholding in Ocfish Holding Company Ltd (Ocfish) had been unsuccessful, it was investigating alternative structures to facilitate the transfer of RAH shareholding to a suitable BEE consortium.

## Restitution sought

Arnold Benghis, his son David and co-conspirator, Jeffrey Noll, all of the defunct company, Hout Bay Fishing and now jailed in the USA are being sued by the South African government for U\$90 million for desecrating the country's rock lobster resources and poaching Patagonian toothfish which was illegally imported into the USA. The motion is being opposed.