

## Theme session P

### How to hit an uncertain, moving target: achieving Good Environmental Status under the Marine Strategy Framework Directive

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A total of 18 oral papers (with one no show) and 4 poster papers were presented to this theme session. Counts of attendees at the oral sessions at regular intervals showed an average of around 110 conference participants were present at any one time.

In relation to the Biodiversity State indicators of the Marine Strategy Framework Directive (MSFD), presentations were made on benthos, plankton, cetaceans and non-indigenous species. A Europe-wide view was taken by some of these presentations, while others were more regional in their emphasis. It was obvious that such state indicators would need some interpretation before they could be used in management, and there will be challenges in understanding the comparative importance of various drivers (and whether they were amallow to management). One oral paper and one poster addressed the prospects and difficulties for using DNA-barcoding in assessing biodiversity.

Indicators of the structure of foodwebs, including the large fish indicator, were addressed in four presentations; these indicators remain a challenge both for science, and for policy-makers about determining thresholds of Good Environmental Status. Foodwebs are affected by trawling, as are benthic communities, but assessing the scale of and the effects of these affects remains difficult.

The quality of coastal habitats falls partly outside the ambit of MSFD, but is covered for a number of topics by the Water Framework Directive. Two posters covered the quality of lagoon habitats (and nearshore issues were touched upon in a number of presentations).

A number of assessment and implementation issues were considered by five papers; these ranged from issues around the assessments of “means” of underwater sound (which contain information on both background ambient noise and rare high-noise events), to the integration of the assessment of indicators of GES to the lack of resources to carry out the monitoring work that appears to be necessary.

Possible use of biological records of the deep past (1000 years) was described in one paper, while making best use of information from dead marine mammals was considered in two papers.

A visual representation of the state of commercially exploited fish stocks formed the core of one of the posters.

Discussion topics included the roles of state and surveillance indicators, the difficulty of defining baselines against a background of continuous change and a long history of anthropogenic modification, the needs to consider system resilience, the different and potentially incompatible approaches to MSFD implementation taken in different countries, and the positive effects of the reduction in fishing effort over the last three decades.

MSFD and its implementation will continue to form an important part of the work of ICES into the future – this session demonstrated the wide range of work on this issue being carried out by members of the ICES community.