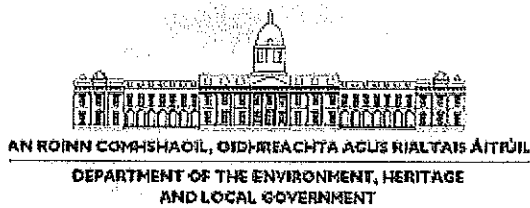


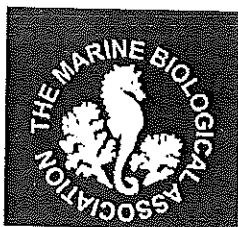
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Programme/Abstracts



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ADDENDUM

Poster Abstracts

Poster 160

Francesca Fornasier

Open

Marine ecosystems in Italy: supporting a new strategy to assess water quality.

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Following the indications of the European Union and Italian Government's environment directives, the Italian Environmental Protection Agency and Technical Services (APAT) activated a monitoring program to assess water quality over the entire national territory. The "Indicators and Environmental Toxicology" sector of APAT endorsed a strategic action plan to contribute at the existing projects of monitoring and conserving aquatic systems. We analysed the gap between the goal of the laws/regulations, the monitoring schemes undertaken at national level and the available scientific methods. First results underlined the extreme diversification of know how and methodologies utilized from the different Regions and between approaches (*i.e.* Environmental Risk Analysis, Contaminated Site Analysis, Conservation and Protected Areas). Furthermore, standardized methods to assess water quality are more available for some water ecosystems, than for marine ecosystems. For these reasons we activated an interdisciplinary working group to assess the priorities and the actions required to develop appropriate standard procedures, specially based on marine ecosystems. As first step we developed two database, one on the availability and use of toxicological texts and one on the bio-indicators and bio-monitoring methods, both based on widespread species occurring in Italy. At the same time, we activated a monitoring program in a specific "sample" coastal area where we put in practice and experimented indicators and the procedures proposed. Outcomes of the working group and weak and strength analysis of this marine monitoring programme are discussed in this paper.

Poster 161

Carys Ann Davies

Sustainable Fisheries/Aquaculture

Comparative age Estimation in Albacore tuna (*Thunnus alalunga*)

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Age estimation of albacore, *Thunnus alalunga*, represents a necessary task for the estimation of the demographic structure of exploited stocks and the satisfactory assessment of the associated fisheries; but counting annual rings in hard parts is still open to many uncertainties. This study assesses the reliability of age estimates obtained from three calcified structures: scales, dorsal spines and otoliths. The dorsal spine is the preferred structure for ageing as its removal causes minimal damage to the market value of the fish. One hundred and sixty individual albacore tuna *Thunnus alalunga* (49 – 89 cm L_P) from the northeast Atlantic and fifty-two individuals (60 – 72 cm L_P) from the western Mediterranean caught in 2005 with ages ranging from 1+ to 5+ were included in the analysis. Age estimates obtained using the three methodologies were compared; inter- and intra-reader error were also examined. Counts of otolith daily increments were made to validate the periodicity of the presumed annual structures. Regional variations in morphology of the calcified structures of Atlantic and Mediterranean fish were examined. The implications for the collection of size at age data are discussed.

Poster 162

Giulia Ceccherelli

Marine Protected Areas/Reserves

Using Inter Simple Sequence Repeat markers to reveal genetic variability between populations of *Patella ferruginea* (Gastropoda: Patellidae) from Asinara MPA and a non-protected area (NW Sardinia, Italy)

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The giant Mediterranean limpet *Patella ferruginea* Gmelin, 1791 is an endangered marine gastropod, distributed on the Western Mediterranean coasts, whose range has progressively contracted to a very few restricted areas, due to intense human exploitation. We have focused our attention on the genetic structure of this species, in order to gather information about the levels of genetic variability within and among samples of *P. ferruginea* collected at the Asinara MPA and a neighbouring non-protected area, and make an attempt to better understand the protection effectiveness of the MPA on the species. The study was carried out by means of ten ISSR (Inter Simple Sequence Repeat) primers on a total of 40 individuals collected at four localities. Genetic analysis evidenced i) medium (sample from MPA) to low (sample from non-protected area) levels of within population genetic variability, and ii) a pattern of genetic structuring that varied with spatial scales. Although preliminary, these results highlight the important role of i) the MPA in safeguarding the genetic variability of *P. ferruginea*, and ii) residual populations living in non protected areas, which output of offspring could ensure an adequate level of gene flow, avoiding the possible trend of inbreeding within populations of the MPA.