

PROJECT NAME	European Lifestyles and Marine Ecosystems
ACRONYM	ELME
STUDY REGION	Europe
PRINCIPAL INVESTIGATOR	Prof. Laurence Mee
DURATION	January 1, 2004 - March 31, 2008
PROJECT WEBSITE	Link to project website
LOICZ PROJECT DATABASE	Click here for more project information



PROJECT DESCRIPTION

Through improved understanding of the relationship between European lifestyles and the state of marine ecosystems, ELME will model the consequences of alternative scenarios for human development in post-accession Europe on the marine environment (LOICZ Themes 3 & 5). ELME is designed to provide the best available scientific information for predicting the likely impacts of major economic, social and institutional changes within European marine ecosystems.

The health of marine ecosystems represents an 'end indicator' of human environmental impacts and of our ability to achieve sustainable development. Achievement of the overall objective requires a highly multidisciplinary approach integrating relevant information on: - the current major state changes affecting Europe's marine ecosystems in four major sea areas - the pressures (anthropogenic and from natural variability) on the environment producing these state changes - the underlying social and economic drivers that lead to these pressures; and - the plausible scenarios for social and economic change across Europe during the next two decades.

Variables or processes to be studied: The interrelationship between major state changes and the human and natural pressures producing them, the social and economic impacts of state change and effective policy responses are being summarised using conceptual Drivers-Pressures-State-Impacts-Responses (DPSIR) models. ELME is examining the current DPS relationships and then using this information to model the consequences of plausible macroeconomic and major policy options in the expanded European Union. Spatial and temporal scales of the research: ELME will examine state changes within the four major sea areas surrounding the expanded European Community: the Baltic, North East Atlantic, Mediterranean and Black Sea. Drivers and pressures will be from across the entire Community within its projected borders (including Turkey), and neighbouring countries where relevant.

Long-term data will be re-analysed to reveal state changes, the temporal scale of the data being dependent on what is available and the temporal scale of the change (i.e. major changes in the Baltic system have been observed over the last 100 years, while much more rapid changes have been recorded in the Mediterranean in response to increasing coastal development in the last three decades).

Application of data products: Project outputs will include models of socio-economic impacts on biodiversity and ecosystems with a view to facilitating the development of integrated strategies for preserving/restoring their integrity.

THE PROJECT RELATES TO THE FOLLOWING PRIORITY TOPICS AND SCIENTIFIC THEMES

Priority Topics:

1 - Link social and ecological systems in the coastal zone

Scientific Themes:

2 - Implications of Global Change for Coastal Ecosystems and Sustainable Development