

Regional Collaboration in Environmental Monitoring and Forecasting in the Northern Adriatic Sea Project

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Project Rationale

Like many coastal environments throughout the world, the watersheds of the Adriatic Sea are regions of rapid population growth and changing land-use patterns. Changes in the coastal ecosystems of Croatia, Italy, and Slovenia are making the coastal zone more susceptible to environmental hazards, more costly in which to live, and of less value to the regional economy. The overall goal of this program is to cultivate a regional approach to environmental monitoring and forecasting in the Northern Adriatic Sea that will help manage coastal fisheries and tourism.



Objectives

- To cultivate a regional approach to environmental monitoring and forecasting in the Northern Adriatic Sea that will help manage coastal fisheries and tourism
- To examine the influence of the Po River Front on the food web and fisheries of the Northern Adriatic Sea
- To provide a forum for student exchange and training among the U.S., Croatia, Italy, and Slovenia

Plans

Adriatic field cruise data collected during 2002 and 2003 will be analyzed. A workshop will be held in Croatia in 2004 to compare results, prepare manuscripts and plan future collaboration. Dr. Marco Costantini will visit GLERL for one month to work on manuscripts.

2003 Accomplishments

During 2003 we conducted a 10-day interdisciplinary cruise on the Adriatic Sea. An Italian student visited GLERL for one month to help process the data. We also continued work on developing a Regional Communications Network for the Northern Adriatic Sea. Italian and Croatian students were funded to work on the project.

2002 Accomplishments

A June 2002 meeting and test cruise took place from Ancona, Italy, as well as an October cruise devoted to collecting field data. Planning for a May 2003 10-day cruise was also a priority, as well as continued efforts toward meeting the project objectives, including:

Setting up the framework for the development of a Regional Communications Network Subsystem for the Northern Adriatic Sea that can be used for a) data gathering and management, b) retrospective analyses of existing data, c) data sharing, d) identification of information gaps, technological needs, and priorities for future research and monitoring, and e) development of products such as GIS maps and forecasts to the user community.

Developing a Scientific and Technical Advisory Committee to provide a mechanism for scientific interaction and exchange on environmental issues in the Northern Adriatic Sea.

Initiating a Student Training and Scientific Exchange Program that will add new disciplinary expertise to the region and ensure a sustainable future for long-term interactions.

2001 Accomplishments

A November 2001 conference, held in Italy, was attended by over 50 people from all countries involved in the program. The conference focused on designing a scientific program and training exercises for 2002, as well as continued efforts toward meeting the project objectives

Products

Publications

V. Tirelli, D. Borme, F. Tulli, M. Cigar, S. Fonda Umani and S. B. Brandt. 2006. Energy density of anchovy *Engraulis encrasicolus* L. in the Adriatic Sea. *Journal of Fish Biology* (68): 982 -986.

Presentations

Costantini, M; Arneri, E; Borme, D; Russo, A; Tirelli, V; Umani, SF; Brandt, SB - Effect of the Po River outflow on the distribution of juvenile European anchovy (*Engraulis encrasicolus* L) in the northern Adriatic Sea (central Mediterranean). *ASLO 2005: Aquatic Sciences Meeting*, Salt Lake City, UT (USA), 20-25 Feb 2005. (World Meeting Number 000 7679).