

so nova varstvena kategorija v slovenskem sistemu za varovanih območij, saj temeljijo na zasebnem lastništvu in zavezanosti lastnika zemljišča, da je (proti odškodnini) pripravljen upravljati/gospodariti z zemljiščem na način, kot bo predpisan v "upravljalnem načrtu". Gre za območja, ki v okviru varstvenega režima, kot ga ponuja Regijski park (IUCN kategorija zavarovanega območja V.), zahteva še poseben način upravljanja za ohranitev določenih habitatov in/ali vrst. Projekt bo spremljala tudi kampanja za osveščanje javnosti o pomenu "mikro-rezervatov" (video film, zgibanke, informativni prispevki in članki ipd.), posebni informativni sestanki/delavnice, urejen pa naj bi bil tudi preprost "center za obiskovalce" s stalno razstavo o mikro-rezervatih. V okviru projekta bo dana tudi možnost odprtja novih delovnih mest za lokalno prebivalstvo.

Projekt naj bi postal model razvoja mreže mikro-rezervatov za celotno Slovenijo.

V prihodnosti načrtujemo delo na vseh že začeti projektih, prijavljali pa smo tudi nove nacionalne projekte in izrazili interes za sodelovanje v 6. evropskem okvirnem programu za projekt "*Hydro-Carbo-Mont*", ki se koordinira iz Innsbrucka; k preučevanju ekoloških parametrov, predvsem kroženju ogljika, vodnega režima, upravljanja in biodiverzitete travišč v evropskih gorovjih smo k številnim evropskim gorovjem dodali Dinaride z našim Snežnikom.

Transekt od morja do Snežnika je raziskovalno območje novega projekta, kjer bi zasledovali različne parametre biodiverzitetnih vzorcev in dinamike na izbranem altitudinalnem gradientu, ki dosega naravno gozdno mejo na Snežniku.

V aplikativnem delu tega projekta bi se radi posvetili tudi nekaterim prostorskim problemom na območju občine Izola (prehod morje-kopno, koncept "umetnega otoka", varovanje in vzdrževanje tradicionalne kulturne krajine, izraba in varovanje obalnega pasu ipd.).

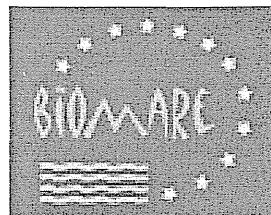
Vizije in načrti IBŠ so veliki, saj izzivov ni treba iskati daleč; v biogeografsko tako enkratnem prostoru je dovolj nerešenih znanstvenih problemov, naravovarstvenih izzivov in klicev po konkretnih aplikacijah v prostoru, pri katerih IBŠ lahko in mora dati ustrezne strokovne rešitve!

Carlo Heip & Alenka Malej

THE EUROPEAN MARINE RESEARCH STATIONS AND BIODIVERSITY RESEARCH

Europe has the longest coastline of all continents relative to its surface and over half of the EU citizens live close to the coast. The oceans cover 70 % of the Earth's surface and to a large extent determine the way in which our planet functions and supports life, parti-

cularly human. The oceans determine our weather and climate, and society relies on the seas for transport, energy, food and mineral resources, waste treatment and, especially in Europe, leisure.



Marine Research Stations: a unique part of Europe's scientific patrimonium

When Charles Darwin published the *Origin of Species*, public and scientific interest in biology soared. This led to the creation of a number of laboratories with facilities to study marine life in many European countries during the last part of the nineteenth century. Some of the earliest and best known are the Stazione Zoologica in Naples, the stations of Villefranche, Banyuls and Roscoff in France, the Marine Biological Association's laboratory in Plymouth and the Biologische Anstalt Helgoland in Germany, to name just a few.

Over more than a century these marine research institutes have been the main centres where scientists, students and laymen alike could have a direct access to the sea and to the laboratories where marine plants and animals could be studied alive. Many Nobel prizes honouring fundamental discoveries in physiology and biochemistry have been earned through work in the marine stations, and tens of thousands of biologists, physiologists, ecologists and scientists from many other disciplines in Europe received their basic training in marine sciences at one of the numerous marine stations.

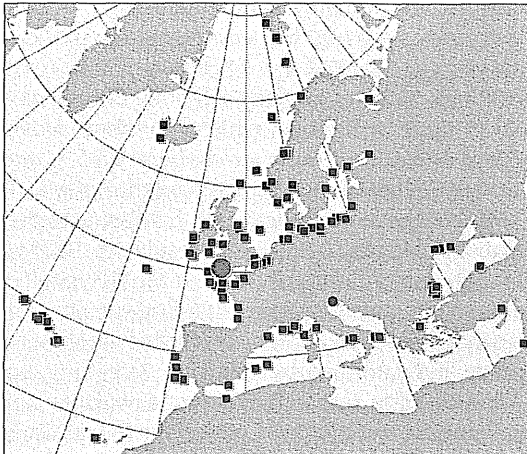
The MARS network

At the meeting held in 1996 in Paris, directors of more than 40 marine research stations decided to create a foundation to coordinate their interests at the European level and to make a better use of the facilities at the stations: oceanographic research vessels, specialized experimental laboratories, libraries and collections, and access to specific biological communities in the seas. These forty-odd marine research stations cover all the coasts of Europe, from the high Arctic in Svalbard in the north, to the Canary Islands and the Azores in the south, and to Turkey and Israel in the eastern Mediterranean.

Besides making facilities accessible at the European level, the MARS network also started a scientific research initiative that would build on the unique characteristics of the marine institutes. In 2000 in Venice,

**NR STRUNJAN & NM CAPE
MADONA, SLOVENIA****Slovenia****Conservation
status**

☆☆☆☆☆

**Co-ordinates:** 45°32' N 13°35-37'W

Nature Reserve Strunjan, Slovenia. Photo L. Lipej

Description of site:

Nature Reserve Strunjan and Natural Monument Cape Madona are two marine protected areas beneath typical flysch cliffs. Both sites are characterized by a variety of habitats and specific abiotic conditions which reflects the high biodiversity of the area.

Description of fauna and flora:

The intensive mapping and monitoring of the fauna and flora of the Slovenian coastal sea is going on from 1998. Up to date at least 1,700 species of animals were recorded for the area.

Habitats present:

	Mud	Sand	Rock
Littoral		X	X
Sublittoral	X	X	X
Seagrass beds		X	

Human impact:

The proposed sites are facing some anthropogenic impacts such as nautic traffic, angling and bathing. Despite the protected status of both sites, the illegal harvesting of protected mussels is still ongoing.

Facilities:

All facilities are available in the nearby Marine Biology Station, which is equipped for all aspects of biodiversity research (labs, SCUBA diving facilities, research equipment, boats and vessels).

Available database and website:

The inventory of fauna and flora is held at the Marine Biology Station (NIB). The websites regarding both marine protected areas are available at <http://projects.msp.nib.si/Tunis2000/> and <http://dragonja.nib.si>.

Commitment and ongoing research:

The Marine Biology Station Piran (National Institute of Biology) is undertaking the biodiversity research in the proposed sites and in other parts of the Gulf of Trieste (northern Adriatic).

marine biodiversity was chosen as the first priority issue. The reasons are obvious. Fisheries are in crisis. Marine species in general are disappearing at a rate never observed since life began on Earth. The extinction crisis ranks, together with global climate change, as the greatest threat to the integrity of the biosphere in the 21st century. Species extinction is not just an aesthetic or moral problem. Marine organisms play a crucial role in almost all biogeochemical processes that sustain the biosphere, and provide a variety of products (goods) and functions (services) that are essential to mankind's well-being, including the production of food and natural substances, the assimilation of waste, the remineralisation of organic matter and the regulation of the world's climate.

MARS and the European Research Area

The scale of the research efforts needed to obtain adequate knowledge for exploration, conservation and restoration of marine biodiversity demands European-scale collaboration. The European Commission came out with its initiatives as early as 1995 and began to cooperate on this issue with the Marine Board of the European Science Foundation and MARS that led to a series of marine policy documents (<http://www.esf.org/>) culminating in 2000 in the concerted action BIOMARE (<http://www.biomareweb.org>). The objectives of BIOMARE are to establish a network of research sites and a series of indicators for biodiversity as the basis for long-term and large-scale marine biodiversity research in Europe. Through the three global initiatives, i.e. the International Biodiversity Observation Year IBOY, DIVERSITAS and the Census of Marine Life CoML, BIOMARE has attracted attention worldwide as a major effort to coordinate biodiversity research at the European scale and beyond.

Within the *Fifth Framework Programme* another important networking effort MARBENA will run till 2004 (<http://www.vliz.be/marbena/>). This project specifically extends the previous actions to the Newly Associated States and will feed directly into EU policy via a series of electronic conferences linked with the European Platform for Biodiversity Research and Strategy (EPBRS).

Finally, within the *Sixth Framework Programme* the issue of biodiversity and ecosystems has grown to

become one of the main research actions, with well received expressions of interest for networks and projects in marine biodiversity, marine genomics and marine biogeochemistry issued from the MARS member stations. It shows that in the European Research Area, which is now taking shape, the role of the marine research stations will continue to be important and that these stations will remain an important asset of Europe to fulfil its role as a world leader in the study of the seas and oceans.

The Piran Marine Biology Station (MBS) of the National Institute of Biology, which represents Slovenia in MARS, is one of its founding members. MBS is one of the partners involved in the Concerted Action BIOMARE, which has brought together European expertise in marine biodiversity. The main results of BIOMARE are: 1) a network of European Marine Biodiversity Focal Sites as a basis for long-term and large-scale marine biodiversity research in Europe; 2) a set of measures and appropriate indicators of biodiversity; 3) setting up of marine biodiversity research in Europe website and a biannual printed newsletter. One of the Focal Sites in the Mediterranean, proposed by MBS, is located in the Gulf of Trieste and comprises two marine protected areas: the Cape Madonna Natural Monument and the Strunjan Nature Reserve (see box on previous page). MBS is also a partner of a follow-up project MARBENA, which will assist further development and implementation of biodiversity knowledge obtained through BIOMARE. MARBENA aims at establishing a pan-European network of excellence including marine scientists as well as other stakeholders in marine biodiversity issues and at enlarging the transparency of marine biodiversity research in Europe. And finally, MBP participates in the BioPlatform network, which is developing the European platform for Biodiversity Research and Strategy that in 2002 extended to include NAS countries (Newly Associated Countries to EU).

For further information you are kindly invited to consult the MARS web page: www.marsnetwork.org or to get in contact with Prof. Carlo Heip, President of MARS, c.o. Netherlands Institute of Ecology, P.O. Box 140, 4400 AC Yerseke, The Netherlands (e-mail: c.heip@nioo.knaw.nl) or Prof. Alenka Malej, MBS NIB, Fornače 41, 6330 Piran, Slovenia (malej@nib.si), and MBS web page <http://www.msp.nib.si>.