

MAMA

1st meeting in Paris, 11-13 March 2002\
National institute of Biology
Marine Biology Station (MBS)
Vlado Malačič, Branko Čermelj, Boris Petelin

Institution profile:

Head: Prof. Alenka Malej (malej@nib.si)

WEB page: www.mbs.nib.si

Stuff:

- Scientific Staff: 9
- Young Scientists: 3
- Professional Staff: 2
- Technicians: 7
- External co-workers: 6

Research activities:

- plankton and benthic ecology
 - trophic dynamics
 - ecological crises (massive micillage accumulation, over-enrichment with nutrients)
 - biodiversity and effects of environmental pollution
- dynamics of the coastal sea
 - link with trophic status of the marine environment
 - numerical modeling of dispersion of sewage, tides
- biogeochemistry and photochemistry of shallow waters
 - aerobic and photocatalysed degradation of organic matter
 - biogeochemical cycling of mercury in the sediments

Related projects (short list):

- Biofiltration and Aquaculture (EU, BIOFAQS)
- Biomare (EU)
- MED POL National Monitoring Programme Slovenia (UNEP)
- ◆ ADRICOSM (INGV Bologna, Italy, Nadia Pinardi)
- ◆ Phare CBC COCES (EU, 'Continuous oceanographic and ecological cross-border data exchange system')
- ◆ MFSTEP (EU, INGV Bologna, Italy, Nadia Pinardi)
- ◆ Applied national research project 'Survey of *requirements* for oceanographic data in Slovenia and eastern Adriatic' (according to EuroGOOS survey standards)
 - ◆ operational oceanography • science/monitoring programme

MBS NIB acts as:

- action address for IOC
- focal point for MED POL of MAP
- NODC
- focal point for marine research and monitoring activities within three-lateral commission (Italian-Croatian-Slovenian)

National monitoring programme

- monitoring of pollution pressure (the Ministry of environment of Slovenia)
- compliance monitoring (the Ministry of Health, quality of bathing waters)
- state of the marine environment (the Ministry of environment, MEDPOL)

National research programme

- the Ministry of Education, Science and Sport

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Capacities of MBS for the operational oceanography:

- **Research vessel 'Sagita':**
 - length: 12 m; draft: 1.4 m, displacement heavy: 15 tons
 - cruise speed: 13.5 knots
 - radio DSC (Distress Safety Call) with GPS warning signal
 - men on board: minimum two
 - CTD probe (University of Western Australia, Perth):
 - Free falling with 1 m/s (< 30 s to reach the sea-floor), < 5 minutes to stay at a station for a single vertical profile
 - Sampling with 50 Hz => data every 2.5 cm
 - TEMPERATURE (*Seabird* thermistor SBE 3-01/F)
 - CONDUCTIVITY (*Seabird* cell SBE 4-01/0)
 - PRESSURE (*Paroscientific*)
 - O₂ (*Seabird*)
 - Chl-a (*Chelsea Instr*)
 - PAR (*Chelsea Instr.*)
 - ADCP (NDP) of Nortek AS, installed on a bow's rod:
 - 500 kHz
 - cell thickness: 1 m
 - range: 50 m
 - vel. accuracy: 0.5 cm/s when averaged for 10 min
- **Coastal Oceanographic Station Piran (COSP):**
 - Buoy's hull: diameter 2.5 m, height 1.6 m (*Sirio d.o.o*)
 - 500 kHz ADCP (*Nortek AC*) at the seafloor
 - sea-floor temperature
 - 3D acoustic anemometer (*Gill's Instruments*)
 - compass/tilt sensor with air temperature
 - data transmission with radio modems at 500 MHz to 4.5 km distant land station
 - retrieval period: every 30 minutes
 - averaging period: 10 minutes
- *New laboratories in Marine Research Centre*

- **Obstacles:**
 - Two years of intermittent interruptions of working conditions due to ongoing building process
 - Internet/power supply problems
 - two removals of mobile propriety, lab equipment, library and computer power

- **Advantage of building:**
 - Better working conditions for conducting operational oceanography:
 - computer power for data base and modeling
 - new laboratory facilities for testing, calibrating and development of field instruments
 - facilities for (small) meeting arrangements and for training groups of students
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- **Responsibilities in MAMA:**
 - WP1 (2 months), WP5 (2), WP2(1), WP3(1), WP7(1), WP8(1)
 - WP1 (task 1.2 national consultations and surveys) Responsible for the Adriatic in WP1
 - WP5 (contributor/recipient in NET-MedGOOS, national node on MedGOOS WWW)

- **Questions:**
 - Which would be the fields and records (format) for the data base of capacities of institutions that are able/wish to perform the operational oceanography
 - Should all institutions that are not members of MAMA be surveyed and contacted directly? Should we simply collect *public* informations about their infrastructure (from web pages) and insert it the data-base?

11 March 2002, will be updated until 22 March 2002

Institutions in Slovenia that *execute* the national monitoring and research programmes (preliminary names in English)

- Marine Biology Station - National institute of Biology
- Institute for sanitary quality (quality of bathing waters, compliance monitoring)
- Agency for the safety of the environment, Ministry of the Environment and Space (sea-level measurements, coastal water temperature)
- Institute Josef Stefan (monitoring of mercury in the Gulf of Trieste and in river drainage system, monitoring of heavy metals in the Gulf of Trieste).
- Institute of Geodesy and photogrammetry, University of Ljubljana (hydrography, depth soundings)
- Agency for Maritime Transport, the Ministry of Transport (hydrographic surveys)

Institutions in Slovenia that *sponsor* the national oceanographic and environmental monitoring and research programs (preliminary names in English)

- Agency for the safety of the environment, Ministry of the Environment and Space (sponsoring the environmental monitoring programme and coastal buoy maintenance)
- National Committee of UNESCO, National board of IOC (sponsoring education on the ecology of the coastal sea, establishing the NODC (Quality Control of coastal Buoy data), public distribution of environmental information/measurements)
- Ministry of Science, Education and Sport (research programs, infrastructure facilities of MBS)

Authorities that are the *end-users* of coastal buoy data

- the Slovenian Maritime Directorate, the Ministry of Traffic (coast guard)

- the Service for the Safety of the Coastal Sea (oil spills, pollution)
- the Agency of the Environment, the Ministry of the Environment
- the Ministry of Defence
- the Ministry of Internal Affairs, Maritime Police
- fishery companies
- coastal town authorities (Koper, Izola, Piran)
- municipal sewage treatment companies (Koper, Piran)
- sailing sport clubs