



GOCE-CT-2003-505446  
MarBEF



# Marine Biodiversity and Ecosystem Functioning

*EU Network of Excellence*

*Sustainable development, global change and ecosystems*

## **D-7-CSP-4.7 Report on training course “Genetic diversity of marine organisms”, Hel**

Due date of deliverable: 30. November 2007

Actual submission date: 1. December 2007

Start date of project: 1 February 2004

Duration: 60 months

Organisation name of lead contractor for this deliverable

Framework Programme (2002-2006)		
Dissemination Level		
<b>PU</b>	Public	X
<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	



**Report**  
**on the MarBEF training course on**  
**“Physiological and genetic diversity of marine organisms in European coastal systems”**  
**8th 16th - July 2007, Hel Marine Station, Hel, Poland**

TITLE

Marine Biology Summer School 2007 (MBSS2007)

“Physiological and genetic diversity of marine organisms in European coastal systems.”  
(website: <http://www.ocean.univ.gda.pl/~bss/2007.html>)

LOCATION

Hel Marine Station Institute of Oceanography, University of Gdańsk, Hel, Poland (website:  
<http://hel.hel.univ.gda.pl>)

TIME

8th 16th - July 2007

SCIENTIFIC CONTENT

The Marine Biology Summer School 2007 was a nine-day self-contained program of intensive study on various aspects of marine biodiversity, **primarily the diversity in** ecophysiological performance of individuals and population genetics of benthic organisms from various European coastal regions.

The Marine Biology Summer School 2007 was dedicated to the **diversity in the** adaptation capacity of marine organisms at physiological and genetic levels **and the relation between such diversity and the functioning of populations at ecological level**, with special emphasis on coastal zoobenthic organisms.

The course went thus beyond traditional borders of disciplines and levels of biological organisation. This interdisciplinary approach (integration of international science) was exemplified in the course through genetic, ecophysiological, population research of benthic invertebrates. The school included undergraduate units of study from degree programs.

The course was full time and consisted of ca 41 contact hours over the seven-day period, taking the form of 12 hours of lectures, 3 hours of plenary discussions and 26 hours of field works and practical classes (see “Daily Schedule Courses” attached).

COURSE PARTICIPANTS

	Participant	Affiliation	Country	MarBEF partner
1)	Karaseva Nadezda	Department of Zoology of Invertebrates, Biological Faculty, Moscow State University 119 991, Moscow, GSP-1, Leninsky Gory, MSU, 1-12	Russia	associate partner



2)	Kudrenko Sergiy	Odessa Branch of the Institute of Biology of the Southern seas, NAS of Ukraine. 37 Pushkinskya ST. Odessa 65125	Ukraine	associate partner
3)	Kuzmanić Marina	Institute of oceanography and fisheries Centar for Marine Studies, University of Split Biskupa Jurje Dobrile 6 21000 Split	Croatia	associate partner
4)	Nika Staglicic	Institute of oceanography and fisheries Laboratory of ichthyology and coastal fishery Setaliste I. Mestrovica 63 21 000 Split	Croatia	associate partner
5)	Pedersen Jens Thaulow	Danish Institute for Fisheries Research ATT: Jens Thaulow Pedersen Department of Inland Fisheries Vejlsovej 39 8600 Silkeborg	Denmark	partner
6)	Põlme Sergei	Estonian Marine Institute, University of Tartu Mäealuse 10a, 12618 Tallinn	Estonia	associate partner
7)	Rimskaya-Korsakova Nadezda	Department of Zoology of Invertebrates, Biological Faculty, Moscow State University 119 991, Moscow, GSP-1, Leninsky Gory, MSU, 1-12	Russia	associate partner
8)	Sánchez María	Littoral Ecology, IMEDEA, Universitat Illes Balears Miquel Marquès 21, 07190 Esorles, Balears	Spain	partner

#### LECTURERS

The course was given by experts who have considerable experience in marine biodiversity, particularly with respect to benthic organisms, biodiversity, genetics and physiology:

Prof. Herman Hummel, Dr Sander Wijnhoven, The Netherlands Institute of Ecology (NIOO-KNAW), Yerseke, The Netherlands

Prof. Maciej Wolowicz, Dr Adam Sokolowski, MSc Rafał Lasota, Institute of Oceanography, University of Gdańsk, Poland



### DAILY SCHEDULE COURSES

#### July 8 (Sunday)

10:00 - 22:00	Arrival of participants at the Hel Marine Station, accommodation		
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#### July 9 (Monday)

08:00 - 09:00	<i>Breakfast</i>		
09:00 - 09:30	all	Welcome by organisers: organisational and technical affairs.	
09:30 - 10:00	all	Lecture	Introduction of the Institute of Oceanography, University of Gdańsk, Poland
10:00 - 12:30	all	Lectures	“Introduction - Concepts and definitions on adaptive strategies and biodiversity” “Diversity of coastal ecosystems: intertidal and estuarine ecosystems”
12:30 - 13:30	all	Welcome and introduction by the Head of the Hel Marine Station, walk around the Station and the seal-ponds “Fokarium”	
13:30 - 14:30	<i>Lunch</i>		
14:30 - 17:30	all	Lectures	“Diversity concepts and measures” “Diversity of coastal ecosystems: the non-tidal Baltic Sea” “Practical approach: sampling and treatment of biological materials for physiological and genetic studies.”
17:30 - 20:00	all	Field-trip (by car) to Jastarnia for sampling the shallow sublittoral zone	
21:00 - ...	<i>Open fire - integration event</i>		

#### July 10 (Tuesday)

08:00 - 09:00	<i>Breakfast</i>		
09:00 - 13:30	gr.A+B	Field trip for sampling onboard the research vessel IO UG r/v “Oceanograf II” in the Gulf of Gdańsk	
	gr.C+D	Lectures	“Practical approaches and data processing: genetics, ecophysiology and diversity of marine organisms.”
13:30 - 14:30	<i>Lunch</i>		
14:30 - 18:30	gr.C+D	Field trip for sampling on board the research vessel IO UG r/v “Oceanograf II” in the Gulf of Gdańsk	
	gr.A+B	Lectures	“Practical approaches and data processing: genetics, ecophysiology and diversity of marine organisms.”
18:30 - 20:00	<i>Dinner</i>		
20:00 -	all	Student’s presentations (short presentations of scientific interest, research projects, etc. ).	

#### July 11 (Wednesday)

08:00 - 09:00	<i>Breakfast</i>		
09:00 - 13:30	gr.A+B gr.C gr.D	Genetic analyses - electrophoresis. Respiration measurements. Growth rate measurements.	
13:30 - 14:30	<i>Lunch</i>		
14:30 - 18:30	gr.A+B gr.C gr.D	Genetic analyses - electrophoresis. Growth rate measurements. Respiration measurements.	
18:30 - 20:00	<i>Dinner</i>		
20:00-21:00	all	Student’s presentations (short presentations of scientific interest, research projects, etc. ).	



July 12 (Thursday)

08:00 - 09:00	<i>Breakfast</i>	
09:00 - 13:30	gr.C+D gr.A gr.B	Genetic analyses - electrophoresis. Respiration measurements. Growth rate measurements.
13:30 - 14:30	<i>Lunch</i>	
14:30 - 18:30	gr.C+D gr.A gr.B	Genetic analyses - electrophoresis. Growth rate measurements. Respiration measurements.
18:30 - 20:00	<i>Dinner</i>	
20:00 - 20:45	all	Plenary discussions "Marine biodiversity in Europe - the latest issues. Network of Excellence MarBEF"
20:45 -	all	Time for individual consultation of the lecturers about your own project proposals and ideas - get the best advise from experts.

July 13 (Friday)

08:00 - 09:00	<i>Breakfast</i>	
09:00 - ...	Excursion around the surroundings and study sites, visit to the Tri-city conurbation ( <i>lunch and evening meal on your own</i> )	

July 14 (Saturday)

08:00 - 09:00	<i>Breakfast</i>	
09:00 - 13:30	all	Data processing and calculations (genetic diversity on basis of electrophoretic gel readings, ecophysiological diversity on basis of respiration rate and growth of key species).
13:30 - 14:30	<i>Lunch</i>	
14:30 - 18:30	all	Data processing and calculations (genetic diversity on basis of electrophoretic gel readings, ecophysiological diversity on basis of respiration rate and growth of key species).
18:30 - 20:00	<i>Dinner</i>	
20:00 - ...	optional	Time for individual consultation of the lecturers about your own project proposals and ideas - get the best advise from experts.

July 15 (Sunday)

08:00 - 09:00	<i>Breakfast</i>	
09:00 - 11:00	all	Data processing and evaluation.
11:00 - 13:30	all	Preparation of presentations.
13:30 - 14:30	<i>Lunch</i>	
14:30 - 16:30	all	Wrap up the presentations.
17:00 - 19:00	all	Presentations of the results by students.
20:00 - ...	<i>Social dinner</i>	

Monday 16 (Monday)

08:00 - 09:00	<i>Breakfast</i>	
Departure of the participants		



## EVALUATION OF THE COURSE

In the anonymous evaluation questionnaire the students expressed their great satisfaction with organisation and students services. The quality and the content of lectures and practical classes were highly appreciated; some participants suggested extending the course duration. All students showed their hope for continuation of the course in the future and recommended it to colleagues and classmates in their mother institutions.