



ANNUAL REPORT 2010

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1. FOREWORD

GeoEcoMar, the National Research and Development Institute for Marine Geology and Geoecology, founded in 1993 as Romanian Centre of Marine Geology and Geoecology" - RCMGG, has become a representative institution for Romanian research in Earth Sciences, its activity being focused on geology and geoecology of marine, coastal, deltaic, lacustrine and fluvial aquatic environments.

The technical capacity and scientific performance obtained within research projects allowed NRD GeoEcoMar to be involved in numerous projects, financed both from domestic, state-owned or private (e.g. ROMPETROL, PETROM, MESD) and external funds (European Commission Framework Programs 6 and 7, structural funds, PHARE, NATO, UNESCO, etc.).

Strengthening its leading position in the Romanian scientific research domain, NRD GeoEcoMar has become both National and European Center of Excellence (Euro-EcoGeo-Centre Romania) for environmental and geoecological studies, in the fluvial - deltaic - marine systems.

The specialists of the Institute, including two Correspondent Members of the Romanian Academy, are members of the scientific boards of some major organizations (e.g. The Administration of the Danube Delta Biosphere Reservation) and, also, of various advisory organizations (e.g. The National Committee of the Coastal Area, The International Association of Danube, The Advisory College of Research, Development and

Innovation, etc.).

The scientific research projects and programs approached by the Institute were largely oriented to environmental knowledge and management, but also to uncover new mineral resources.

NRDI GeoEcoMar pays particular attention to permanent training and improving its scientific researchers, linking them to training, doctoral programs and post doctoral training, both in Romania and abroad (e.g. France, the Netherlands, Switzerland).

In order to characterize and monitor the quality of the environment, the Institute makes special efforts to buy advanced research equipment. NRD GeoEcoMar is able to perform high quality geological, geophysical and geoecological studies, including environmental impact and environmental assessment studies, in this regard being authorized by the Ministry of Environment and Sustainable Development (License Certificate R-BM-06-59/2008, R-EIM-06-61/2008).

In order to increase the confidence of its beneficiaries, in elaboration of specialized studies, the Institute has implemented a Quality Management System authorized by Lloyd's Register Quality Assurance, in accordance with the standards: ISO 9001:2009 and SR EN ISO 9001:2009.

Compared with past years, in 2010 NRD GeoEcoMar has again recorded a significant scientific and financial growth, occupying a leading position within the NASR, as well as in other various ratings, at national or local level. The institute has been awarded diplomas and medals within fairs and exhibitions organized in Romania and abroad.



2. INTRODUCTION

The National Research and Development Institute for Marine Geology and Geoecology - GeoEcoMar was founded in 1993 (HG 672/29.11.1993) as Romanian Centre of Marine Geology and Geoecology" - RCMGG and, in 1996 was accredited as national institute (by GD 1316/10.12.1996), coordinated by the Ministry of Education and Research. In 2004, the rules of organization and functioning were established by the GD 967/15.06.2004. In 2004 and 2008 GeoEcoMar was reaccredited as national research institution.

The main activities of GeoEcoMar (CAEN code 7219) are focused on marine, coastal, deltaic and fluvial research (Danube - Danube Delta - Black Sea coastal area), including the assessment of human impact on the environment, complex research (geological-geophysical-geoecological) in the Black Sea and other marine areas, natural hazards studies in the Black Sea (submarine landslides, gas seeps, extreme waves, major storms, etc.), sedimentological, paleoenvironmental and paleoecological studies.

In 2010 GeoEcoMar was involved in numerous research programs, both national (National Plan II: Partnerships Program - 9 projects, Program Ideas - 2 projects, NURC grants - 1 project GEOSIDMAR Core Program - 12 projects, program Corinth - 1 project) and international (Framework Programme VII European Commission: 5 projects; Framework Programme VI - 2 projects; program South East Europe - 1 project, program LIFE + - 1 project, European Science Foundation - TopoEurope - 1 project, IGCP - 1 project Inquire - 1 project, Swiss National Science Foundation - 1 project, program COST - an action ERA-NET projects - 2 projects). At the end of

2010 was signed the contract for the MARINEGEOHAZARD project, financed by the Romania- Bulgaria 2007-2013 Cross Border Cooperation Programme.

Also in 2010, was submitted, within the VII Framework Programme of the European Commission, the ARCH proposal, declared as winner in the early 2011.

Between 1996 - 2010 the Institute has participated in numerous research projects in the Framework Programmes IV - VII of the European Commission, and other agreements such as those with GEF - UNDP, UNEP, International Atomic Energy Agency (IAEA), Land-Ocean Interactions in the Coastal Zone Project (LOICZ), Past and Present Global Changes Project (PAGES), Joint Global Ocean Flux Study Project (JGOFS), IGCP, Inquire, European Science Foundation, Swiss National Science Foundation.

Bilateral scientific cooperation between GeoEcoMar and its traditional partners such as IFREMER, Brest (France), Institute of Biogeochemistry and Marine Chemistry - Hamburg University (Germany), Ismar - Department of Marine Geology, Bologna (Italy),

Institute "F.A. Forel" of Geneva University (Switzerland), took place continuously.

2.1.2 Domain of expertise of GeoEcoMar

2.1.2. a) According with UNESCO: 2503, 2506 (2506.04, 2504.07, 2504.16, 2506.18), 2510 (2510.06, 2510.10, 2510.11)

2.1.2. b) According with CAEN: 7219

2.1.3 Research and Development directions

2.1.3. a) Main research and development domains

- Complex knowledge of the Danube - Danube Delta - Black Sea macro-geo-system (evolution and geological structure, marine resources, specialized expertise);
- Development of marine geological- sedimentological and geophysical maps (multibeam and single-beam bathymetry, seismo-acoustics, marine gravimetry and magnetometry), electrometry;
- Knowledge of the structure and the functioning of the ecosystems from the Danube - Danube Delta - Black Sea macro-geo-system;
- Studies and research on integrated coastal zone management;
- The study of global changes (sea level, climate) and knowledge of their effects on the environment;
- Study and monitoring of natural hazards;
- Introduction of modern research techniques and technologies;
- Elaboration of strategies, studies, forecasts on the development of science and industry / business sector;
- Studies on CO2 storage in underground geological structures;
- Participation in international programs.

2.1.3 b) Secondary research domains

- Participation in the implementation of sectoral plans and of the core programs;
- Conducting studies on strategic domains and national defense;
- Technical Assistance provided to the State bodies.

2.1.3 c) Services/Microproduction

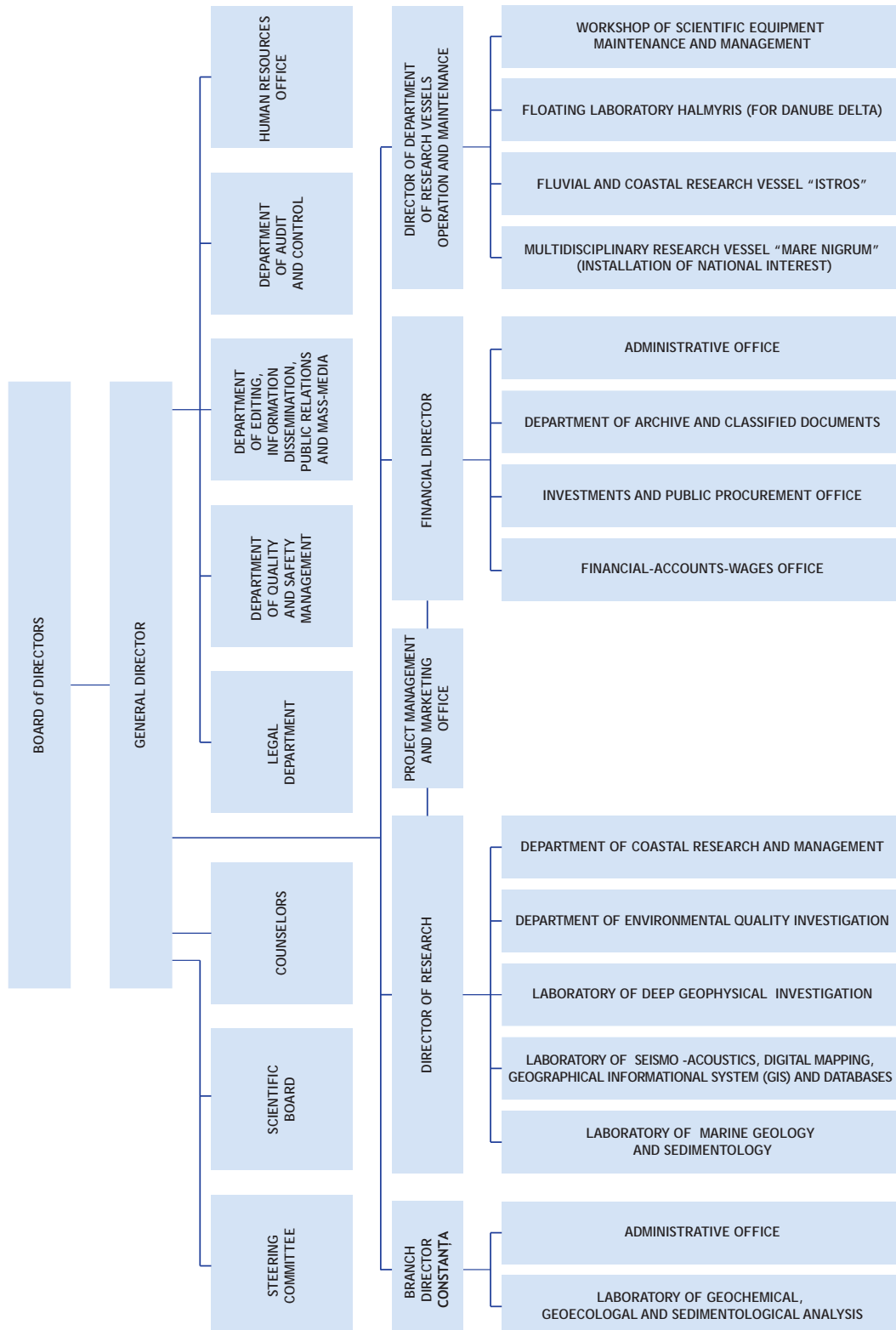
- Impact studies and environmental balances;
- Training and specialization;
- Organization of scientific events (e.g. summer schools, educational/popularizing geosciences courses and seminars);
- Expert advice and assistance;
- Editing and printing of publications specific of the activity domain (geological guides, maps, books, brochures, etc.);
- Services (laboratory, specific measures, mapping, etc.);
- Participation in technology transfer.



3. ORGANIZATIONAL AND FUNCTIONAL FRAMEWORK

3.1 Organizational Structure

The organizational framework of NRD GeoEcoMar, approved through the Order of the Ministry of Education, Research and Youth no. 6366/18.12.2008, is presented below.



3.2 The identification data of GeoEcoMar

Name: National Research and Development Institute for Marine Geology and Geoecology - GeoEcoMar;
Act of incorporation, including subsequent amendments: GD no. 672/29.11.1993, turned into NRD by GD no. 1316/1997, as amended by GD no. 967/15.06.2004;
The number of registration in the potential contractors register: 1761

General Director: Dr. Eng. geologist Gheorghe Oaie
Headquarters: 23-25 Dimitrie Onciul street, RO 024 053, Bucharest, sector 2
Phone, fax, website, E-mail: Tel.: / Fax: +4021 252 30 39, www.geoecomar.ro; contact@geoecomar.ro

3.3 The management structure of the GeoEcoMar

3.3.1 Board of Directors

According with the Order of the Ministry of Education, Research and Youth no. 6125/11.12.2008, the Board of Directors is composed of:

1. Gheorghe OAIE

President, General Director

2. Adrian STĂNICĂ

Member, President of the Scientific Board

3. Silviu RĂDAN

Member, specialist

4. Corneliu DINU

Member, specialist, University of Bucharest, Faculty of Geology and Geophysics

5. Mariana STĂNESCU

Member, representative of the Ministry of Education, Research and Innovation

6. Maria POPESCU

Member, representative of the Ministry of Public Finances

7. Ion MIHALCEA

Member, representative of the Ministry of Labor, Social Solidarity and Family

A representative of the Union is always invited to attend the Board Meetings.

The main prerogatives of the Board of Directors are:

- approve the strategy and development programs of the Institute, according to the general strategy in its own domain of activity;
- analyze and to propose for approval the investments to be made by the Institute, under the law circumstances;
- analyze the achievement of performance criteria regarding the activity of the Institute;
- analyze and to endorse the annual financial statements, submitted for approval to the coordinating ministry;
- approve the administration report regarding the activity of the Institute in the previous year;

- analyze and to endorse the draft budget of revenue and expenditure.

3.3.2 Scientific Board

The Scientific Board is a collective and advisory body, which has as main objective the orientation of the programs, projects and research activities carried out by the Institute. The Board is composed of 15 members, elected by vote, representing the main scientific departments of the Institute. The General Director, the Branch Director and the Director of Research are members of right. The Scientific Board is mandated to assist the Board of Directors in making decisions on research policy.

The activity of the Scientific Board of NRD GeoEcoMar is based on a Regulation of Organization and Functioning, approved by the Board of Directors.

The most important prerogatives of the Scientific Board are:

- draw up the development strategy of the research and development activity of the Institute;
- draw up its own research and development plans;
- analyze, approve and monitor the fulfillment of scientific works;
- propose for approval by the Board of Directors the research - development and innovation program of the Institute;
- endorse the decisions of the Board of Directors on research policy of the Institute and of the Branch;
- propose training programs and employment of research staff, on professional ranks;
- organize and coordinate the scientific events;
- endorse the domestic and international scientific cooperation activities;
- endorse the granting of scholarships and training programs in the country and abroad.

3.3.3 Steering Committee

The Steering Committee provides the operative management of the institute and is composed by General Director, Branch Director, Director of Research, Financial Director and the Director of Vessels Department. Depending on the issues on the agenda, the department managers are also invited to attend meetings. A representative of the Union may be also invited to attend the meetings. The Steering Committee coordinates all the necessary activities needed to achieve the objectives resulting from:

- the strategy of research-development programs;
- the annual research-development program;
- the budget of revenue and expenditure;
- the investments program;
- the quality assurance system;
- other liabilities;

3.3.4 Human resources

The total number of NRD GeoEcoMar employees during 2010 was 123. A 44% percent represents the staff involved in research activities. The crews of NRD GeoEcoMar research vessels fill 33 positions, 23 on RV Mare Nigrum, 8 on RV Istros and 2 on the floating-lab Halmyris. The University graduated staff represents a percent of 53%, out of which 2 persons are Corresponding Members of the Romanian Academy, 22 persons have a PhD Degree and 11 persons are involved in the Doctoral program.

3.3.4. a) Staff structure

Ind. No.	Index	No.	%
1	Total positions, of which:	132	100
	- filled positions	123	93
2	- total University graduated staff	65	53
3	Total staff involved in research - development (R-D) activities, of which:	61	50
	- University graduated staff (R-D)	46	75
	- certified staff (R-D)	44	72
4	Total administrative staff, of which:	19	15
	- administrative staff, University graduated	10	55
5	University graduated staff involved in Marketing/Sales activities	1	100
6	Other staff (sailors, workers, guards), of which:	42	34
	- other staff (navy officers) University graduated	8	19

3.3.4. b) R-D Staff Structure

Ind. No.	Index	No.
1	Romanian Academy Members/Corresponding Members	2
2	Staff involved with teaching in University education	3
3	PhD coordinators	2
4	PhD graduates/total no. of University graduates	23/65
5	Staff involved in renowned scientific and professional organizations in the country	30
6	Staff involved in prestigious scientific and professional organizations abroad	15
7	Scholarships and internship trainings in the country	4
8	Scholarships and internship trainings abroad	4
9	Scientific events organized by the Institute	8

3.3.4. c) Staff structure on age categories, during 2010

Ind. No.	Age Category (years)	Total	Persons involved in R-D activities	University graduates	Researchers						Master Students	PhD Students	Master Graduates	PhD Graduates	PhD Coordinators
					Total	SR I	SR II	SR III	SR	JR					
1	>65	10	8	6	7	7	-	-	-	-	-	-	-	6	2
2	60-65	20	10	7	7	2	4	1	-	-	-	-	-	5	-
3	55-60	23	10	5	4	-	-	4	-	-	-	1	-	2	-
4	45-55	25	8	5	5	2	3	-	-	-	-	-	1	4	-
5	35-45	28	11	10	7	1	2	2	2	-	-	3	1	2	-
6	<35	17	15	14	15	-	-	7	4	4	1	7	11	3	-
7	Total	123	62	47	45	12	9	14	6	4	1	11	13	22	-

3.3.3.d) Information regarding the staff training (staff involved in training programs)

Staff involved in master and doctoral programs, during 2010:

Students	No.	Name and surname
A. Master	3	Stanciu Christian Adrian
		Constantinescu Adriana
		Pavel Bianca
B. PhD Students	11	Anghel Sorin
		Avram Corina
		Balan Sorin
		Briceag Andrei
		Cazacu (Varzaru) Camelia
		Dan Sebastian
		Dudu Alexandra
		Dutu Florin
		Maximov Gabriela
		Muresan Mihaela
		Secrieru Dan

Staff involved in training programs, during 2010:

Ind. No	Name and surname	Destination	Period	Purpose/Objectives	Evaluation
1	Stanciu Christian Adrian	Malta	14.11-17.12.2010	Intensive training on economical issues and integrated marine and coastal management	Diploma
2	Dinu Irina	Venice	13.11-13.12.2010	3D modeling training SHYFEM	Final paper and modeling maps
3	Dan Sebastian	Venice	22.11-6.12.2010	ADCP Course	Field testing
4	Maximov Gabriela	Venice	22.11-6.12.2010	ADCP Course	Field testing
5	Pop Cornel Ion	Murighiol	13-17.12.2010	ADCP Course	Field testing
6	Maximov Gabriela	Murighiol	13-17.12.2010	ADCP Course	Field testing
7	Dudu Alexandra	Murighiol	13-17.12.2010	ADCP Course	Field testing
8	Tiron Laura	Murighiol	13-17.12.2010	ADCP Course	Field testing
8	Fulga Costina	Constanta	5-14.02.2010	Project Management Course	Diploma



4. FINANCIAL RESULTS

Total revenues: 15.543.378 lei
of which:

Revenues from R-D activities: 12.261.454 lei, as follows:

Revenues from national R-D contracts financed by the State budget: 5.862.633 lei;
Revenues from international R-D contracts financed by public funds: 2.558.995 lei;
Revenues from R-D contracts financed by private funds: 3.839.826 lei;
Revenues from economical activities (services, microproduction, intellectual property);
Other revenues: 3.281.924 lei.

The revenues of GeoEcoMar during 2010 were derived from research on the following programs:

Plan / Program	Value for 2010 (RON)
National Programs	810.423,00
Core Program - GEOSIDMAR	5.052.210,00
Third parties contracts	3.839.826,00
International projects	2.558.995,00
Total	12.261.454,00

4.1 National Programs

Crt. no.	Project	Contractor	Subcontractor
National Plan II - PARTNERSHIP Program			
1	Using and developing new methods for investigating major changes of climate and sea level changes in the Danube Delta and the Black Sea, in order to reconstruct the evolution and forecast the associated risks - CLIMARISC	NRDI GeoEcoMar	- University of Bucharest Faculty of Physics - NRDICIT Rm. Valcea - SC Accent Pro 2000
2	Complex study of the semi-closed ecosystems (Alpine and volcanic lakes), in order to establish the reference level of anthropogenic impact: Alpine lakes from Făgăraș Mountains and St. Ana Lake - ALPIMP	NRDI GeoEcoMar	- University of Bucharest Faculty of Physics - GIR Bucharest - ICPE - CA Bucharest - SC Accent Pro 2000
3	Scientific substantiation, conceptual and numerical modeling of the aquifer structures for the protection and sustainable use of the groundwater resources in the southern part of Romania - AQUASID	NRDI GeoEcoMar	- SC GEOAQUA Consult - University of Bucharest Faculty of Geology and Geophysics - NIHWM Bucharest
4	Geo-Biodiversity of the National Park Cheile Bicazului-Hasmas. Geological, geographical, biological integrated studies to enrich the natural heritage of the park and to expand its boundaries - GEOBIOHAS	GIR Bucharest	- NRDI GeoEcoMar - University "Alexandru Ioan Cuza" - Iasi, - University of Bucharest, Faculty of Geology and Geophysics

5	Protected areas: assessing environment quality in order to capitalize the natural resources and to achieve a sustainable local development - PROMED	GIR Bucharest	<ul style="list-style-type: none"> - NRD GeoEcoMar - University of Bucharest, Faculty of Geology and Geophysics - NIHWM Bucharest
6	The influence of the global geo-climate changes on sustainable development in Dobrogea - GLOBE	Constanta Maritime, Hydrographic Directorate	<ul style="list-style-type: none"> - NRD GeoEcoMar - NRD Grigore Antipa - University "Ovidius" Constanta - University of Bucharest CCSFN - "Ovidiu" Townhall - SC Buta&Co. SA
7	New innovative model used in scientific substantiation of the decisions regarding the ecological protection and reconstruction of the wetlands and the preservation of the protected areas, based on mathematical modeling of the morpho-hydrographic dynamics and water quality - MORFDD	NRDI Danube Delta	<ul style="list-style-type: none"> - NRD GeoEcoMar - NIHWM Bucharest - UTCB - Faculty of Hydrotechnics and Land Improvements
8	Water and sediments flow on the Romanian Coast: measurements using modern technologies and mathematical modeling in order to draw up a support system for taking decisions on coastal protection - CLASS	NRDI GeoEcoMar	<ul style="list-style-type: none"> - University of Bucharest, Faculty of Geology and Geophysics - ISMAR, Venice, Italy - SC Gera SRL
9	Assessing the impact of oil pollutants and natural degradation of hydrocarbons upon the aquatic ecosystems - IDEA	National Institute for Laser, Plasma and Radiation Physics	<ul style="list-style-type: none"> - NRD GeoEcoMar - Univ. "Ovidius" Constanta - Institute of Biology of Romanian Academy - NRD Optoelectronics - SC DOLSAT Consult
National Plan II - IDEAS Program			
1	The implications of the Mediterranean Sea Messinian drainage on the Dacian Basin evolution. Physical, biological and sedimentological processes	NRDI GeoEcoMar	
2	Black Sea: the evolution of the calcareous nannoplakton in the last 7000 years. Paleoenvironmental and paleogeographical reconstruction	NRDI GeoEcoMar	
NURC Grant			
1	Geomorphological and geoenvironmental evolution of the interface between the hydrographic network and the area of active deposition of sediments: case study Danube Delta - EUROCC/2009	NRDI GeoEcoMar	
Total National Programs = 810.423 lei			

4.2 Core Program - GEOSIDMAR

During 2010, GeoEcoMar activities in the Core Program - GEOSIDMAR, included:

- complex investigations on Black Sea, Danube Delta, along the Romanian Black Sea Coast, along the Romanian sector of Danube, on the confluence of Danube with the tributary rivers (Cerna, Topolnița, Jiu, Olt, Vedea, Argeș, Ialomița, Siret, Prut);
- measurements, sampling (water, sediments, biological), laboratory analysis, data processing and interpretation;
- drafting stage reports and annual summary report;
- scientific substantiation of the necessary measures proposed to reduce/eliminate the negative impact of the human activities upon the environment;
- substantiation of some international partnership proposals applied in programs such as Cross Border Cooperation (CBC), Joint Operational Program Black Sea 2007 - 2013, South East Europe (SEE);

Crt. No.	Project	Expected results
Objective 1: Global changes: effects evaluation, risks forecasting and management Objective Code: PN 09-41 01		
1	Project Code: PN 09 41 01 01	<ul style="list-style-type: none"> - complex geological, sedimentological, seismo-acoustical, bathymetrical, geochemical, ecotoxicological and geoecological studies in order to establish basic levels absolutely necessary for identifying recent and future local/global climate and sea level changes; - monitoring the evolution in time of geoecological consequences regarding global climate changes and geotectonic events; - knowledge of characteristic ecosystems structure and functioning; - understanding the consequences of global changes on ecosystems, an essential request in their sustainable operation; - expanding the database of the Institute; - integration of marine research activities in international programs.
	Geoecological monitoring of the Romanian continental shelf	
2	Project Code: PN 09 41 01 02	<ul style="list-style-type: none"> - inventory of major Romanian CO₂ sources; - substantiation of a CCS demonstrative project in Romania; - scientific substantiation of a future National Program and an Action Plan for CCS commercial development in Romania including all its components: caption, transport and storage - proposal of funding sources and support scheme for implementing a CCS demonstrative project in Romania - proposals to create legislative and regulatory framework in order to ensure the competitiveness of a CCS demonstrative project in Romania and the development of CO₂ capture/transport/storage points.
	Identification of geological structures suitable for CO₂ storage in Romania; the establishment of an appropriate methodology	
Total Objective 1 = 1.552.210 lei		

Objective 2: Sustainable and adaptive development, resources management

1	Project Code: PN 09 41 02 01	<ul style="list-style-type: none"> - location and delimitation of areas of interest based on existing documentation; - preparation of research vessel, including supply of fuels and lubricants; - research equipment testing and calibration, including those owned by the vessel; - multi-beam bathymetric measurements; - seismo-acoustics measurements; - sediments sampling from cores and water/sediments interface; - CDT measurements and water sampling from interest points; - hydro and geochemical laboratory analysis; - interpretation of results for confining areas of interest from economic point of view; - drafting of cartographic materials (distribution/concentration maps, geological sections, etc.) - drafting of stage reports and final report.
	Complex research for outlining of new marine, mineral and energetic resources	
2	Project Code: PN 09 41 02 02	<ul style="list-style-type: none"> - synthesis of existing published and/or unpublished data, related to exploitable or potentially exploitable marine resources in the Black Sea; - updated evaluation of the basic status of the major ecosystems in the Black Sea; - identifying the potential risks of operating activities of Black Sea resources; - proposing measures to mitigate negative results following resources operation, including the strategies regarding the sustainable management of natural resources; - environmental protection against the natural or man-made undesirable effects, aiming to improve environment quality; - awareness of policy makers and of locals; - results publication and dissemination.
	Potential risks in the exploitation of the Black Sea resources, in terms of global climate changes	

Total Objective 2 = 0 lei



Objective 3: Integrated management of Danube-Danube Delta-Coastal-Black Sea Geosystem
Objective Code: PN 09-41 03

1	Project Code: PN 09 41 03 01	<ul style="list-style-type: none"> - expanding (updating) the knowledge-base regarding the Romanian continental shelf by drafting geologic - sedimentologic, bathymetric and geocologic maps; - documentation based on known database, owned or from other sources, in order to elaborate the scheme for achieving marine mapping works, delimitating the map sheets of economic or scientific major interest; - preparation of research vessel, including supply of fuels and lubricants; - research equipment testing and calibration, including those on research vessel; - understanding the physico-chemical and biological processes, the structure and functioning of the benthic biocenosis, indispensable to their sustainable exploitation; - knowledge of the sediment genesis processes; - knowledge of pollutants dispersion and fixing mechanisms in sediments; - expanding information regarding the potential of mineral resources in Romania through updating the knowledge-base on marine resources; - achievement of the theoretical database, necessary for the sustainable exploitation of the marine environment, in terms of protecting specific ecosystems; - achievement of the informational database necessary for the substantiation of coastal protection works or oil rig emplacement, etc.
	Geological and geophysical mapping of the marine areas under Romanian jurisdiction	
2	Project Code: PN 09 41 03 02	<ul style="list-style-type: none"> - analysis of distribution and intensity of coastal area activities; - analysis of potential conflicts between these activities; - appointment of a multi-criteria analysis system for implementation of a sustainable development (environmental, economical, social) and its testing in the coastal area; - solutions regarding the spatial planning of the anthropogenic activities from coastal area and comparison with plans currently existing in Europe; - choosing the most acceptable measures of protection for each littoral sector, using multi-criteria analysis.
	Comprehensive spatial planning of the Romanian seaside	
3	Project Code: PN 09 41 03 03	<ul style="list-style-type: none"> - identifying the characteristics of each sector of beach to be studied; - obtaining a wave climate for a long period of time (years) - calculating the amount of sediment transported in Romanian coastal area; - predictions concerning short-term (years) and medium-term (tens of years) beach evolution;
	Investigation and quantification of water and sediment circulation in coastal area, based on numerical models	

4	Project Code: PN 09 41 03 04	<ul style="list-style-type: none"> - mineralogical and geochemical study of suspended and bottom sediments and cored sediments; - determine the main physicochemical parameters of water and sediments; - analysis of contaminants (heavy metals, pesticides, hydrocarbons, nutrients, etc.) from water and sediments; - study the pelagic and benthic populations of aquatic ecosystems; - mapping of biogas emissions (N₂O, CO₂, CH₄) using <i>in situ</i> measurements on various aquatic and terrestrial environments; - setting trends for seasonal variation in representative aquatic or terrestrial ecosystems; - assessing the impact of human interventions on productivity of water bodies and on eutrophication processes, and the consequences they have upon greenhouse gas emissions; - assessing consequences of human activities in the Danube Delta, identifying areas under stress and environmental and socioeconomic risk assessment on short, medium and long term.
	<p>Geoecological research to evaluate natural and anthropogenic factors influencing the distribution of sediments, marine water quality and emissions of greenhouse gases in the Danube Delta and Razim - Sinoie Lagunar Complex</p>	
5	Project Code: PN 09 41 03 05	<ul style="list-style-type: none"> - measurements of water flow and sediment carried by river; - determine the main categories of pollutants in the Danube and its main tributaries; - determine the influence of water flows, sediment and pollutants on the Danube and Danube Delta ecosystems, including the northwestern part of the Black Sea; - development of cartographic documents (geological, sedimentological, geoecological, bathymetric maps) necessary for environmental control and surveillance; - geological, sedimentological and geophysical measurements and observations (bathymetry and seismo-acoustics) in critical areas (thresholds) to increase the navigation safety; - expanding the database opened for internal users; - implementation of new research technologies in collaboration with other research institutes, including those from abroad; - scientific substantiation of proposals of measures to reduce / eliminate pollution and to make the best decisions on environmental protection.
	<p>Danube river: morpho-sedimentological and geoecological evolution and estimative anthropogenic pollution</p>	



6	Project Code: PN 09 41 03 06	<ul style="list-style-type: none"> - creation of a complex geodynamic network to enable the future achievement of a wide range of geodetic and geophysical observations, permanently or by monitoring. Including these stations in the international and national network of permanent GPS stations. Creating the necessary premises for the expansion of the geodynamic polygon on the entire western shore of the Black Sea, via a / some bilateral project (s) with Bulgaria and Ukraine; - integration of surveying and geodetic station networks and registering tide gauges in a uniform system of coordinates (EUREF) and integrated interpretation of records; - obtaining of some inaccessible geodynamic information, by other methods and their integration together with hydrologic and sedimentological data in hydrodynamics simulation models of processes occurring in the coastal zone, all of these leading to the scientific management of the coastal zone; - integrating the results and data exchange in international projects (such as Wegener - Medlas, CERCOP, etc.), whose purpose is to highlight and monitor the movement of lithospheric plates; - determining the relative and absolute rate of sea level change compared to the land; - determining the direction and amplitude of the epirogenetic movements, affecting different sectors of the coast line, in order to choose the best methods of coastal protection; - contributions to the study of regional seismicity and the highlighting of the active faults; - highlighting the main trends of hydro-geomorphological evolution of the Danube in its problematic sectors; - connecting, through the complex network of terminals made along the Lower Danube, of the geophysical and geodetic networks of the riverside States.
	Implications of terrestrial movements on morpho-geological evolution of the Danube - Black Sea geosystem	
Total Objective 3 = 3.500.000 lei		



Objective 4: Protection and integrated management of national geological and archaeological heritage
Objective Code: PN 09-41 04

1	Project Code: PN 09 41 04 01	<ul style="list-style-type: none"> - assessment of natural factors and anthropogenic impact on areas protected by law; - assessment of economic and social value and the costs and benefits of natural heritage conservation in protected areas; - proposals of solutions for the natural recovery of damaged areas; - providing to local and national bodies of a scientifically based documentation regarding protected areas, to be used in decision making regarding sustainable development, in order to protect and conserve nonrenewable natural resources or endangered ones; - proposals for alternative strategies of exploiting natural resources by redirecting some activities from those areas to clean and environment friendly activities, such as ecotourism and geotourism which, on the one hand, ensure the preservation of natural environment, healthy and unpolluted, and on the other, enable growing benefits for local communities and attaining economic sustainability; - sustainable development of the studied areas by capitalization of local resources.
	Geological and paleontological studies in the protected areas of the Carpathians and Apuseni Mountains, in order to ensure conservation and sustainable use	
2	Project Code: PN 09 41 04 02	<ul style="list-style-type: none"> - obtaining information on archaeological and cultural potential of Histria Argamum, Albesti-Tropaeum Traiani archaeological sites; - archaeological research will be oriented according to geophysical data; - parameters observations and measurements on extracted samples (magnetic susceptibility) will allow adjustment of criteria for geophysical interpretation, leading to a better calibration of geophysical interpretation process; - completion of the study will enable the development of a specific geophysical research methodology , modernization and continuous diversification of geophysical equipment and software; - publication of the obtained results; - expanding the existing database.
	Environmental and engineering geophysics research for highlighting the shallow geological, archaeological and other kind of structures	

Total Objective 4 = 0 lei

TOTAL PROGRAM = 5.052.210 lei



4.3 Third Parties Contracts

NRDI GeoEcoMar has provided economic agents with research services, consisting of complex marine and fluvial research, performing laboratory tests and analyses, conducting studies regarding the state of the environment.

Crt. no.	Activity	Beneficiary
1	Performing measurements of carbon dioxide emissions at the interface soil / atmosphere within the geological survey program in the Podul Cosnei and - Poiana Negrii, in order of shaping the carbonated mineral water accumulation structures.	SC Dorna Apemin S.A.
2	Analysis of legal rules and instruments applied within Constanta Harbor	S.C. IMPULS SRL
3	Study on bathimetrical uplift of the St. George Arm, on a 1000m distance from Mahmudia	SC EXPERCO - ISPIF SRL
4	SWOT analysis in the environmental protection applicable in the Constanta Harbor	SC ECOROM 2000 SRL
5	Supplying and installation of optical microscope with complete configuration	SC Carl Zeiss Instruments SRL
6	Translation services	Echo Solutii Lingvistice SRI
7	Feasibility study for evaluating the state of the Rapana resources from the southern coast of the Romanian seashore -Agigea - Mangalia	SC North Station Grup SRL
8	Supplying of GIS and GPS digital products for the bathymetry of St. George - Vadu coastal area, the bathimetric interval of 0-20m.	SC Sheba Distribution SRL
9	Feasibility studies	INTECSEA BV
10	Spill settlement, storage and eventual recovery of the material dredged from the critical points of navigation located along the Danube	AFDJ Galati
11	Services of organizing the scientific seminar within the project no. 31-068/2009-CLIMARISC	SC Total GSM 2004 SRL
12	Topographic and documentation services for development of a feasibility study for "achievement of a support geodetic network for the hydrographical works on the Danube river in order to increase the accuracy of measurements and of the electronic navigation charts."	SC Tehnogis Grup SRL

13	Development of a monitoring system of the Danube Delta through radar interferometry (InSAR) in order to detect soil subsidence / compaction / lifting phenomena.	SC Advanced Studies And Research Center SRL
14	Environmental Impact Assessment for the digging work of the LVO4 West Lebada oil rig, Black Sea continental shelf	Petrom SA
15	Research contracts (2 stages) Order 1: Assistance using specialized personnel in gravitational core drilling under pressure program Order 2: Mobilization of R/V Mare Nigrum, aiming mainly the gravitational core drilling under pressure and bathymetric multibeam measurements	MAREXIN BV
16	Sedimentological report on the area between the 100 - 200m isobaths of the Black Sea, containing the primary data; the primary bathymetry data and the accessory measurements of the physical-chemical parameters of the water necessary to calibration and processing the primary and vectorial bathymetrical data.	MREI
17	Research within the Core Program for Carbon capture and storage until 2020.	ISPE
Total Third Parties = 3.839.826 lei		

4.4 International Cooperation

NRDI GeoEcoMar conducts a laborious research activity in international projects, being an active participant to research and exploration of the Black Sea and other marine areas of interests.

NRDI GeoEcoMar is involved both in European projects (European Commission Framework Program VI and VII, CEE, CBC, Black Sea 2007-2013) and in bilateral cooperation projects (IFREMER - France; CESNE - Switzerland) or other international projects.

Below are listed the major international projects in which NRDI GeoEcoMar was involved in 2010:

Crt. no.	Project	Thematic/Main results achieved
1	- collaboration concepts between European research fleets;	- collaboration concepts between European research fleets;
2	PC - VII HYPOX In situ monitoring of oxygen depletion in hypoxic ecosystems of coastal and open seas and land-locked water bodies	- monitoring of oxygen concentration by performing in situ measurements, in order to evaluate its deficit in the marine environment;
3	PC VII - Black Sea Scene - Upgrade	- creating a multidisciplinary scientific network, at basin level

4	PC VII - CLIMATEWATER Bridging the gap between adaptation strategies of climate change impacts and European water policie	<ul style="list-style-type: none"> - improving the European legislation on water, by highlighting the national and Community currently legislative shortcomings - harmonization of national and European legislation - implementation of new regulations at the Union level
5	PC VI - HYDRALAB IV More than water; dealing with the complex interaction of water with environmental elements, sediment, structures and ice	<ul style="list-style-type: none"> - harmonization and optimization of coherent using in developing the best research infrastructures on hydraulic modeling, at European level, - Integration and compatibilization of the physical hydraulic techniques with those of ecological modeling to develop interdisciplinary physical models.
6	SEDI PORT SIL LIFE +	-establish a methodology for ecologization/ treatment of sediments accumulated in harbors and their transformation from contaminated materials, that require a special attention, in raw materials particularly useful.
7	South Eastern Europe (SEE) ECOPORT 8	- establishing a guide to good environmental practices which should be applied to South Eastern European harbors
8	European Science Foundation TOPOEUROPE - SourceSink Project	- assessment of natural hazards in order to quantify sediment transfer from mountain ranges to active sedimentary basins
9	PC VI - Black Sea Scene - Black Sea scientific network	<ul style="list-style-type: none"> - joins expert geologists (experienced in marine geology) and archaeologists (experienced in prehistoric times) to make possible the identification of submerged sites located in marine areas; - studying the migration of populations due to changes of environmental conditions imposed by climate change older than 5000 years old; - training and specialization in archeogeology
10	IGCP 521 Black Sea Mediterranean corridor during the last 30 ky: sea - level change and human adaptation	- changes in sea level, the shoreline evolution and the adaptation of humans to regional environmental conditions; the tectonics of the area (e.g. Caucasian coast, Marmara Sea), stable areas (e.g. Manici Low Land, variable climate from temperate (e.g. North Western Black Sea) to subtropical (e.g. Israeli coast)
11	INQUA 0501 - Caspian - Black Sea - Mediterranean Corridor during the last 30ky: sea-level change and human adaptive strategies	- exchange of ideas on the Black Sea region in order to link natural processes with specific ecosystems
12	Swiss National Sciences Foundation NEAR 4	- establishment of programs to study management of water resource and of wetlands for master and doctoral students from Eastern Europe
13	FENCO ERA - NET Scrutinizing the impact of CCS communication on the general and local public - Impact of Communication	Public communication
Total = 2.558.995 lei		

5. NRD GeoEcoMar RESEARCH INFRASTRUCTURE

5.1 Research and Development Laboratories

Laboratories located in Bucharest Headquarters:

- Laboratory of Marine Geology and Sedimentology
- Laboratory of Deep Geophysical Investigation
- Laboratory of Seismo - Acoustics, Digital Mapping, Geographical Informational System (GIS) and Database
- Department of Coastal Research and Management
- Department of Environmental Quality Investigation
- Department of Quality and Safety Management
- Project Management and Marketing Office
- Workshop of Scientific Equipment Maintenance and Management

5.1.1 Laboratory of Marine Geology and Sedimentology

Areas of competence:

- Studies on the composition and geologic evolution of the Black Sea Basin and other areas of the World Ocean;
- Geological and sedimentological mapping of the Black Sea continental shelf;
- Complex study of sediments (granulometry, mineralogy, chemistry, biology) in the Black Sea, Danube Delta, Romanian sector of the Danube and its main Romanian tributaries;
- Studies on emissions of greenhouse gases (CH₄, N₂O, CO₂) in the wetlands, from the Danube - Danube Delta - Black Sea hydro-sedimentary geosystem;
- Geological-sedimentological, paleoecological and paleoenvironmental research;
- Studies on geological and environmental impact of global changes and sea level changes in the past and present;
- Studies on the effects of anthropogenic activities on the ecosystems characteristic to fluvial, deltaic, coastal and marine areas; impact studies and environmental balances;
- Assessment of marine, lacustrine and fluvial environmental quality;

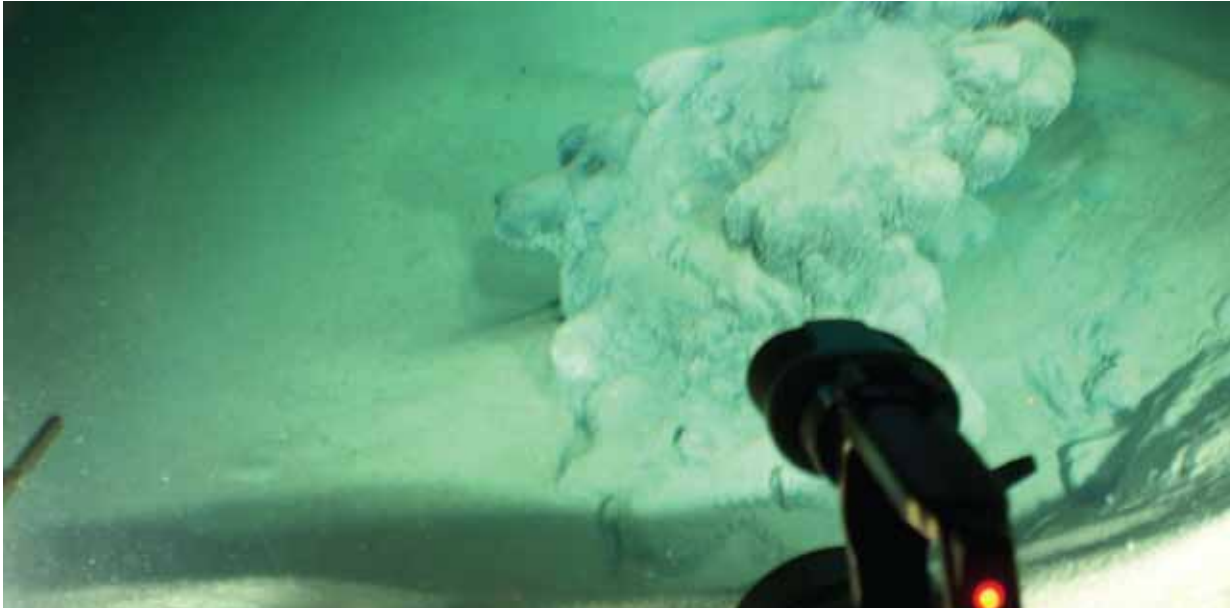


Underwater geological investigations. Bălea Lake

5.1.2 Laboratory of Deep Geophysical Investigation

Areas of competence:

- Geophysical mapping (gravimetric and magnetic) of the Black Sea continental shelf and of other marine areas, including continent-sea transition zone;
- Processing, interpretation and 2D and 3D modeling of geophysical data in order to deciphering geological structures;
- Environmental and engineering geophysics;
- Archaeological geophysics;
- Topohydrography - building of dynamic electronic navigation charts;
- Geophysical databases and GIS applications;
- Coordination of research projects on CO2 capture and storage in geological structures in order to reduce global warming.

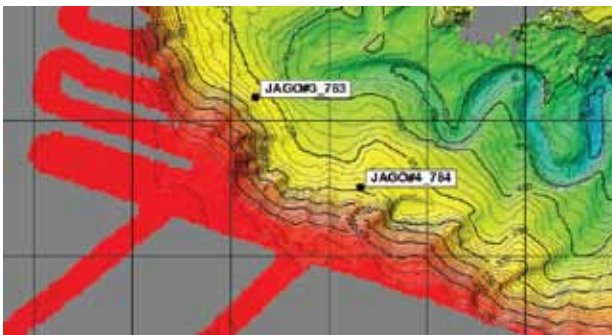


METROL Project - Underwater carbonate structures (bathyscaphe image)

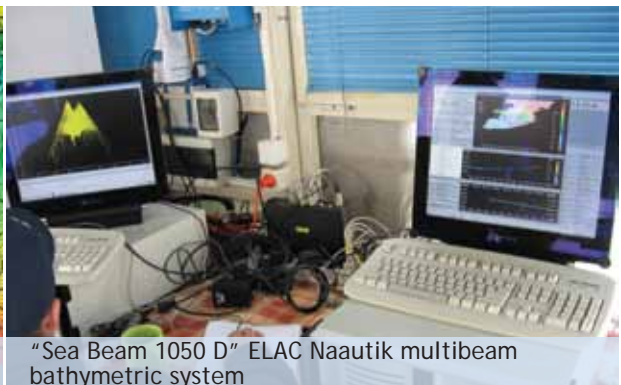
5.1.3 Laboratory of Seismo - Acoustics, Digital Mapping, Geographical Informational System (GIS) and Database

Areas of competence:

- Recording and interpretation of mono- and multibeam bathymetry data;
- Recording, processing and interpretation of seismo-acoustics data (sub-bottom profiler, side scan sonar);
- Integration of bathymetry data, seismo-acoustics, and other categories of data measured by NRD GeoEcoMar as digital maps, according with the national research topics and as international or third parties projects, to which the institution is an integrative part;
- Data integration at the level of the institution as Geographical Information Systems GIS and databases.



BLASON Project - multibeam bathymetric surveys in the area of Danube submarine fan



"Sea Beam 1050 D" ELAC Nautik multibeam bathymetric system

5.1.4 Department of Coastal Research and Management

Areas of competence:

Specialized studies and research for coastal area:

- Sedimentology / granulometry/ mineralogy;
- Geomorphology and bathymetry;
- Historical development of coastal areas;
- Numerical modeling of sediment transport in coastal areas.

Activities in the field of Integrated Coastal Zone Management:

- Consultancy on developing strategies for sustainable development of coastal zone;
- Causal analysis (DPSIR and CCA) for integrated coastal zone management;
- Multicriteria analysis to substantiate the decision for integrated coastal zone management.



Coastal area - "Împuțita" Canal

5.1.5 Department of Environmental Quality Investigation

Areas of competence:

- Wide experience in environmental studies, especially for the aquatic domain, with emphasis on marine area;
- Specific analysis on water and sediment samples are performed, mostly within the institution, which is equipped with sampling and laboratory specialized equipment.



Environmental investigations - "Lilieci" drill

5.1.6 Department of Quality and Safety Management

Areas of competence:

- Manage the Quality Management System (QMS) applied at the level of the institution, according to ISO 9001 / 2008 (accreditation from Lloyd's Register Romania), applying specific techniques and tools;
- Make periodic internal audits
- Follow the procedures from QMS;
- Prepare and attend periodic audits of the accreditation body, Lloyd's Register Romania

5.1.7 Project Management and Marketing Office

Areas of competence:

- Manage the project portfolio of the institution, applying specific techniques and tools in the system of controlled management;
- Research the specific market in order to successfully address new segments or areas of interest;
- Inform, continuously, the institution management about national and international projects;
- Suggest ways to increase the success of the institution within the projects competition.

5.1.8 Workshop of Scientific Equipment Maintenance and Management

Areas of competence:

- Manage the specialized equipment and scientific equipment endowment of NRD GeoEcoMar;
- Check and calibrate the scientific equipment;
- Perform maintenance and repair of scientific equipment;
- Follow the periodical metrological checks laboratories for the scientific equipment within the BRLM laboratories and ensure the reception of the calibrated equipment;
- Prepare the required documents and complete quality management system according to ISO 9001:2008;
- Participate in preparing tender documents to purchase new research equipment;
- Provides logistical support for the purchase of specific materials;
- Provide technical assistance during field campaigns;
- Coordinates the activities of data acquisition at the Mangalia station of wave energy study;
- Perform scientific prototype equipment by request of researchers.

Laboratories located in Constanța Branch:

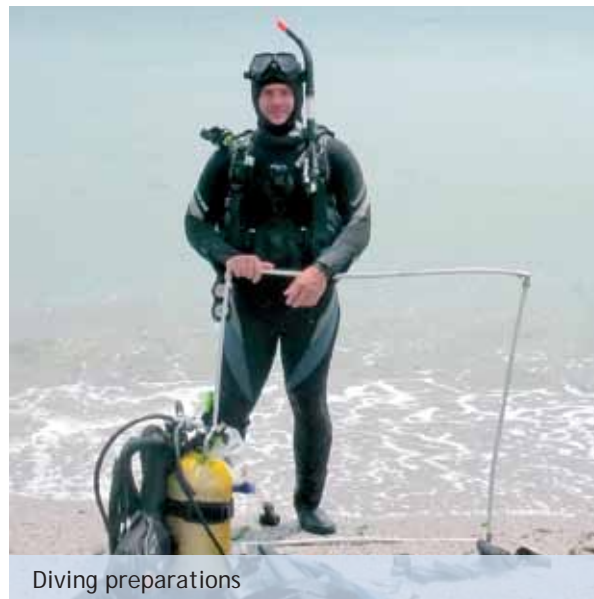
5.1.9 Laboratory of Geochemical, Geological and Sedimentological Analysis

Areas of competence:

The laboratory conducts geochemical, biological, geocological, granulometrical, mineralogical and geotechnical analysis.

The main types of analysis performed are:

- Determination of major chemical components concentrations (CaCO_3 , TOC, total Fe_2O_3 , TiO_2 , MnO) and minor (e.g. heavy metals: Cu, Pb, Zn, Cr, Ni, Cd, Co, Sr, Rb, Ba, Zr, As) on water and sediment samples using X-ray fluorescence and atomic absorption;
- Determination of concentrations of nutrients (PO_4 , NO_2 , NO_3 and silica) in water samples using standard methods (HACH);
- Determination of chlorophyll concentration using UV-VIS spectrophotometry;
- Measurements of physical - chemical parameters on water samples: dissolved oxygen, oxygen saturation, pH, Eh, conductivity, salinity, total dissolved solids by using electrochemical methods;
- Biological analysis of phytoplankton, zooplankton, zoobenthos.



Dividing preparations

Types of works performed:

- Monitoring activities of the marine, brackish and fresh water environment;
- Environmental impact studies and environmental balances;
- Studies on the impact of global changes on marine and coastal environment;
- Laboratory tests conducted at: contracts for carrying out national research programs funded by the Ministry of Education, Research and Innovation, projects under international programs, contracts with different economic agents;
- Research projects such as the "CoreProgram";
- Research contracts signed with economic agents;
- Studies on the accumulation of mineral aggregates used in the construction, ceramics and glass industry;
- Studies on contamination with petroleum products;
- Granulometrical, mineralogical and physico-mechanical analysis on unconsolidated sediments.



CTD measurements

5.2 Research infrastructure

The basic infrastructure of the NRD GeoEcoMar is provided by the research vessels and by the specialized laboratories which are working on board, as well as at the headquarters of the institution.

Research vessels and boats:



Installation of national interest - multidisciplinary oceanographic research vessel "Mare Nigrum"; displacement - 3200 tons; 25 researchers on board, 10 laboratories measuring 200 square meters;



Research vessel "Istros", used on river, deltaic and coastal areas; displacement -147.8 tons displacement, 10 researchers on board, 3 laboratories, range 900 km;



Floating laboratory "Halmyris"; displacement - 90 tons, 20 researchers on board, two laboratories, conference room); is used as a work basis in the Danube Delta, as well as a location for scientific events.



Research boat "Carina" (6 m long, 6 seats, 150 hp diesel engine) is commonly used for making observations and measurements in areas not accessible for research vessels mentioned above.

Motor boats, usually used in shallow fluvial, lacustrine and coastal areas.

Testing laboratories accredited /non accredited

- Workshop of research equipment maintenance and management which can build and test various equipment prototypes needed for the current research or it can modernize older equipment, but still useful for field or laboratory activities.

Installations and special objectives of national interest

- Multidisciplinary oceanographic research vessel "Mare Nigrum".

The list of performant equipment and specific research facilities:

5.2.1 Tangible equipment

Crt. No.	Inventory no.	Description	Date month/year	Value lei
1	300007	Naval Station FTM	12/1997	484,18
2	300023	ESE Generator 304	02/2005	2.950,00
3	300034	GPSQ GARMIN 9000	04/2006	2.799,24
4	300035	JOHNSON Motor	01/2007	9.947,45

5	300036	GPS+accesories+software	01/2007	4.073,00
6	300038	GPS R 3L1 Receptor	01/2007	12.841,29
7	300043	KT6 Kapameter	01/2007	3.119,29
8	300045	GPS Receptor	03/2007	12.622,00
9	300046	Particle Laser Analyzer	05/2007	133.105,07
10	300047	EAV1 Electrometer	06/2007	20.097,18
11	300048	Proton Gradientmeter	06/2007	18.732,22
12	300059	UV-VIS Spectrofotometer	11/2007	49.896,70
13	300060	Laser Measurement Device	12/2007	3.158,26
14	300062	Laser Measurement Device	11/2007	2.998,80
15	300063	ZEISS Microscope	12/2007	22.276,80
16	300065	GARMIN GPS	12/2007	2.344,30
17	300066	GARMIN GPS	12/2007	2.236,02
18	300071	CTD 48 SV Equipment	01/2008	30.238,90
19	300072	GARMIN MAP GPS	01/2008	2.779,99
20	300073	JUNO ST GPS	01/2008	5.518,01
21	300074	Stereomicroscope	01/2008	7.516,66
22	300075	TRADUCER TRACTAT	01/2008	112.913,90
23	300076	USBL acoustic system	01/2008	60.633,89
24	300077	Laser Measurement Device	03/2008	3.252,00
25	300078	Corer	07/2008	36.113,92
26	300079	Methane detection equipment	07/2008	91.092,25
27	300080	Winch cable	07/2008	96.390,00
28	300081	Sampling device	07/2008	2.369,03
29	300082	Portable multiparameter	07/2008	7.339,92
30	300083	Diving equipment	07/2008	13.915,70
31	300087	Minivacuum pump	07/2008	3.089,00
32	300089	Nise laboratory+triphasic vacuum	07/2008	51.759,12
33	300093	BX 41 OLYMPUS Microscope	09/2008	35.248,70
34	300094	Doppler profiler acoustic system	09/2008	36.086,52
35	300095	Accesories of the acoustic system	09/2008	28.376,79

36	300096	Microwave digestion oven	09/2008	49.061,87
37	300098	digital Portable Oscilloscope	10/2008	11.197,16
38	300099	Portable digital multimeter	10/2008	2.097,17
39	300100	XT 220A Analitical balance	10/2008	7.876,78
40	300101	GPS System	10/2008	6.900,00
41	300103	Rio Grande 1200 KHZ Doppler +acesories	11/2008	62.472,30
42	300104	HACH LANGE kit+acesories	11/2008	27.564,92
43	300105	Vacuum pump	11/2008	11.979,73
44	300107	Measurement and control equipment	12/2008	7.854,76
45	300110	Put detector	12/2008	34.231,00
46	300113	Liofilizator	04/2009	3.042,40
47	300118	GAMMA spectrometric multichannel analyzer	12/2009	23.456,00
48	300119	Signal digital procesor digital-for spectrometry	01/2010	30.031,09
49	350032	ROV - underwater robot	01/2008	613.591,60
50	350033	Cromatography equipment	01/2008	566.825,36
51	400001	BP 2100 technical balance	01/1995	278,47
52	400002	BP2100 analytical balance	01/1995	497,76
53	400032	2323 laboratory spinner+acesories	03/1995	1.079,29
54	400034	X ray generator	05/1995	4.030,00
55	400035	HACH field kit - Spectrometer	05/1995	2.199,67
56	400040	GDK 39 bottom marine gravimeter	08/1995	138,68
57	400041	GMNK3 on board marine gravimeter	08/1995	296,44
58	400126	Spectrometer	01/1987	448,95
59	400148	Chemical analysis field kit+acesories	05/1995	2.199,67
60	400158	Z383 Spiner + acesories	01/1995	61.731,95
61	400159	AT 261 DR analytical balance	01/1995	1.418,94
62	400200	Thermometer with sensor and adapter	07/2003	3.097,02
63	400252	GPRS HELD -LAND IPAQ HP G 340	12/2004	2.892,37
64	400261	Proton magnetometer + acesories	01/2005	16.918,00
65	400296	GPS + acesories	12/2005	1.493,88
66	400326	Acoustic sensor - bathimetry system	01/2007	6.458,37

67	400354	CEEDUCER - bathymetry system	01/2007	16.675,44
68	400355	ZEISS stereomicroscope	01/2007	27.969,76
69	400359	3200 - XS Deck equipment	01/2007	112.158,09
70	400362	GFL 2008 water distiler	01/2007	13.916,24
71	400363	Water level recorder	01/2007	6.280,20
72	400461	HW 500 E winch	12/2009	440.566,57
73	480006	Cooling incubator	08/1998	2.847,01
74	450001	CTD equipment	02/1997	71.752,26
75	450026	Monobeam sonar	01/1999	4.850,23
76	450031	Launching equipment with TV module	02/2000	21.200,00
77	450034	Hydraulic crane - articulated arm	02/2000	2.007,80
78	450035	"NUCLEUS" radar	02/2000	13.287,40
79	450036	"Side Scan" lateral sonar	02/2000	29.460,65
80	450057	Radiobeacon	01/2004	5.576,01
81	400471	Multiline 340 I 2F30	06/2010	9.027,07
82	300122	Carl Zeiss Optical Microscope	08/2010	22.400,00
83	400476	Titrette digital burette with accesories	10/2010	3.392,42
84	700080	ACER X 1230PK Projector	09/2010	2.528,34
85	500029	Dacia Duster Laureat	12/2010	58.694,78
Total				3.295.267,93

5.2.2 Intangible equipment

Crt. No.	Inventory no.	Description	Date month/year	Value lei
1	200013	GLOBAL MAPPER Licence	05/2006	785,84
2	200014	GLOBAL MAPPER Licence	05/2006	785,84
3	200015	GLOBAL MAPPER Licence	05/2006	785,84
4	200016	GLOBAL MAPPER Licence	05/2006	785,84
5	200022	SDK GM V8 Licence	01/2007	3.098,20
6	200023	GLOBAL MAPPER Licence	01/2007	2.294,64
7	200028	Logging software	01/2007	3.126,15
8	200032	Trimble software	03/2007	7.485,00

9	200036	Work suite 2006 licence	05/2007	207,61
10	200039	Work suite 2006 licence	05/2007	207,61
11	200044	GEOSOFIT OASIS	11/2007	9.223,79
12	200045	GEOSOFIT OASIS +fitting	12/2007	13.576,16
13	200049	Adobe Acrobat software	01/2008	2.890,00
14	200063	SIDESCAN POST - PROCESS SOFTWARE	10/2008	20.100,80
15	200064	GIS SOFTWARE - SEA	10/2008	8.676,11
16	200065	COREL DRAW SUITE X3	10/2008	5.390,56
17	200075	COREL DRAW GRAPHIC SUITE X4 - BOX	12/2009	2.365,00
18	200077	MULTILINE SOFTWARE	06/2010	593,44
19	200078	Statistical list software	02/2010	2.069,85
20	200079	CIEL accounting software	05/2010	1.974,00
Total				86.422,28

5.2.3 Other intangible equipment

Crt. No.	Inventory no.	Description	Date month/year	Value lei
1	200008	Juridical software	01/2006	122,18
2	200009	Accounting software	03/2006	522,46
3	200010	Accounting software	03/2006	522,46
4	200011	Accounting software	04/2006	522,46
5	200012	Accounting software	04/2006	522,46
6	200034	WIN software, monopost	04/2007	522,46
7	200058	Salaries software	06/2008	11.875,25
8	200070	Assesments software	02/2009	1.142,40
Total				15.752,13

6. RESULTS OF THE RESEARCH - DEVELOPMENT ACTIVITY OF THE NRD GEOECOMAR

6.1 Scientific/technical papers published within the ISI journals

Popescu, S.-M., Dalesme, F., Jouannic, G., Escarguel, G., Head, M.J., Melinte-Dobrinescu, M.C., Sütő-Szentai, M., Bakrac, K., Clauzon, G., Suc, J.-P., 2009. Galeacysta etrusca, dinoflagellate cyst marker of Paratethyan influxes into the Mediterranean Sea before and after the peak of the Messinian Salinity Crisis. *Palynology* 33(2), 105-134.

Impact Factor: 0,862

Number of quotations: 1

Melinte-Dobrinescu, M.C., Bojar, A.-V., 2010. Late Cretaceous carbon- and oxygen-isotope stratigraphy, nannofossil events and paleoclimate fluctuations in the Hateg area (SW Romania). *Palaeogeography, Palaeoclimatology, Palaeoecology* 293, 293-305.

Impact Factor: 2,646

Number of quotations: 2

Melinte-Dobrinescu M.C., 2010. Lithology and biostratigraphy of Upper Cretaceous marine deposits the Hateg region (Romania): Palaeoenvironmental implications. *Palaeogeography, Palaeoclimatology, Palaeoecology* 293, 283-294.

Impact Factor: 2,646

Number of quotations: 3

Popescu, S.-M., Biltekin, D., Winter, H., Suc, J.-P., Melinte-Dobrinescu M.C., Klotz, S., Rabineau, M., Combourieu-Nebout, N., Clauzon, G., Deaconu, F., 2010. Pliocene and Early-Middle Pleistocene vegetation and climate changes at the European scale: long pollen records and climatostratigraphy. *Quaternary International* 219, 152-167.

Impact Factor: 1,601

Number of quotations: 0

Oudet, J., Munch, P., Verati C., Ferrandini M., Melinte-Dobrinescu M., Gattacecca J., Cornée J.J., Oggiano G., Viseur S., Borgomano J., Ferrandini J., 2010. Syn-rotational multiple rifting in the Cenozoic of NW Sardinia: integrated onshore offshore tectonostratigraphy of the Castelsardo basin. *Palaeogeography, Palaeoclimatology, Palaeoecology* 295, 293-306.

Impact Factor: 2,646

Number of quotations: 0

Khadiji, Sh., Mouthereau, F., Larrasoana, J.C., Verges, J., Lacombe, O., Khademi, E., Beamud, E., Melinte-Dobrinescu, M., Suc J.-P., 2010. Magnetostratigraphy of synorogenic Miocene foreland sediments in the Fars arc of the Zagros Folded Belt (SE Iran). *Basin Research* 22, 918-932.

Impact Factor: 2,161

Number of quotations: 0

Oudet, J., Munch, P., Borgomano J., Quillévère, F., Melinte-Dobrinescu, M., Demory, F., Viseur, S., Cornée, J.J., 2010. Land and sea study of the northeastern golfe du Lion rifted margin: the Oligocene - Miocene of southern Provence (Nerthe area, SE France). *Bulletin de la Société Géologique de France* 181, no 6, 591-607.

Impact Factor: 0,500

Number of quotations: 0

Durisch-Kaiser, E., Doberer, A., Reutiman J., Pavel, A., Balan S., Radan S., Wehrli B., 2010. „Organic matter governs N and P balance in Danube Delta lakes” .*Aquatic Sciences - Research Across boundaries* (Online First), Springer, pp. 1-13

Impact Factor: 2,045

Number of quotations: 2

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Impact Factor: 1,601

Number of quotations: 0

Vasiliev I., de Leeuw A., Filipescu S., Krijgsman W., Kuiper K., Stoica M., Briceag A. 2010. The age of the Sarmatian-Pannonian transition in the Transylvanian Basin (Central Paratethys). *Palaeogeography, Palaeoclimatology, Palaeoecology* 297 (2010) 54-69.

Impact Factor: 2,646

Number of quotations: 0

Tiron, Laura; Provansal, Mireille. 2010. Dynamique sédimentaire dans un milieu deltaïque: Le Bras de St. George. *Zeitschrift für Geomorphologie*, NF Volume 54, Issue 4 (2010), p. 417 - 441.

Impact Factor: 0,8336.9 Prospective and Technological Studies, regulations, procedures, methodologies and technical plans, new or improved, controlled or used by the beneficiary

Number of quotations: 0

Balintoni, I., Balica, C., Seghedi, A., Ducea, M., 2010. Avalonian and Cadomian terranes in North Dobrogea, Romania. *Precambrian Research* 182, 217-229

Impact Factor: 3,581

Number of quotations: 0

Oaie Gh., Melinte M. C. 2010. Holocene litho- and biostratigraphy of the NW Black Sea (Romanian Shelf). *Quaternary International*, 30, p. 1 - 10

Impact Factor: 1,601

Number of quotations: 0

N.B. Number of quotations as it was recorded in Thompson ISI database, on January 31, 2011.

6.2 Cumulative impact factor of ISI papers - 25.54

6.3 Quotations in ISI journals - 10.

6.4 Patents (requested / granted)

No one.

6.5 Quotations in the ISI system of patented research

No one.

6.6 Products / services / technologies resulted from research activities, based on patents, certifications or own innovations.

No one.

6.7 Scientific papers / technical journals non ISI

6.7.a) International databases:

Melinte-Dobrinescu M.C., Lamolda, M.A., 2010. Calcareous nanofossil fluctuation related to the Oceanic Anoxic Event 2 (OAE2), p. 117-120. *Analele Stiintifice ale Univ. Al. I. Cuza Iasi (Serie noua), GEOLOGIE. Proceedings of the International Symposium Geology of the Natural Systems-Geo Iasi 2010. ISSN1223-5342.*

Varzaru, C., Melinte-Dobrinescu M.C., Brustur, T., Szobotka S.-A., Briceag, A., 2010. The significance of several Upper Cretaceous Marine sites for the geodiversity of the Hateg Country, p.141-144. *Analele Stiintifice ale Univ. Al. I. Cuza Iasi (Serie noua), GEOLOGIE. Proceedings of the International Symposium Geology of the Natural Systems-Geo Iasi 2010. ISSN1223-5342.*

Daszkiewicz M., Bobryk E., Schneider G., with a contribution by Silviu Radan. 2010. „Composition and technology of lower Danube kaolin ware (LDKW) - Examples from Novae, Bulgaria” *Rei Cretariae Romanae Fauturum Acta*, 41, p. 37-49, Dr. Rudolf Habelt GmbH • Verlag, Bonn

Dan C. Jipa. 2010. The proximal sheet-flood facies of the Candesti beds alluvial fan (Prahova River, Romania). *GeoEcoMarina* nr. 16

Irina Dinu, Marco Bajo, Adrian Stanica, Sebastian Dan, Gabriela Maximov, Georg Umgieser. 2010. Preliminary simulations of surface coastal currents from the area of Constanta to the border between Romania and Bulgaria. *GeoEcoMarina* nr. 16.

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Tatiana Begun, Adrian Teaca, Marian-Traian Gomoiu. 2010. Ecological state of macrobenthic populations within *Modiolus phaseolus* biocoenosis from Romanian Black Sea continental shelf. *GeoEcoMarina* nr. 16.

S.C. Radan, S. Radan. 2010. Lake Sediments Fingerprinting in the Danube Delta, using Composite Magneto - Lithological Signatures; Environmental And hydrosedimentary inferences. *GeoEcoMarina* nr. 16.

S.C. Radan, S. Radan. 2010. Magneto-Lithological Models for Recent Sediments: Examples from Deltaic, Lagoonal and Littoral wetlands; Ecohydrological Applications. *GeoEcoMarina* nr. 16.

Priscila Opreanu. 2010. Changes in the structure of benthic biocoenoses on the lower course of the danube from 1996 to 2004. *GeoEcoMarina* nr. 16.

Opreanu G. 2010. Identifying erosion areas along the Danube on the basis of granulometric and hydrologic parameters. *GeoEcoMarina* nr. 16.

Glicherie Caraivan, Viktor P. REZNIC, V.P.VASILIEV, Adrian Teaca, Priscila Opreanu. 2010. Biogeophysics, geophysical and geochemical research on the western Black Sea shelf. *GeoEcoMarina* nr. 16.

Constantina Fulga. 2010. Mineralogical monitoring of the upper sediments in the Black Sea shelf. *GeoEcoMarina* nr. 16.

Dan Vasiliu, Marian - Traian Gomoiu, Laura Boicenco, Luminita Lazar, Florin Timofte. 2010. Chlorophyll a distribu-

tion in the Romanian Black Sea inner shelf waters in 2009. *GeoEcoMarina* nr. 16.

Melinte-Dobrinescu, M., Briceag, A 2010. Calcareous nannoplankton fluctuations in the Holocene deposits of the NW Black Sea. *Acta Palaeontologica Romaniae* 7, p.23-29.

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Teaca A., Begun T., Gomoiu, M.T., Surugiu V., 2010 - Qualitative and quantitative assesment of the macrobenthic populations of crustaceans from the North-Western part of the Black Sea. *Rapp. Comm. Int. Mer Médit.*, 39, 676 (Inclusa in BDI Thomson Scientific Master Journal List).

Muresan Mihaela, Teodora Maria Onciu, 2010 - The spatial zooplankton distribution in the North - Western Black Sea Region: Spring and Autumn, 2008 - *Rapp. Comm. Int. Mer Médit.*, 39, 503 (Inclusa in BDI Thomson Scientific Master Journal List)

Bajo M., Stanica A., Dan S., Dinu I., Umgieser G. (2010) - Impact of Danube freshwater discharge on the coastal current system and implications on the sediment transport. *Rapp. Comm. Int. Mer Médit.*, 39, p. 144. (Inclusa in BDI Thomson Scientific Master Journal List)

Gruber N.J., Kuhns R. J., Steurer J.F., Stanica A., Lipan I.C., Tofan L., Mozingo J., Roberge J.C., Ehlinger T., Ginther P., Rosati J.D.. Development of a Coastal Systems Operations Center for the Institutional Strengthening of Coastal Management along the Romanian Black Sea. *Watershed Management Conference 2010: Innovations in Watershed Management under Land Use and Climate Change. Wisconsin, August 23-27, 2010. Proceedings of the 2010 Watershed Management Conference.* pp. 952-965. [http://dx.doi.org/10.1061/41148\(389\)87](http://dx.doi.org/10.1061/41148(389)87) (inclusa in SCOPUS).

6.7.b) Full articles published in volumes of proceedings at international conferences (by peer review)

Melinte-Dobrinescu M.C., Oaie, G., Dimitriu, R., Briceag, A., 2010. Sea-level change, biotic and human adaptations since the last 7,000 years in the NW Black Sea, Romanian shelf (IGCP 521). *Proceedings of the Int. Conference GEOEVENTS and the ROLE OF IGCP IN EUROPE. Caravaca de la Cruz, sept. 2010, pp. 89-95.*

Radan S., 2010. „Modern sediments as enviromagnetic archives. A case study: Danube Delta and Northwestern Black Sea”. *Proceedings of the Fourth International Scientific Conference on « Water Observation and Information System for Decision Support », BALWOIS 2010, 25 - 29 May 2010, Ohrid, Republic of Macedonia. Book of Abstracts, vol. II-Ecohydology and Hydrobiology, (extended abstract 2010-612, 7 p.; full paper on CD edited by the Balkan Institute of Water and Environment, France; pp. 1-7-7; also on-line. http://www.balwois.com/balwois/administration/full_paper/ffp-1947.pdf)*

Radan S.C., Radan S., 2010. Lake sediments fingerprinting in the Danube Delta, using composite magneto-lithological signatures; an environmental approach”. *Proceedings of the Fourth International Scientific Conference on « Water Observation and Information System for Decision Support », BALWOIS 2010, 25 - 29 May 2010, Ohrid, Republic of Macedonia. Book of Abstracts, vol. II-Ecohydology and Hydrobiology, (extended abstract 2010-610, 9 p.; full paper on CD edited by the Balkan Institute of Water and Environment, France; pp. 1-9-9; also on-line. http://www.balwois.com/balwois/administration/full_paper/ffp-1945.pdf)*

Radan S.C., Radan S., Cazacu C., Milu C., 2010. “Magneto-lithological models for recent sediments: examples from deltaic, lagoonal and littoral lakes”. *Proceedings of the Fourth International Scientific Conference on « Water Observation and Information System for Decision Support », BALWOIS 2010, 25 - 29 May 2010, Ohrid, Republic of Macedonia. Book of Abstracts, vol. II-Ecohydology and Hydrobiology, (extended abstract 2010-611, 9 p.; full paper on CD edited by the Balkan Institute of Water and Environment, France; pp. 1-9-9; also on-line. http://www.balwois.com/balwois/administration/full_paper/ffp-1946.pdf)*

Dimitriu, R.G., Oaie, G., Ruzsa, G., 2010, The Geodynamic dimension of the first early-warning system for marine geohazards of risk to be set-up and implemented on the western Black Sea coast: *Abstract Volume of the IGCP 521 - INQUA 0501 Sixth Plenary Meeting and Field Trip, Rhodes, Greece, 27 September-05 October 2010: p. 57-59*

Glicherie Caraivan, Costina Fulga, Constantin Chera., *Underwater geoarchaeological survey in front of the Danubian Island "Pacuiul lui Soare" (Romania) using remote sensing techniques- preliminary results”, Proceeding of the XIX CBGA Congress, Thessaloniki, Greece, 2010, pp.519-524*

Oaie Gh., Melinte-Dobrinescu M., Briceag A., Roban R. 2010. Holocene palaeoenvironmental changes in the Romanian Black Sea shelf. *CBGA Congress, Salonic (Greece)*

Oaie Gh, Seghedi A, Poncos V., Teleaga D., Serban F. 2010. Deformation and dynamics of the Danube Delta using InSAR technology. *INQUA 501- IGCP 521 Six Plenary Meeting and Field Trip, Rhodes (Greece), p. 148 - 150*

Melinte M. C., Oaie Gh. 2010. Holocene paleoenvironmental changes on the Romanian Black Sea Inner shelf. *INQUA*

501 - IGCP 521, Six Plenary Meeting, Rhodes, p. 133 - 136

Dinu I. 2010. Management perspectives of the aquifer system from the Lower Olt Basin, Romania. "Book of abstracts - IAHR International Groundwater Symposium", p. 99 - 100, Valencia, Spain, September 22 - 24, 2010. Full-extent paper (CD-ROM).

6.7.c) Articles in other journals

D.C. Jipa, C. Avram, 2010. "The influence of the Messinian crisis on the genesis of the Paleo - Danube. A discussion." Buletinul DHM, Vol. II, Pg. 85-88.

6.8 Scientific communications at international conferences

1. Melinte-Dobrinescu M.C., Oaie, G., 2010. Calcareous Nannoplankton fluctuation, a tool to assign Holocene Black Sea changes. Int. GEOECOMAR Symposium 2010 "rivers-Deltas-Seas, 21st-22nd of October 2010, Bucharest.

2. Bojar, A.-V., Melinte-Dobrinescu M.C., 2010. Limita Cretacic-Tertiar in Carpatii Orientali, Romania: o abordare multidisciplinara. CONFERINTA ANUALA A SGR, BUCURETI, 5-6 NOIEMBRIE 2010, dedicata Prof. Dr., m.c. al Academiei Romane NICOLAE ANASTASIU.

3. S. C. Radan, S. Radan, "Lake sediments fingerprinting in the Danube Delta, using composite magneto-lithological signatures; an environmental approach". 12th Castle Meeting on New Trends in Geomagnetism (Castle of Nové Hradý - Czech Republic, 29 aug.-10 sept. 2010). Poster

4. S. C. Radan, S. Radan, "Coal paleofires in the Western Dacic Basin: geophysical, mineralogical and geochemical signatures recovered from porcelanites and clinkers; a case history". ICCFR 2 - 2nd International Conference on Coal Fire Research (Berlin-Germania, 19-21 mai 2010). Poster.

5. Radan S., "Mesozoic lateritic weathering crust relics and their redeposited products in Dobrogea (south-eastern Romania)". Al 18-lea Congres International de Sedimentologie (Mendoza-Argentina, 26 sept.-1 oct. 2010). Prezentare orală.

6. S. C. Radan, S. Radan, C. Cazacu, C. Milu. "Magnetic susceptibility and lithological characterisation of the lake sediments from the southeastern Romania wetlands; environmental significances". GeoEcoMar - Simpozionul International "Rivers - Deltas - Seas" (Bucuresti-Romania, 20-22 oct. 2010). Poster.

7. S. C. Radan, S. Radan, C. Cazacu, C. Milu. "Magneto-lithological models for recent sediments: examples from deltaic, lagoonal and littoral lakes". GeoEcoMar - Simpozionul International "Rivers - Deltas - Seas" (Bucuresti-Romania, 20-22 oct. 2010). Poster.

8. Varzaru Camelia. "Upper Cretaceous marine sites of the Hateg Country Dinosaur Geopark". XIX Congress of the Carpathian Balkan Geological Association Thessaloniki, Greece, 23-26 September 2010. Poster

9. Bondar C. Sesiunea stiintifica jubiliara "85 de ani de la infiintarea Serviciului hidrografic roman", INHGA, Bucuresti, 28-30 septembrie 2010, Poster "Date privind evidentierea schimbarilor climatice si a impacturilor antropice asupra regimului hidrologic si morfologic al Dunarii, Deltei Dunarii si Marii Negre".

10. Dului, O., Lyapunov, S., Gorbunov, A., Alexe, V., Brustur, T., Ricman, C., Szobotka, S., Dimitriu, R., Pop, C., Frontasieva, M., Iovea, M., On the heavy elements content of sediments and rocks from two semiclosed ecosystems: proglacial lake Balea (Fagaras Mountains) and crater lake St. Ana (Harghita Mountains) - Al XIX-lea congres al Asociatiei Carpato-Balcanice de Geologie, Salonic, Grecia, 22-26 septembrie, 2010 - prezentare poster

11. Dancker D. L. Daamen, Bart W. Terwel, Emma ter Mors, David M. Reiner, Diana Schumann, Sorin Anghel, Ioanna Boulouta, Diana M. Cismaru, Carmencita Constantin, Chris C. H. de Jager, Alexandra Dudu, Rebecca M. Firth, Vassiliki Gemeni, Chris Hendriks, Nikolaos Koukouzas, Angelos Markos, Robert Næss, Oana C. Nihfidov, Katja Pietzner, Irene R. Samoila, Constantin S. Sava, Mike H. Stephenson, Claudia E. Tomescu, Hans Y. Torvatn, Sturle D. Tvedt, Daniel Vallentin, Julia M. West, Fotini Ziogou. 2010. Scrutinizing the impact of CCS communication on opinion quality: Focus Group Discussions versus Information-Choice Questionnaires: Results from experimental research in six countries. Abstracts for GHGT 10, 19 - 23.09.2010, Amsterdam

12. Katja Pietzner, Diana Schumann,, Sturle D. Tvedt, Hans Y. Torvatn, Robert Næss, David M. Reiner, Sorin Anghel, Diana Cismaru, Carmencita Constantin, Dancker D. L. Daamen, Alexandra Dudu, Andrea Esken, Vassiliki Gemeni, Loredana Ivan, Nikolaos Koukouzas, Glenn Kristiansen, Angelos Markos, Emma ter Mors, Oana C. Nihfidov, John Papadimitriou, Irene R. Samoila, Constantin S. Sava, Bart W. Terwel, Claudia E. Tomescu & Fotini Ziogou. 2010.

Public awareness and perceptions of carbon dioxide capture and storage (CCS): Insights from surveys administered to representative samples in six European countries (Results from over 6000 respondents), Abstracts for GHGT 10, 19 - 23.09.2010, Amsterdam

13. Steurer J. F., Rosati J. D., Kuhns R. J., Gruber N., Adler M.J., Lipan I., Roberge J. C., Stanica A., Dan S., Ginther P., Swisher C., Mozingo J., Ehlinger T., Tofan L., - "Integrated Coastal Zone Management System for the Romanian Black Sea Coast", First International Conference Coastal Zone Management of River Deltas and Low Land Coastlines, Alexandria, Egipt, 6-10 March, 2010, abstract.

14. Bajo M., Stanica A., Dan S., Dinu I., Umgieser G., "Impact of Danube Freshwater Discharge on the Coastal Current System", 39th CIESM Congress - Venice, Italy, 10 - 14 May 2010, poster.

15. Gruber N.J., Kuhns R. J., Steurer J.F., Rosati J.D., Stanica A., Ginther P., Mozingo J., Ehlinger T., Tofan L.. Environmental program management for coastal protection along the Romanian Black Sea coast. Floodplain Management Association Annual Conference 2010 (FMA 2010). Book of abstracts, p. 50

16. Glicherie Caraivan, Irina Dinu, Costina Fulga, Daniela Popescu, Hydrogeological framework of Constanta city area (South Dobrogea - Romania) ARW. "Climate Change and its Effect on Water Supplies- Issues of National and Global Security", Cesme, Turcia, 1-5 septembrie 2010, Abstract Book

17. Glicherie Caraivan, Costina Fulga, Constantin Chera, Underwater geoarchaeological survey in front of the Danubian Island "Pacuiul lui Soare" (Romania) using remote sensing techniques- preliminary results", Geologica Balcanica, nr.39.1-2. Sofia 2010 Abstract Volume, p.62

18. Melinte-Dobrinescu MC - Key lecturer and Convenor at the GEOEVENTS PROGEO International Conference (Caravaca de la Cruz, Spain, Sept. 2010) Black Sea; sea-level changes and biotic changes since the last 7,000 years

19. Melinte-Dobrinescu MC - Participant in IPC 3 (Int. Palaeontological Conference London June 2010) - oral presentation Oceanic anoxic events: global warm and regional cooling?

20. Melinte-Dobrinescu MC - Participant in GEO 2010 IASI - oral presentation Climate changes in a Cretaceous warm world

21. Andrei Briceag, Mihaela C. Melinte-Dobrinescu, Marius Stoica. „The record of the macrofaunas, microfaunas and nannofloras in the Holocene deposits of the Black Sea”. The 3-lea International Congress of Paleontology, 28 June - 2 July 2010, London

22. Andrei Briceag, Arjan de Leeuw, Marius Stoica, Mihaela C. Melinte-Dobrinescu, Wout Krijgsman, Iuliana Vasiliev, Sorin Filipescu. „INTEGRATED STRATIGRAPHY OF THE MIDDLE/UPPER MIOCENE BOUNDARY INTERVAL IN CENTRAL PARATETHYS (TRANSYLVANIAN BASIN, ROMANIA)”. Geoevents International Conference, 15 - 18 September 2010, Caravaca de la Cruz, Spain

23. Mihaela C. Melinte-Dobrinescu, Gheorghe Oaie, Radu Dimitriu, Andrei Briceag - "SEA-LEVEL CHANGE, BIOTIC AND HUMAN ADAPTATION SINCE THE LAST 7,000 YEARS IN THE NW BLACK SEA, ROMANIAN SHELF (IGCP 521)". Geoevents International Conference, 15 - 18 September 2010, Caravaca de la Cruz, Spain

24. Varzaru Camelia. „Upper Cretaceous Marine Fossil Sites in the Hateg Country and the Significance for the Geological Heritage”. National Symposium of Geology and Geophysics GEO-2010, 21 mai, Bucuresti, prezentare orală .

25. Varzaru Camelia. „The significance of several Upper Cretaceous Marine sites for the geodiversity of the Hateg Country”. International Symposium Geology of the Natural Systems-Geo Iasi 2010. 1-4 September 2010, Iasi, oral presentation

26. Constantinescu Adriana et al., The structure and function of cephalic fields in the Osteostraci (Vertebrata; Agnata). Prima Conferinta Internationala a Studentilor Geologi si Geofizicieni, 2010, Bucuresti

27. Anghel Sorin. „A magnetic survey at Argamum Necropolis”, Proceedings IGCP 521 - INQUA 501 Sixth

28. Plenary Meeting and Field Trip- Island of Rhodes, Greece- 27 September - 5 October, 2010, oral presentation

29. Bondar C. Conferinta internationala "Rezervatia Biosferei Delta Dunarii - 20 de ani" si Simpozionul international "Delte si zone umede", Tulcea, 1-3 septembrie 2010.

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30. Dimitriu, R.G., Micu, C., Mocanu, M., An evaluation of the prospective archaeo-cultural heritage of the Northern Romanian littoral zone ; Al XIX-lea congres al Asociatiei Carpato-Balcanice de Geologie, Salonic, Grecia, 22-26 septembrie, 2010 - prezentare orală
31. Dimitriu, R.G., Oaie, G., Ruzsa, G., The Geodynamic dimension of the first early-warning system for marine geohazards of risk to be set-up and implemented on the western Black Sea coast. IGCP 521 - INQUA 0501 Sixth Plenary Meeting and Field Trip, Rodos, Grecia, 27 septembrie-05 octombrie 2010 - prezentare orală;
32. Carozza, L., Carozza, J.-M., Micu, C., Ailincăi, S., Dimitriu, R., Haita, C., Florea, M., Burens, A., Mihail, F., Balasescu, A., Radu, V., New data on the archaeological settlement and paleogeography of the Lower Danube area (Romania) IGCP 521 - INQUA 0501 Sixth Plenary Meeting and Field Trip, Rodos, Grecia, 27 septembrie-05 octombrie 2010 - prezentare orală
33. Caraivan, G., Dimitriu, R., Fulga, C., Chera, New geoarchaeological researches around the Danubian Island Pacuiul lui Soare. Sesiunea de comunicări „Pontica” a Muzeului de Istorie și Arheologie Constanta, octombrie 2010. prezentare orală
34. Dan S., Stanica A., “The role of episodic water level variations for the dynamics of Danube Delta coastal zone”. International Conference on Coastal Conservation and Management in the Atlantic and Mediterranean (ICCCM2010), 11 - 17 Aprilie 11 to 17, 2010, Estoril, Portugalia.
35. Glicherie Caraivan, Adrian Stanica Costina Fulga., Southern Romanian Black Sea Cliff Coasts. International Conference: Water Across Time in Engineering Research, June, 16-19, 2010. Ovidius University, Constanta. Oral presentation.
36. Glicherie Caraivan, Costina Fulga, Priscila Opreanu: Upper Quaternary evolution of Mamaia Lake area (Romanian Black Sea shore). Conferința INQUA 501- IGCP 521 Sixth Plenary Meeting and Field Trip (Rhodos) 27 sept. - 5 oct. 2010. Oral presentation.
37. Opreanu, P - Review of the diversity and distribution of recent ostracod fauna in the northwestern Black Sea. - INQUA 501- IGCP 521 Sixth Plenary Meeting and Field Trip, Rhodes, Greece, 27 September - 5 October 2010
38. Dinu Irina. “Management perspectives of the aquifer system from the Lower Olt Basin, Romania”. IAHR International Groundwater Symposium Valencia, 22-24.09.2010 - oral presentation
39. Christian Adrian Stanciu. Fault plane solution of earthquakes in the Shabla - Kaliakra area, Black Sea. GEOECOMAR International Symposium 2010 “RIVERS - DELTAS - SEAS”. Oral presentation & abstract
40. Jana Friedrich, Sorin Balan, Marian-Traian Gomoiu, Dan Secrieru, Sara Wilcken. Monitoring the formation of hypoxia on the north-western Black Sea shelf - a contribution to EU-FP7 "HYPOX". GEOECOMAR International Symposium 2010 “RIVERS - DELTAS - SEAS”. Oral presentation & abstract
41. Mihaela C Melinte - Dobrinescu, Gheorghe Oaie. CALCAREOUS NANNOPLANKTON FLUCTUATION, A TOOL TO ASSIGN HOLOCENE BLACK SEA CHANGES. GEOECOMAR International Symposium 2010 “RIVERS - DELTAS - SEAS”. Oral presentation & abstract
42. Andrei Briceag, Marius Stoica, Gheorghe Oaie. Microfaunas of the Holocene deposits of the Black Sea. GEOECOMAR International Symposium 2010 “RIVERS - DELTAS - SEAS”. Oral presentation & abstract.
43. Adrian Stanica. The International Centre for Advanced Studies for Danube - Danube Delta - Black Sea. An initiative to boost researches in rivers - deltas - seas systems. GEOECOMAR International Symposium 2010 “RIVERS - DELTAS - SEAS”. Oral presentation
44. Gabriela Maximov, Sebastian Dan, Irina Dinu, Adrian Stanica. Coastal currents on the southern Romanian littoral. GEOECOMAR International Symposium 2010 “RIVERS - DELTAS - SEAS”. Oral presentation & abstract
45. Gheorghe Oaie, Antoneta Seghedi, Valentin Poncos, Delia Teleaga, Florin Serban. Danube Delta: estimation of the deformation processes (subsidence, uplift) using InSAR technology. GEOECOMAR International Symposium 2010 “RIVERS - DELTAS - SEAS”. Oral presentation & abstract
46. Marius Stoica, Dan Jipa. Late Neogene evolution of sedimentary environments in the northern part of the Dacian Basin. GEOECOMAR International Symposium 2010 “RIVERS - DELTAS - SEAS”. Oral presentation & abstract

47. Dan Jipa, Marius Stoica, Rodica Macalet, Corina Avram, Stefan Szobotka. Brackish marine to alluvial fan sedimentary record: Maeotian to Pleistocene in the central Dacian Basin. GEOECOMAR International Symposium 2010 "RIVERS - DELTAS - SEAS". Oral presentation & abstract
48. Gabriela Maximov. Sediment accumulation in the deep western Dacian Basin depression. GEOECOMAR International Symposium 2010 "RIVERS - DELTAS - SEAS". Oral presentation & abstract
49. Marius Stoica, Dan Jipa, Alina Floroiu Transgression-regression events in the Dacian Basin area and the paleobiological response. GEOECOMAR International Symposium 2010 "RIVERS - DELTAS - SEAS". Oral presentation & abstract
50. Marius Stoica, Dan Jipa. The Gilbert delta Messinian build-up in the Drobeta Turnu Severin area. A critical evaluation GEOECOMAR International Symposium 2010 "RIVERS - DELTAS - SEAS". Oral presentation & abstract
51. Dan Jipa, Cornel Olariu. Is the appearance of Danube Paleo-River an effect of the Messinian salinity crisis? GEOECOMAR International Symposium 2010 "RIVERS - DELTAS - SEAS". Oral presentation & abstract
52. Dan Jipa, Gabriela Maximov. Messinian Crisis effect in the western Dacian Basin depression: a 200 m sea-level drop. GEOECOMAR International Symposium 2010 "RIVERS - DELTAS - SEAS". Oral presentation & abstract
53. Marius Stoica, Dan Jipa. A basin-wide evaluation of the Messinian crisis effects in the Dacian Basin and the northern Black Sea area (Taman Peninsula). GEOECOMAR International Symposium 2010 "RIVERS - DELTAS - SEAS". Oral presentation & abstract
54. Caraivan G.I., Muresan M., Ioncescu P., Stanica A. Eco-management and good practices in European ports - concepts and practices Progress. ECOPORT 8 . 2nd Transnational Event, Bucharest, ROMANIA, 21 October, 2010
55. Skolka M., Preda C., Muresan M., Memedemin D., Onciu T.M., Caraivan G.I. Monitoring of invasive species in Constanta harbor area. ECOPORT 8 . 2nd Transnational Event, Bucharest, ROMANIA, 21 October, 2010
56. A. Seghedi, G. Oaie, M. Melinte, M. Popa. Geological heritage and geoconservation in Romania in protected areas along the Danube River; oral presentation. International Conference Geoevents, Geological Heritage and the Role of the IGCP, Caravaca de la Cruz, Spain, 15-18 September 2010, Abstract book, 249-250;
57. G. Oaie, A. Seghedi, V. Poncos, D. Teleaga, F. Serban. Deformation and dynamics of the Danube Delta using InSAR technology, oral presentation. Abstracts volume, IGCP 521-INQUA 501 Sixth Plenary Meeting and Field Trip, 27 September-5 October, Rhodes 2010, 148-150.
58. Oaie Gh., Melinte-Dobrinescu M., Briceag A., Roban R. 2010. Holocene palaeoenvironmental changes in the Romanian Black Sea shelf. CBGA Congress, Salonic (Greece)
59. Melinte M. C., Oaie Gh. 2010. Holocene paleoenvironmental changes on the Romanian Black Sea Inner shelf. INQUA 501 - IGCP 521, Six Plenary Meeting, Rhodes
60. A. Seghedi, O. Dragastan, S. Radan. Mesozoic development stages of the NW margin of the Black Sea, invited oral presentation. AAPG Kiev Abstracts volume
61. A. Seghedi. Natural and cultural heritage and geotourism: the Cheia Jurassic reefs, Romania; poster. Abstracts book, 4-th AAWG Congress, Abidjan, Cote d'Ivoire, 3 p.
62. Seghedi A., Gradinaru E., Naillia M., Anitai N., Rascov M. M., Ghenciu M. Natural and cultural heritage of Agighiol Hills: geotourism and geoconservation in Tulcea County, oral presentation, GEO 2010 Conference of the University of Bucharest, Department of Geology & Geophysics, Abstracts (CD);
63. Seghedi A., Dealurile Agighiolului - geoturist map, oral presentation, anniversary colloquium Prof. Corina Ionescu, Cluj-Napoca;
64. Oaie Gh., Munteanu E., Seghedi A., Demidoff and the attractivity of a trip on the Danube in the XIX-th century; oral presentation, at the session of scientific presentations entitled Scientific results of the Demidoff expedition, the Romanian Academy.
65. Seghedi A., Berza T., Results of the prospections by drillings for coal in Donbass Basin financed by Anatole Demi-

doff in 1837-1839, in te light of present knowledge of the geology of SE Ukraine; oral presentation, at the session of scientific presentations entitled Scientific results of the Demidoff expedition, the Romanian Academy.

66. Uruic, S., Misu S., Albuiescu, M., A. Seghedi, A., Sinitean A., Data Regarding Heavy Metals Environmental Contamination of Ocna de Fier Area from SW Romania, poster presentation; 193

67. Balintoni I., Balica C., Seghedi A., Ducea M. Avalonian and Cadomian terranes in North Dobrogea, Romania, oral presentation, Abstracts volume of the Annual Conference of the Geological Society of Romania 2010, p. 15-16.

68. Stanciu C. „Crustal Seismic Attenuation Between East-European and Moesian Tectonic Plates-Romania”, 4th Saint Petersburg International Conference & Exhibition, 5 - 8 Aprilie 2010, Saint Petersburg, Rusia

69. Stanciu C., Marinescu M. „Seismic Hazard Generated by Earthquakes produced in Seismogenic Area Vrancea” (poster), International Risk and Disasters Conference, 30 Mai - 3 Iunie 2010, Davos, Elvetia

70. Marinescu M., Stanciu C., Marinescu G., Matei M., „Most important natural hazards in Romania” (poster), International Risk and Disasters Conference, 30 Mai - 3 Iunie 2010, Davos, Elvetia

6.9 Prospective and Technological Studies, regulations, procedures, methodologies and technical plans, new or improved, controlled or used by the beneficiary

Crt. no.	Activity	Beneficiary
1	Performing measurements of carbon dioxide emissions at the interface soil / atmosphere within the geological survey program in the Podul Cosnei and - Poiana Negrii, in order of shaping the carbonated mineral water accumulation structures.	SC Dorna Apemin S.A.
2	Study on the bathimetrical uplift of the St. George Arm, on a 1000m distance from Mahmudia	SC EXPERCO - ISPIF SRL
3	Feasibility study for evaluating the state of the Rapana resources from the southern coast of the Romanian seashore -Agigea - Mangalia	SC North Station Grup SRL
4	Feasibility studies	INTECSEA BV
5	Spill settlement, storage and eventual recovery of the material dredged from the critical points of navigation located along the Danube	AFDJ Galati
6	Topographic and documentation services for development of a feasibility study for "achievement of a support geodetic network for the hydrographical works on the Danube river in order to increase the accuracy of measurements and of the electronic navigation charts."	SC Tehnogis Grup SRL
7	Research contracts (2 stages) Order 1: Assistance using specialized personnel in gravitational core drilling under pressure program Order 2: Mobilization of R/V Mare Nigrum, aiming mainly the gravitational core drilling under pressure and bathymetric multibeam measurements	MAREXIN BV
8	Sedimentological report on the area between the 100 - 200m isobaths of the Black Sea, containing the primary data; the primary bathimetry data and the accessory measurements of the physical-chemical parameters of the water necessary to calibration and processing the primary and vectorial bathimetrical data.	MREI

6.11 Members of the editorial staff of the ISI journals (or included in international data bases) and international editorial collective

ISI journals:

- Prof. Nicolae Panin: Reviewer of the Quaternary International journal (Elsevier);
- Dr. Mihaela Melinte: Reviewer of the Cretaceous Research journal (Amsterdam);
- Dr. Mihaela Melinte: Reviewer of the Geologica Carpathica journal (Bratislava);
- Dr. Mihaela Melinte: Reviewer of the Acta Geologica Poland journal (Warsaw);
- Dr. Mihaela Melinte: Reviewer Society of Economic Paleontologists and Mineralogists journal (SEPM) Special Publication, Washington DC;
- Dr. A. Seghedi: Co-editor of African Journal of Earth Sciences (Elsevier).

Journals included in international databases (Category B + NURC):

Dr. Titus Brustur: Member of the editorial board of the "Geo-Eco-Marina" journal;
Prof. Nicolae Panin: Member of the editorial board of the "Geo-Eco-Marina" journal;
Prof. Marian Traian Gomoiu: Member of editorial board of the "Geo-Eco-Marina" journal
Dr. Gheorghe Oaie: Member of editorial board of the "Geo-Eco-Marina" journal;
Dr. Dan Jipa: Member of editorial board of the "Geo-Eco-Marina" journal;
Dr. Constantin Sava: Member of editorial board of the "Geo-Eco-Marina" journal;
Dr. Silviu Radan: Member of editorial board of the "Geo-Eco-Marina" journal;
Dr. Adrian Stan: Member of editorial board of the magazine "Geo-Eco-Marina"
Engineer Dan Secrieru: Member of editorial board of the "Geo-Eco-Marina" journal.

6.12 Members of the editorial staff of nationally recognized journals (Category B, NURC classification)

- Prof. Dr. M. T. Gomoiu. Romanian Journal of Biology - Zoology. Chief Editor;
- Prof. Dr. M. T. Gomoiu. Geo-Eco-Marina. Co-editor in chief;
- Prof. Dr. M. T. Gomoiu. Annals of University "Ovidius" , Constanta - Biology. Editor;
- Prof. Dr. M. T. Gomoiu. Annals of University of Oradea, Biology. Member of the editorial board;
- Prof. Nicolae Panin. Geo-Eco-Marina. Chief Editor;
- Prof. Nicolae Panin, "Marine Research". Member of the editorial board;
- Dr. Titus Brustur. "Revue Roumaine of Geology / Romanian Journal of Geology". Editorial Secretary;
- Dr. Titus Brustur. "Nature Protection", Member of the editorial board;
- Dr. Eng G. Oaie. Geo-Eco-Marina. Member of the editorial board;
- Dr. S. Radan. Geo-Eco-Marina. Member of the editorial board;
- Dr. C. Sava. Geo-Eco-Marina. Member of the editorial board;
- Dr. D. Secrieru. Geo-Eco-Marina. Member of the editorial board;
- Dr. T. Brustur. Geo-Eco-Marina. Member of the editorial board;

6.13 International awards obtained through selection process

Prof. Nicolae Panin, Member of the Romanian Academy - Award "The 2010 Black Sea Medal" of the Commission on the Protection of the Black Sea Against Pollution;

Adriana Constantinescu - Third Place at First International Conference of Geologist and Geophysicist Students, 2010.

6.14 National Awards (the Romanian Academy, NURC, other)

NURC Awards - Human Resources (Articles published):

Melinte - Prize for the work He-He Euch Koundi N., S. Ferry, J.-P. Juice, Clauzon G.;

Melinte-Dobrinescu, MC, Safra, A., Zargouni F., 2009. Messinian erosion in northern Tunisia and Deposits. Inferences on the Sicily Strait during the Messinian Salinity Crisis. Terra Nova 21, 1, 41-48;

Melinte - Award-Dobrinescu Melinte work, MC, J.-P. Juice, Clauzon, G., Popescu, SM, Meyer, B., Armijo, R., Bilttekind, N. Cagatay, N., Ucar, G., Jouannic, G., Fauquette, S., Cakir, Z., 2009. The Messinian Salinity Crisis in the des Dardanelles region: Chronostratigraphic constraints. Palaeogeography, Palaeoclimatology, Palaeoecology 278, 24-39;

Melinte - Prize for the work. Schuller, V., Frisch, W., Danisik, M., Dunkl, I., Melinte MC, 2009. Upper Cretaceous Gosau Deposits of the Western Mountains (Romania) - similarities and differences to the Eastern Alps. Austrian Journal of Earth Sciences 102, p. 133-145.

6.15 Number of PhD coordinators, members of the research unit - 2 PhD coordinators.

6.16 Number of doctors, members of the research unit - 23 PhDs.

6.17 Books and book chapters - 17.

6.18 Awards, certificates of excellence - 2.

7. NRDI GEOECOMAR ACHIEVEMENTS IN 2010

7.1 Presentation of the partnership activity:

7.1.a) The development of partnerships at national and international level (with personalities / institutions / associations) to participate in specific national and European programs

NRDI GeoEcoMar has concluded conventions with the following Romanian institutions, for collaboration in national and European research programs:

- University of Bucharest;
- University "Alexandru Ioan Cuza" of Iasi;
- University "Ovidius" of Constanta;
- Maritime Hydrographic Directorate;
- Lower Danube River Administration.

7.1.b) Registration of NRDI GeoEcoMar in international databases that promotes partnerships:

<http://www.rvinfobase.eurocean.org/spec/vessel.jsp?id=3749>
http://ioc.unesco.org/eurocean_bb2/links.php?licat_id=81
<http://co2neteast.energnet.com/content.jsp?page=2&language=1>
<http://ioc.unesco.org/loi/printer.php?id=84>
<http://www.co2club.ro/en/membri.html>
http://www.eu-seased.net/frameset_flash.asp?v0=2

7.1.c) Registration of NRDI GeoEcoMar as a member in research networks / member of prestigious professional associations at national / international level:

NRDI GeoEcoMar is a member of the following international, national and pan-European networks:

- EurOCEAN (The European Centre for Information on Marine Science and Technology);
- ERVO (European Network Research Vessel Operator);
- International Oceanographic Institute (Malta);
- Global Carbon Sequestration and Storage Institute (Australia);
- Zero Emissions Platform (governmental group with a representative from NRDI GeoEcoMar);
- ENERGY (European Network for Research in Geo-Energy) - national representatives;
- CO2NET (Carbon Dioxide Knowledge Sharing Network).

7.1.d) Participation in evaluation committees of national and international competitions

Researchers from NRDI GeoEcoMar are members of the following committees:

- ESFRI (European Strategy Forum for Research Infrastructures) - thematic working group "Environment";
- Advisory Board of NASR;
- Commission 3 "Environment" of NASR - President, Prof. Dr. N. Panin
- National Committee of the Coastal Zone;
- Zero Emissions Platform (governmental group).

7.1.e) Participation in evaluation committees for grant awards and prizes:

- Prof. Nicolae Panin. Geonomic Sciences Department of the Romanian Academy. Academy awards committee;
- Prof. Marian Traian Gomiou. Department of Biological Sciences. Academy awards committee;

7.1.f) Scientific personalities who visited NRD GeoEcoMar

Dr. Barbu Lang, Geological Institute of Israel, former president of the Geological Society of Israel.

7.1.g) Lessons, courses and seminars given by invited scientific personalities

Geo-Eco-Israel Seminar, presented by Dr. Barbu Lang.

7.2 Specification of national and international fairs and exhibitions in which NRD GeoEcoMar has attended and their results:

7.2.a) Fairs and exhibitions:

SEG International Showcase - Conference and Exhibition SEG in Denver, Colorado, October 17-22, 2010. (stand GeoEcoMar)

7.2.b) National fairs and exhibitions:

- Regional Research Fair, Constanta, Hotel Perla, Mamaia, June 9-12, 2010 (stand GeoEcoMar);
- Researchers' Night 2010 September 24, 2010 (stand GeoEcoMar);
- National Exhibition of Research October 6 to 9, 2010, Bucharest. (stand GeoEcoMar)- The Demidoff' s expedition in Romania, heading towards Crimea and southern Russia, October 4 to 1, 2010, co-organized by the Romanian Academy and NRD GeoEcoMar, in the Auditorium hall of the Romanian Academy Library;
- Regional Research Fair, Bacau, Romania, September 2010.

7.3 Presentation of the media activities:

- extracted from the media (interviews)
- participation in radio / TV debates

<http://www.comunicatedepresa.ro/incd-geoecomar/incdgeoecomar-participa-cu-experimente-relevante-si-observatii-fascinante-la-noaptea-cercetatorilor/>
<http://www.centruldepresa.ro/comunicatedepresa/science-research/%C3%AEn-perioada-16-23-octombrie-2010-incd-geoecomar-particip%C4%83-la-expo>
<http://www.centruldepresa.ro/comunicatedepresa/science-research/incd-geoecomar-organizeaz%C4%83-%C3%AEn-perioada-10-16-octombrie-2010-s%C4%83pt%C4%83>
<http://www.centruldepresa.ro/comunicatedepresa/science-research/incd-geoecomar-v%C4%83-invita%C4%83-mar%C5%A3i-12-octombrie-orele-1600-1730-la-co>
<http://www.radioromaniacultural.ro/articole/art.shtml?c=12&g=2&arh=1&y=2010&a=81341>
http://www.telegrafonline.ro/1262815200/articol/107909/portul_constanta_cel_mai_curat_din_europa_de_est.html
<http://www.comunicatedepresa.ro/incd-geoecomar/solutii-de-dezvoltare-durabila-in-sapte-porturi-maritime-europene-promovate-prin-proiectul-ecoport-8/>
<http://www.centruldepresa.ro/ro/comunicatedepresa/science-research>
<http://stirievenimente.ro/evenimente/GeoEco-Israel-sau-cum-controla-infrastructura-viata-la-marginea-unei-placi-continentale/3166>
http://www.ispe.ro/ro/secundar/stiri/evenimente/Programul_National_Pentru_CCS_TarguJiu.html
<http://ikeritza.blogspot.com/2010/12/stiinta-ca-subiect-de-presa.html>
<http://www.agerpres.ro/media/index.php/comunicate/item/11183-Comunicat-de-pres-INCD-GeoEcomar.html>
<http://www.agerpres.ro/media/index.php/comunicate/item/33113-Comunicat-de-pres-INCD.html?tmpl=component&print=1>
<http://www.romanialibera.ro/stil-de-viata/eco/500-de-milioane-de-euro-pentru-un-turceni-verde-196003.html>
<http://www.green-report.ro/stiri/nava-de-cercetare-mare-nigrum-face-valuri-la-denver>
<http://www.comunicatedepresa.ro/extreme-soft-group/premiera-internationala-primele-panorame-navigabile-in-delta-dunarii/>
<http://www.comunicatedepresa.ro/incd-geoecomar/nava-de-cercetari-oceanografice-mare-nigrum-a-institutului-national-de-cercetare-dezvoltare-pentru-geologie-si-geoecologie-marina-geoecomar-porneste-vineri-14-mai-2010-intr-o-no-ua-expeditie/>
<http://www.sapteseri.ro/blog/2010/11/conferinta-anuala-a-societatii-geologice-a-romaniei-sgr/>
<http://www.dilemaveche.ro/sectiune/stiinta-tehnologie/articol/ce-anse-pot-avea-galileii-azi>
<http://www.dilemaveche.ro/sectiune/stiinta-si-tehnologie/articol/mici-intrebari-despre-marea-neagra>
<http://www.dilemaveche.ro/sectiune/stiinta-si-tehnologie/articol/jurnalismul-de-tiin>
<http://www.dilemaveche.ro/sectiune/stiinta-si-tehnologie/articol/carl-sagan-teleenciclopedia-si-national-geographic>
<http://foto.agerpres.ro/index.php?i=4770622>
<http://focus-energetic.ro/australienii-ne-ajuta-sa-stocam-co2/>
<http://www.infomediou.eu/countdown-for-the-first-romanian-ccs-demonstration-project/>
http://www.bellona.org/news/news_2010/Romania_CCS_project_launch
http://www.agir.ro/univers-ingenieresc/energia_si_problemele_regionale_majore_dialog_si_cooperare_2990.html

<http://www.dilemaveche.ro/sectiune/stiinta-si-tehnologie/articol/problemele-dunarii-interviu-cu-dr-gheorghe-oaie>
<http://www.ecomagazin.ro/numaratoare-inversa-pentru-primul-proiect-demonstrativ-romanesc-de-captare-si-stocare-a-co2/>
<http://www.financiarul.ro/2009/06/19/exploatarea-hidrogenului-sulfurat-din-marea-neagra-un-deranj-mult-prea-mare/>
<http://www.romanalibera.ro/exclusiv-r1/reportaj/cautatorii-de-comori-din-marea-neagra-167978.html>
<http://www.radioromaniacultural.ro/articole/art.shtml?c=1&g=1&arh=1&y=2010&a=85191>
<http://cercetareromania.ro/tag/diaspora/>

7.4 Sources of information and documentation on the scientific and technical heritage of the NRD GeoEcoMar:

The library of GeoEcoMar is a specialized one, primarily dedicated to the researchers of the institution. In terms of the setting up and the administration form, the library is a private property, without legal personality, with limited access.

The publications can be accessed by the research and development units in the field, as follows:

- Geological Institute of Romania
- Institute of Marine Research Gr. Antipa
- Danube Delta Institute
- Institute of Environmental Engineering.
- National Institute for Earth Physics
- Institute of Geodynamics "Sabba Stefanescu" of the Romanian Academy

In terms of the structure, the library has a specialized collection, with free access of specialists.

Regarding the publication of the institution, Geo-Eco-Marina is now freely accessible online. All articles in all editions, are in accordance with free access to information, attracting attention of researchers in Romania and, especially, abroad.

In terms of access to scientific literature, the situation is different. By 2010 the institution has received funding from NASR by financing agreements of the expenditure for the purchase of periodicals, books, CD-ROM or other publications, including magnetic media, in order to support information and documentation activities. Reduced funding has led to failure of payment of subscriptions to publications, and reduced the number of books purchased. The library was stocked with new books or books at the Romanian Academy from donations.

Currently, researchers have no access to some of the most important scientific documentation resources worldwide because of the lack of funding. Therefore, the management of the institution has as main priority for 2011, the subscription to electronic editions to at least one of the sources mentioned below:

- online scientific databases and bibliographic reference - Thomson ISI;
- online platform of journals with full scientific text - Science Direct
- online platform of journals with full scientific text - Springer Link.

7.5 Conclusions

The large number of research projects and contracts in which NRD GeoEcoMar was involved during 2010 allowed the consolidation of the leading position occupied on the research market. This first demonstrates the stability of the institution, even after almost two years of economic crisis, particularly difficult for the entire scientific community in Romania. According to the balance of income and expenditure, GeoEcoMar ended 2010 with no debt to the Romanian state or other partners.

According to the objectives set by its own strategy of development for 2010, NRD GeoEcoMar managed to keep a normal pace of development. By contracts signed with private or state economic agents, the institution has provided decent paid on time wages. In this way, the standard quality of studies was developed at a high level, competitive with the foreign market, researchers have not left their jobs, on the contrary, three young researchers have been employed following the contest in November 2010. Research programs, both domestic and international, were completed on time and without any financial problems.

It is necessary to emphasize the involvement of the institution in numerous other activities such as:

- Participation in fairs and exhibitions in the country and abroad;
- The participation rate in national and international scientific meetings, in many cases as main organizer;
- Getting awards, diplomas and medals, awarded for the quality of studies and research conducted and disseminated;
- Sending researchers to training, including doctoral studies;
- Support the institute conferences with the participation of personalities of the scientific world;
- Strengthening national leadership in geological and geocological water environments research, maintaining the respect of foreign partners;
- integration on European research networking.

In conclusion, NRD GeoEcoMar, by its activity in 2010, accounted for the entire research system in Romania, coordinated by NASR, an element of stability, progress and scientific achievements.

8. NRDI GeoEcoMar STRATEGY FOR 2011

As in previous years, NRDI GeoEcoMar retains its basic mission, that of being a research and development institute of excellence in the fields of marine geology, geophysics and geoecology, coastal and inland waters and to represent, at the European Union level, a reference unit and an important partner for the Sea and Earth Sciences.

In 2011, NRDI GeoEcoMar will concentrate its human and material resources on basic specific activities: multidisciplinary marine research, research on mineral, energetic and biological marine resources, scientific substantiation of decision making by central and local State authorities, in order to protect and improve the environmental quality, international cooperation and integration in European research infrastructures. A specific priority for 2011 is the implementation of the objectives of MARINEGEOHAZARD project, European infrastructure project to create the first early warning system in case of marine geohazards. This project, worth about 7 million Euros and will bring NRDI GeoEcoMar in a leading position for the western Black Sea area and beyond.

Another priority for this year is the total involvement in the studies on the masterplan, coastal diagnosis and the feasibility studies for protection against erosion of the Romanian seaside. In this way, the experience and knowledge of the NRDI GeoEcoMar on coastal sciences can contribute to the achievement of concrete plans of coastal area protection against erosion and their integration into a modern plan for integrated coastal zone management. The 2011 objectives pursued by NRDI GeoEcoMar, based on medium term development strategy (2006 to 2016), partially adapted to the economic crisis are:

- supporting of Sea Sciences, as a priority area of research in Romania
- outlining of new resources (mineral, energetic, biological);
- carrying out complex research along the coastal area of Romania to the Black Sea for scientific substantiation of protection solutions;
- environmental studies (e.g. audit, impact, survey) and specialized documentations (e.g. maps and bathymetric studies, geo-thematic, ecological, etc.)
- the performance requirements of ISO 9001: 2008 quality standards, according to the License Certificate (No. 170539/2006) granted by Lloyd's Register Romania;
- providing human resources needed to cover the research plan;
- increasing the professional level of young researchers from the Institute, but also of the support staff;
- modernization of research infrastructure, even in conditions of financial cuttings, for projects managed by UEFISCDI;
- maintaining the marine research vessels, Mare Nigrum and Istros, in the European research fleet (by European Research Vessel Operators, EUROCEAN bodies and the FP7 EUROFLEETS) and also by improving scientific facilities and navigation equipment;
- proposing new projects under the European programs, bilateral or other;
- supporting government bodies (e.g. MAE, MMDD, MECTS) in implementing the EC recommendations of the environmental and integrated management of marine area, including the coastal zone.

The list of objectives remains open to approach new areas, to the demands of existing and potential beneficiaries.

8.1 In the field of scientific research

The main perspectives / development priorities in scientific research, for 2011, are:

Crt. no.	Strategic directions
1	Permanent access to programs under the National Plan II. Preparation of a portfolio of research proposals for future competitions.
2	Permanent access to international programs, notably the European Commission Framework Program VII (2007-2013), of structural funds, but also of other, including bilateral projects.
3	Increasing the number of contracts and collaborations with companies and large companies in the country and abroad, with other representative institutions in the field, in order to attract new sources of funding
4	Continuous improvement of services provided by the NRDI GeoEcoMar by compliance with quality standards ISO 9001: 2008 and the ISM for research vessels.

5	Involvement of research staff in the education process, both in the country and abroad.
6	The computerization of the research process, proper management of computer networks, the database development, constantly upgrading the web site of the institute (www.geocomar.ro)
7	Permanent development of cooperation with prestigious universities and institutions.
8	Organizing domestic and international scientific events (communication sessions, summer schools, workshops, etc.).
9	Training and development of scientific, technical and auxiliary staff of the Institute.

8.2 Human resources strategy

Personnel policy that NRD GeoEcoMar will apply in 2011 will address the following issues:

- increasing the number of staff employed in research, reported the total number of employees;
- reducing the average age of researchers, by employing young people;
- maintaining a core of experienced researchers;
- increasing the number of employees with contracts of collaboration;
- increasing, differentially, the salaries of scientific staff based on "annual self-evaluation sheets", scientific performance and contribution to the development of the institute.

In order to maintain a high standard in research, following a review conducted in the Scientific Board of the Institute, the following personnel policy have been proposed for 2011:

- attracting in research field of students and Master students, to work part - time in different projects, with the possibility of employment by competition;
- hiring, part-time or full-time, professionals with experience, to cover fields complementary to the institute's activity;

- new staff employed in research will be subject to a trial period under the provisions of the Labor Code and Collective Labor Agreement of the Institute;

- attracting specialists from EU countries who want to operate in Romania;

- increasing contributions of specialists with titles of "associate researcher"; and "honorary member", affiliated to NRD GeoEcoMar, titles awarded to experienced specialists working both in the country and abroad.

To ensure a very close relationship between research and education, NRD GeoEcoMar concluded / renewed cooperation agreements with Universities of Bucharest, Iași and Constanța, thus trying to attract in research field an increased number of young people by providing certain facilities (e.g. ensuring student practices on board of research vessels, supporting and coordinating the Bachelor, Master and Doctoral Degrees, practice training in own laboratories).

8.3 Scientific research funding strategy

In 2011 NRD GeoEcoMar will give a great importance to external funds. Based on national research funding, all the financial opportunities offered will be accessed. Below the categories of funds which NRD GeoEcoMar will apply for in 2011 are detailed:

Internal competitions:

The Core Program - GEOSIDMAR will continue to be active by 2011, and projects started in 2009 will be brought to completion.

On the list of National Plan II projects are just two projects which will continue in 2011. The Leadership of the institution will require researchers to prepare new projects that may be proposed as soon as it announced a competition organized by NASR through UEFISCDI. There will also be considered Grants awarded by the Romanian Academy.

International competitions:

I. The European funds for research from the EC Framework Programme VII. GeoEcoMar is currently involved as a partner in 5 projects PC VII; GeoEcoMar will participate in all competitions involving its own expertise in all calls this year.

II. European funds for research at regional and inter-regional level: Black Sea 2007 - 2013 - Joint Operational Programme, INTER-REG IV C Programme Programme Area (South Eastern Europe) and The Black Sea ERA NET Program;

GeoEcoMar will access funds provided by the programs mentioned above as main contractor, partner or subcontractor. In order to successfully overcome the crisis period, which prefigures research in Romania in 2011 GeoEcoMar will try to involve in many applied research contracts and / or in consulting contracts for beneficiaries in the private sector from home or abroad. These sources of funding may come from several areas:

- Research for off-shore oil on the continental shelf of the western Black Sea. Exploration of the off-shore hydrocarbon resources still remains an attractive source for specialized companies. Based on its own research infrastructure, especially specialized marine research, but also highly specialized personnel, GeoEcoMar is the only solid actor on the market of offshore research and exploration and therefore offers its services to all potential beneficiaries of such works;
- Consulting in integrated coastal zone management and sediment supply artificial beaches degraded by erosion. GeoEcoMar has participated and participates in national or international consortium, which deal with the strategies of sustainable development of coastal areas, in order to propose solutions for the rehabilitation of the beaches on the Romanian Black Sea coast. The Know-how qualifies GeoEcoMar to become a partner in consortium that can run protection works for: sedimentology and coastal dynamics, identifying the sources of sediments supply, environmental impact study, monitoring of works and technical advice for any problem related to the coastal management;
- Development of environmental impact studies and environmental balance. GeoEcoMar is authorized by the MMP for the study of environmental impact and environmental balance. In crisis conditions existing at the moment, when the certainty of funds coming from the projects won in competition is very low, GeoEcoMar, by the Department of Environmental Quality Investigation, will access, to a much larger scale, the contracts on drawing up of environmental studies and balances;
- Preparation of documentation for archaeological sites, monuments and natural reserves, etc.
- Consulting contracts is also a significant source of funding for GeoEcoMar.

The priority for 2011 is the re-accreditation GeoEcoMar to perform all types of environmental studies, according to new requirements of the Ministry of Environment and Forests.

8.4 Editing and Documentation Services, Library and the Management of Archived Information Strategy

In order to disseminate scientific information, in 2011 NRD GeoEcoMar will edit the issue nr.16 of journal GEOECOMARINA. GEOECOMARINA covers scientific reference work of researchers from the institute, but also of other scientists from Romania and abroad, which can be freely accessed on the website www.geoecomar.ro as "pdf" documents.

All articles to be submitted for publication in the Geo-Eco-Marina journal will be reviewed by Romanian and foreign reviewers, the transition to a peer-review system being critical for the inclusion among the top magazine publications in the field. The major objective of the magazine remains its entry in the ISI Thomson - Reuters Scientific and SCOPUS databases (documentation was submitted during 2010 and the waiting period is about 12 months.) Therefore, the journal will be included in major scientific publication databases available online (e.g. the electronic libraries of the major universities worldwide). In addition to these measures (maintenance of online subscriptions and promoting and enhancing the quality of the magazine), NRD GeoEcoMar will pursue informatics:

- permanent expanding of the web site
- achievement of an efficient communication between the NRD GeoEcoMar Bucharest headquarters and Constanta Branch ;
- promoting the activities of NRD GeoEcoMar, by using new methods offered by the virtual space (e.g. the presentation of documentaries on the NRD GeoEcoMar activities and capabilities on sharing sites such as - www.youtube.com, etc.) and also by participating in profiled fairs and exhibitions.

8.5. Infrastructure and Investments Strategy

For 2011, NRD GeoEcoMar envisages the following:

- completion of building works in the Building C at its headquarters in Bucharest,
- changing the administrative headquarters of Wave Measuring Station in Mangalia, action not finished in 2010;
- modernizing laboratories and the field equipment, by putting into operation of new equipment. Funding for new research equipment in 2011 will come from personal funds, budget funds, international projects or other financial sources.

The current socio-economic conditions, in which, even if the economic recession is over, at macro-economic level, state of crisis is likely to affect research in Romania in 2011 as well, maintaining the current position of the GeoEcoMar on the market of research and services, will require the same management policy based on solid and realistic principles which must take account of changes at the national and EU level.

9. PUBLIC RELATIONS AND USEFUL ADDRESSES

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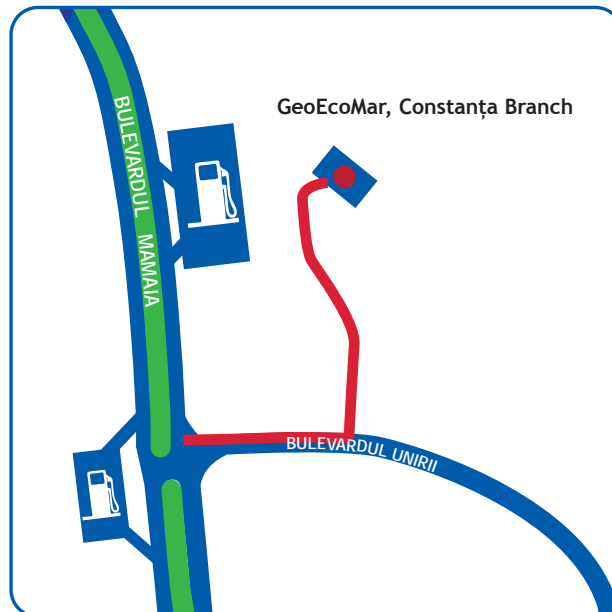
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