



**THE NATIONAL INSTITUTE FOR MARINE RESEARCH AND DEVELOPMENT
"GRIGORE ANTIPA" CONSTANTA
and
THE BALKAN ENVIRONMENTAL ASSOCIATION (B.EN.A.)**

***THE INTERNATIONAL SYMPOSIUM
PROTECTION OF THE BLACK SEA ECOSYSTEM AND
SUSTAINABLE MANAGEMENT OF MARITIME ACTIVITIES***

PROMARE 2015

Seventh Edition
29-31 October 2015
Constanta, ROMANIA

Back to back event marking the
CELEBRATION OF THE INTERNATIONAL BLACK SEA DAY

CELEBRATION OF THE 45TH ANNIVERSARY OF THE
ESTABLISHMENT OF THE ROMANIAN MARINE RESEARCH INSTITUTE
and the

Kick-Off meeting of the DG MARE Project on Maritime Spatial Planning (MARE/2014/22): Cross-
Border MARitime Spatial PLANning in the Black Sea (MARSPLAN-BS)

with the support of:
*National Agency for Scientific Research and Innovation
and
The Romanian Black Sea Titleholders Association (RBSTA)*



ORGANIZING COMMITTEE:

- ✓ Dr. Simion Nicolaev
- ✓ Dr. Tania Zaharia
- ✓ Dr. Luminița Buga
- ✓ Dr. Luminița Lazăr
- ✓ Dr. Florin Timofte
- ✓ Dr. Valodia Maximov
- ✓ Dr. Mariana Golumbeanu
- ✓ Dr. Laura Alexandrov
- ✓ SR3 Marius Nedelcu
- ✓ PhD applicant Magda Nenciu
- ✓ PhD applicant Mădălina Galațchi
- ✓ PhD applicant George Țiganov
- ✓ PhD applicant Adrian Filimon
- ✓ PhD applicant Elena Vlăsceanu
- ✓ PhD applicant Dragoș Niculescu
- ✓ Biol. Elena Bișinicu

PROGRAMME COMMITTEE

- ✓ Tudor Prisecaru, President of the National Authority for Scientific Research and Innovation (ANCSI)
- ✓ Gheorghe Constantin, director, Ministry of Water, Environment and Forests
- ✓ Decebal Făgădău, Mayor - Constanța Municipality
- ✓ Constantin Ion, Prefect - Constanța County
- ✓ Simion Nicolaev, General Director, NIMRD "Grigore Antipa" Constanța
- ✓ Marian Tudor, General Director, DDNIRD Tulcea
- ✓ Lucian Eduard Simion, Guvernator, DDBRA Tulcea
- ✓ Gheorghe Brezeanu, Romanian Academy Bucharest
- ✓ Marian Traian Gomoiu, Romanian Academy Bucharest
- ✓ Sorin Rugină, Rector "Ovidius" University Constanța
- ✓ Vergil Chițac, Rector Naval Academy Constanța
- ✓ Violeta Ciucur, Rector Maritime University Constanța
- ✓ George Papari, Director Dobrogea-Littoral Water Basin Administration Constanța
- ✓ Lavinia Monica Zaharia, executive director Environmental Protection Agency Constanța
- ✓ Marian Râșnoveanu, Chief Commissioner Environmental Guard Constanța
- ✓ Adrian Bîlbă, General Director Natural Sciences Museum Complex Constanța
- ✓ Mihaela Dupleac, Executive Director Romanian Black Sea Titleholders Association (RBSTA)

SCIENTIFIC COMMITTEE

- ✓ Prof. Dr. Fokion Vosniakos - "Alexander" Institute for Technology and Education Thessaloniki, Greece
- ✓ Prof. Dr. Evangelos Papathanasiou - HCMR, Athens, Greece
- ✓ Prof. Dr. Boris Alexandrov - IBSS-NASU, Odessa, Ukraine
- ✓ Prof. Dr. Nicolae Panin - Romanian Academy, Bucharest, Romania
- ✓ Prof. Dr. Nicolae Papadopol - Scientific Director Natural Sciences Museum Complex, Constanța, Romania

- ✓ Dr. Rolanda Predescu - National Authority for Scientific Research and Innovation, Bucharest, Romania
- ✓ Prof. Dr. Kakha Biliashvili, University of Tbilisi, Georgia
- ✓ Prof. Dr. Galina Minicheva - IBSS-NASU, Odessa, Ukraine
- ✓ Prof. Dr. Atanas Palazov - IO-BAS, Varna, Bulgaria
- ✓ Prof. Dr. Daniela Petrova - IFR, Varna, Bulgaria
- ✓ Dr. Ing. Simion Nicolaev - NIMRD "Grigore Antipa", Constanța, Romania
- ✓ Prof. Dr. Temel Oguz - METU, Erdemli, Turkey
- ✓ Dr. Colpan Polat-Beken - TUBITAK, Research Center Marmara, Turkey
- ✓ Dr. Barış Salihoglu - IMS-METU, Erdemli, Turkey
- ✓ Prof. Dr. Tamara Shiganova - Institute "P.P. Shirshov", Moscow, Russian Federation
- ✓ Dr. Liliana Török - DDNIRD Tulcea, Romania
- ✓ Dr. Eng. Tania Zaharia - NIMRD "Grigore Antipa", Constanța, Romania
- ✓ Prof. Dr. Emil Vespremeanu, University of Bucharest, Romania
- ✓ Prof. Dr. Milan Mesic, University of Zagreb, Croatia
- ✓ Prof. Dr. Massimiliano Fenice, University of Tuscia, Viterbo, Italy

PROGRAMME

29.10.2015

Kick off meeting of DG MARE Project on Maritime Spatial Planning (MARE/2014/22): Cross-Border MARitime Spatial PLANning in the Black Sea (MARSPLAN-BS)

30.10.2015

OFFICIAL OPENING - NIMRD headquarters (Conference Room)

09.30 - 10.00 Registration

10.00 - 11.00 Official opening (Conference Room)

- Opening speech - dr. eng. Simion NICOLAEV, general director of NIMRD „Grigore Antipa“ and prof. dr. Fokion VOSNIAKOS, president B.EN.A.
- Speeches of the central and local authorities
- Messages from R & D institutes and universities, NGOs, scientific, professional and environmental protection organizations

11.00 - 11.30 Coffee Break. Press Conference

PLENARY SESSION - NIMRD headquarters (Conference Room)

Chairpersons: SIMION NICOLAEV, FOKION K. VOSNIAKOS, CAMELIA-ELENA MARINESCU

11.30 - 12.30

- **45 years from the establishment of the Romanian Marine Research Institute - Dr. Eng. Simion NICOLAEV**, General Director of NIMRD “Grigore Antipa“
- **Perseus Project: developing innovative tools to support policymakers - Prof. Dr. Fokion K. VOSNIAKOS**, President of the Advisory Board Perseus Project
- **The significance of the International Day of the Black Sea - Irina Makarenko**, officer of the Commission for the Protection of Black Sea Against Pollution
- **Romania and the Mediterranean Commission (CIESM): 90 years of fruitful interrelationships” (CIESM) - Dr. Alexandru BOLOGA**, former-scientific director of NIMRD “Grigore Antipa“
- DG MARE Project on Maritime Spatial Planning (MARE/2014/22): Cross-Border MARitime Spatial PLANning in the Black Sea (**MARSPLAN-BS**) - Teofil Gherca, director, MDRAP
- **The future researchers:** Costin George Dobrin, student at the National College of “Mircea cel Bătrân“ Constanța (winner of the gold medal at the International Geography Olympiad, August 10 to 18, from Tver - Russia) and members of Junior Rangers Club from 2 Mai

12.30 - 13.30 Lunch Break

ORAL SESSIONS - NIMRD headquarters (Conference Room)

13.30 - 15.00 Special session dedicated to NIMRD's 45th Anniversary

13.30 - 14.00 Report on the state of the Romanian marine and coastal environment in 2014
- Dr. Eng. Tania ZAHARIA, scientific director NIMRD "Grigore Antipa"

14.00 - 15.00 NIMRD Department Presentations - Heads of Departments

15.00 - 16.00 Session I - Oceanography and Marine Engineering

Chairpersons: LUMINIȚA BUGA, EDEN MAMUT

15.00-15.15 Romanian National Oceanographic and Environmental Data Center in the European context - L. Buga, G. Ganea, G. Sârbu

15.15 - 15.30 Constanța Space Technologies Competence Centre Dedicated to the Romanian Marine and Coastal Regions Sustainable Development - COSMOMAR - R. Mateescu, L. Buga, E. Mamut

15.30 - 15.45 Evaluation of the offshore wind energy potential in the Romanian coastal environment at Black Sea - A. Răileanu, F. Onea, E. Rusu

15.45 - 16.00 Long-term Characteristics of the Wind Onshore and Offshore in the Western Black Sea - Teodor-Mihai Cristescu

16.00 - 16.30 Coffee Break

16.30 - 17.30 Session II - Marine Ecology and Environmental Protection

Chairpersons: LAURA BOICENCO, MARIUS FĂGĂRAȘ

16.30 - 16.45 Phytocoenoses with *Convolvulus persicus* L. on the western coast of the Black Sea (Romania and Bulgaria) - Marius Făgăraș, Loreley Dana Jianu

16.45 - 17.00 Several issues regarding the conservation and protection of vulnerable psammophilous species *Polygonum maritimum* L. and *Silene thymifolia* Sibth. et SM. on the Romanian Black Sea coast - Loreley Dana Jianu, Marius Făgăraș

17.00 - 17.15 The breeding assessment of colonial species from the Danube Delta Biosphere Reserve in 2013 - Mihai Marinov, Alexandru Doroșencu, J. Botond Kiss, Vasile Alexe

17.15 - 17.30 Ecological assessment of benthic invertebrate fauna from the Romanian marine transitional waters - Valeria Abaza, Camelia Dumitrache, Adrian Filimon

17.30 - 18.30 Session III - Sustainable Use of Marine Resources

Chairpersons: SIMION NICOLAEV, VIOLIN ST. RAYKOV

17.30 - 17.45 First satellite tracking of Beluga (*Huso huso*, Linnaeus 1758) and Russian sturgeons (*Acipenser gueldenstaedti*, Brandt & Ratzeburg 1833) in the Black Sea - R. Suciu, C. Knight (Rosten), D.F. Onară, K. Hawley, T. Rosten, M. Paraschiv, M. Iani, D. Holoștenco, Șt. Honț

17.45 - 18.00 Ecosystem modelling for fishery management. Case study: Romanian turbot fishery - Gh. Sîrbu, Gh. Radu, Magda Nenciu, Tania Zaharia

18.00 - 18.15 Recent state of Turkish fisheries in the Black Sea - Ertuğ Düzgüneş

18.15 - 18.30 Fisheries management framework in Bulgaria - Violin St. Raykov

19.00 Networking Reception (Hotel Boulevard)

31.10.2015

09.30- 10.30 Session I - Oceanography and Marine Engineering

Chairpersons: RĂZVAN MATEESCU, GHEORGHE VIOREL UNGUREANU

9.30 - 9.45 Structure and content of NIMRD coastal GIS database - Alina Spînu, Luminița Buga, Marius Nedelcu, George Sârbu

9.45 - 10.00 Bathymetry changes in the Danube Delta front over the last decades - Alexandru Vlad Lazăr, Alexandru Magher, Gheorghe Viorel Ungureanu, Andrei Daniel Balahura, Robert Lazăr, Alexandru Dan Ionescu

10.00 - 10.15 Isoconcentration profiles of water parameters by UW-MS analysis - Dan Eduard Mihăiescu, Alexandru Dan Ionescu, Gheorghe Ungureanu, Adrian Fudulu, Mariana Carmela Horja

10.15 - 10.30 The use of interferometric sonars for acoustic seafloor classification - Gheorghe Viorel Ungureanu, Alexandru Vlad Lazăr, Andrei Daniel Balahura, Robert Lazăr, Alexandru Magher, Alexandru-Dan Ionescu

10.30 - 11.30 Session II - Marine Ecology and Environmental Protection

Chairpersons: VALERIA ABAZA, FLORIN TIMOFTE

10.30 - 10.45 Western Black Sea eutrophication status according to Black Sea Eutrophication Assessment Tool, BEAST- MISIS cruise results - Luminita Lazăr, Laura Boicenco, Colpan Beken, Boryana Dzhurova, Snejana Moncheva, Galina Shtereva, Dan Vasiliu

10.45 - 11.00 Research and restoration of the essential filters of the sea (REEFS), Black Sea Romanian coast - Angelica - Ionela Paiu, Mihaela Elena Mirea Cîndea, Romulus-Marian Paiu

11.00 - 11.15 Intercalibration of the Black Sea benthic invertebrate fauna ecological assessment methods under the Water Framework Directive - Valentina Todorova, Valeria Abaza, Camelia Dumitrache, Emil Todorov, Georg Wolfram

11.15 - 11.30 Assessment of benthic habitats on the Western part of the Black Sea shelf within the MISIS project - A. Teacă, V. Todorova, T. Begun, M. Mureșan, M. Sezghin, L. Boicenco, M.-T. Gomoiu, A. Filimon, M. Zazu

11.30 - 12.00 Coffee Break

12.00 - 13.00 Session III - Sustainable Use of Marine Resources

Chairpersons: ERTUĞ DÜZGÜNEŞ, GHEORGHE RADU

12.00 - 12.15 Fish production & consumer trends in Romania - Silvius Stanciu, Iuliana Oana Mihai, Riana Radu, Lucean Mihalcea, Daniela Ludmila Manea, Costel Nistor, Florina Oana Vîrlanuță

12.15 - 12.30 Evolution of the sprat fishery at the Romanian Black Sea coast during 1950-2014 - Gheorghe Radu, Aurelia Țoțoiu, Mădălina Galațchi

12.30 - 12.45 Radionuclide content in recent marine fish catches and assessment of public exposure through food consumption - Vasile Pătrașcu, Romul Mircea Mărgineanu, Valodia Maximov, Ana Maria Blebea-Apostu, Mădălina Galațchi, George Țiganov

12.45 - 13.00 Preliminary genetic analyses for the species *Hippocampus guttulatus* (Cuvier, 1829) in the Romanian Black Sea - Magda-Ioana Nenciu, Daniela Roșioru, Tania Zaharia, Dalia Onară, Elena Taflan, Daniela Holostenco, Natalia Roșoiu

13.00 - 14.00 Session IV - Environmental Education and Awareness

Chairpersons: MARIANA GOLUMBEANU, IULIAN NICHERSU

13.00 - 13.15 "The Crab Island" - Ion Băraru, Bogdan Dincă, George Costin Dobrin, Tina Alina Sandu, Andrei Sava, Răzvan Ursu

13.15 - 13.30 Enhancing conservation and livelihood systems in Marine Protected Areas (MPAs) in the Danube Delta region - Mariana Golumbeanu, Dragoș Micu, Magda Nenciu, Victor Niță, Alina-Daiana Spînu, Marian Tudor, Liliana Ene, Elena Ojea, Stephen Beal

13.30 - 13.45 ResponSEABle Ocean Literacy - strong engagement of the ocean and ocean literacy communities in co-building, co-testing and co-evaluating of the relationship between the ocean health and human activities - Iulian Nichersu, Laura Alexandrov, Simion Nicolaev, Valeria Abaza, Iuliana Nichersu, Marian Mierla, Eugenia Marin, Cristian Trifanov, Florentina Sela

13.45 - 14.00 Marine Litter Watch App as a tool for ecological education and awareness raising along the Romanian Black Sea coast - Mariana Golumbeanu, Magda Nenciu, Mădălina Galațchi, Victor Niță, Eugen Anton, Andra Oros, Christos Ioakeimidis, Constanța Belchior

14.00 - 14.30 Reporting on sections and adoption of Final Declaration

14.30 Closing of the Symposium

POSTER SESSION

During the Symposium, a poster session will be organized for all four scientific sections. The posters are on display throughout the event. All the posters have the same degree of importance as oral presentations.

SESSION I: Oceanography and Marine Engineering

Chairwoman: MARIA EMANUELA MIHAILOV

PO1: The oscillations analysis in head waves of a tractor-tug model by experimental and numerical methods - C. Gasparotti, L. Domnişoru, D. Obreja

PO2: Dynamics of forest areas in the Romanian coast of the Black Sea using fractal analysis - Ana-Maria Ciobotaru, Ion C. Andronache, Daniel Peptenatu, Cristian Drăghici, Radu Daniel Pintilii

PO3: Studies concerning the coastal impact of an offshore wind farm operating in the vicinity of the Danube Delta - A. Ivan, A. Raileanu, F. Onea, E. Rusu

PO4: Wind Data Analysis for NIMRD Oceanographic Measurement Point Estacada Mamaia - Teodor-Mihai Cristescu, Gabriel Ganea, Luminița Buga, Marius Nedelcu, Dan Diaconeasa, Răzvan Mateescu

PO5: Effects of climate change on phenology in Romanian coastal zone of the Black Sea - Bandoc, G., Dragomir, E., Pravalie, R., Mateescu, R.

PO6: The granulometry of sediments from the Năvodari-Mamaia beach area and its influence on the radiometric results - Dănuț Diaconeasa, Vasile Pătraşcu, Silică Petrişoia

PO7: Statistical analysis of the water temperature and salinity on the Romanian Black Sea coast - M.E. Mihailov, L. Buga, L. Lazăr, L. Boicenco, V. Diaconu, G. Ganea

PO8: Hydrodynamics of the marine shallow waters in the area between Năvodari and Constanța, as determined at the Operational Oceanographic Station from Mamaia and the sea level recorders network as well - V. Malciu, M. Mihailov, G. Ganea, M. Nedelcu

PO9: Artificial Neuronal Networks vs. Classical deterministic methods for shoreline change variability analysis and forecasts - Răzvan Mateescu, Elena Vlăsceanu, Dragoş Niculescu, Marius Lungu, Ichinur Omer, Ovidiu Gaceu

PO10: Remote monitoring and operational assessment of potential risk of the Romanian marine and coastal cliff shoreline - E. Vlasceanu, R. Mateescu, D. Niculescu

PO11: The persistence of gamma radionuclides in sediments from the Năvodari - Mamaia littoral zone - Vasile Pătraşcu, Romul Mircea Mărgineanu, Ana Maria Blebea-Apostu, Dănuț Diaconeasa, Silică Petrişoia, Claudia Gomoiu

SESSION II: Marine Ecology and Environmental Protection

Chairwoman: DANIELA MARIANA ROȘIORU

PO12: A GIS analysis on reed vegetation dye-back, Marian Mierlă, Mihai Doroftei, Silviu Covaliov, Cristian Trifanov

PO13: Phytoplankton quality assessment in the Romanian coastal and transitional areas according to the Water Framework Directive - Laura Boicenco, Luminița Lazăr, Oana Culcea, Alina-Daiana Spînu

PO14: Structural and Functional Bases of Phytoplankton Biodiversity in the Black Sea - Lyudmyla Stelmakh

PO15: Assessment of the contaminants in biota from the Western Black Sea basin in respect with MSFD requirements - MISIS project approach - Valentina Coatu, Andra Oros, Daniela Țigănuș, Galina Shtereva, Levent Bat

PO16: Benthic invertebrates associated with *Cystoseira barbata* from the Romanian Black Sea coast - Adrian Filimon, Valeria Abaza, Camelia Dumitrache, Oana Marin, Magda Nenciu, George Țiganov, Florin Timofte

PO17: Macrophytobenthic communities from the Romanian Black Sea coast - indicators of the ecological status of coastal water bodies - Oana Marin, Dimitar Berov, Emil Todorov

PO18: Heavy metals contamination in *Mytilus galloprovincialis*, water and sediments from Romanian Black Sea coast - D.M. Roșioru, A. Oros, M.I. Nenciu, L. Lazăr

PO19: Seasonal variability of water quality during the rehabilitation of the Southern Romanian Black Sea coast - Elena Stoica, Luminița Lazăr, Maria Emanuela Mihailov, Valentina Coatu

PO20: Assessing the conservation status of community interest marine and coastal habitats and species in Romania - Tania Zaharia, Alina-Daiana Spînu, Dragoș Micu, Victor Niță, Laurența Alexandrov, Marius Făgăraș, Valodia Maximov, Eugen Anton, Magda Nenciu

PO21: Results of the assessment of the Western Black Sea contamination status in the frame of MISIS joint cruise - A. Oros, V. Coatu, D. Secrieru, D. Țigănuș, D. Vasiliu, H. Atabay, C. Beken, L. Tolun, S. Moncheva, L. Bat

PO22: Present level of petroleum hydrocarbon in seawater associated with offshore exploration activities from the Romanian Black Sea Sector - Daniela Țigănuș, Valentina Coatu, Luminița Lazăr, Andra Oros

PO23: Meiobenthos composition on the Romanian Black Sea shelf in 2015 - Mihaela Mureșan, Ana Bianca Pavel

PO24: State of macrozoobenthic community under the Danube's plume influence on the Romanian Black Sea shelf - A. Teacă, T. Begun, M. Mureșan, M. Zazu, M.T. Gomoiu

PO25: The anthropization degree of areas in coastal zone of Sulina - Portița sector - Cristian Trifanov, Marian Mierlă, Mihai Doroftei, Silviu Covaliov

SESSION III: Sustainable Use of Marine Resources

Chairman: VALODIA MAXIMOV

PO26: Adoption of traceability systems by Romanian coastal fisheries - Tania Zaharia, Valodia Maximov, Liliana Mihaela Moga, Carmen Georgeta Nicolae, George Țiganov, Magda Nenciu

PO27: Ships and boats used in fishing activities on the Romanian Black Sea area during 1982 - 2012 - Eugen Anton, Simion Nicolaev, Gheorghe Radu, Valodia Maximov

PO28: Evolution of some chemical and biochemical indicators in *Rapana venosa* (Valenciennes, 1846) of the Romanian Black Sea coast - Cristian Sorin Danilov, Andra Oros, George Țiganov, Daniela Mariana Roșioru

PO29: Length-weight-age relationship of anchovy (*Engraulis encrasicolus*, Linnaeus 1758) from the Romanian Black Sea coast - Mădălina Galațchi, Valodia Maximov, Gheorghe Radu, Aurelia Țoțoiu, George Țiganov, Sorin-Cristian Danilov, Dragomir Coprean

PO30: Characterization of populations of the main demersal commercial fish species in the Romanian Black Sea area - Aurelia Țoțoiu, Mădălina Galațchi, Gheorghe Radu

PO31: Particularities of the traceability systems in the fishery industry, Liliana Mihaela Moga, Magda Ioana Nenciu, Carmen Georgeta Nicolae

PO32: The characteristic ichthyofauna of the Romanian marine sites within the Natura 2000 European ecological network - Valodia Maximov, Tania Zaharia, Magda Nenciu

PO33: Correlation of ceatacean stranding events between 2010-2014 at the Romanian coast - Romulus Marian Paiu, Mihaela Elena Mirea Căndea

PO34: Assessment of dolphin population abundance at the Romanian Black Sea coast in 2013 - George Țiganov, Adrian Filimon, Magda - Ioana Nenciu, Eugen Anton

PO35: New equipment and technologies used for fishing the Rapa whelk at the Romanian Black Sea coast - George Țiganov, Cristian Sorin Danilov, Eugen Anton, Lucian Oprea

PO36: Perspectives on development of environmental management accounting in Romanian aquaculture sector - Iuliana Oana Mihai, Radu Riana, Silvius Stanciu

PO37: Economic analysis of aquaculture sector in Galati county of Romania - Iuliana Oana Mihai, Riana Radu, Silvius Stanciu, Lucean Mihalcea

PO38: Reed typology and management implications in the Danube Delta Biosphere Reserve coastal area - Silviu Covaliov, Mihai Doroftei, Marian Mierlă, Cristian Trifanov

PO39: Investigation and application studies of the Ecosystemic Approach to Fishery in the Ionian Sea (Greece) and the Black Sea (Romania): Recommendations regarding the future management of fishing resources at national/regional level - Kostas Kapiris, Tania Zaharia, Andreas Palialexis, Gheorghe Radu, Alexis Conides, Eugen Anton, George Christidis, Valodia Maximov, Victor Niță, Simion Nicolaev

PO40: Evolution of the turbot fishery at the Romanian Black Sea coast during 2000 - 2014 - Valodia Maximov, Eugen Anton, George Țiganov, Cristian Sorin Danilov, Mădălina Galațchi

PO41: Complementary activities for Romanian fisheries. Case study: Lower Prut area - Silvius Stanciu, Florina Oana Vîrlănuță, Oana Iuliana Mihai, Riana Radu, Ludmila Daniela Manea

PO42: Comparative aluminium content in mineral waters and implications on human health - Ticuța Negreanu-Pîrjol, Bogdan-Ștefan Negreanu-Pîrjol, Ertuğ Düzgüneş, Carmen Elena Lupu

SESSION IV: Environmental Education and Awareness

Chairman: MARIUS LUNGU

PO43: Education for sustainable development in the Black Sea Romanian coastal area - Anca Maria Gheorghe, Mihaela Elena Mirea Cîndea, Angelica Ionela Paiu, Romulus Marian Paiu

PO44: An integrated approach for improving the integrated coastal zone management in the Black Sea region - Mariana Golumbeanu, Simion Nicolaev, Tania Zaharia, Magda Nenciu, Alina-Daiana Spînu, Andra Oros, Luminița Lazăr, Valentina Coatu, Daniela Țigănuș, Victor Niță, Răzvan Mateescu, Laura Alexandrov, Valeria Abaza, Gulfem Bakan, Oleg Dyakov, Mariana Ivanova, Galina Atanasova Stoyanova, Vasile Stegărescu

PO45: Climatic potential for tourism of the Romanian Black Sea littoral expressed by tourism climatic index, balneary climatic index and marine climatic index - M.-L. Lungu, D.C. Ilieș, I. Josan, M. Ungureanu, Z. Prefac, C. Morar, O. Gaceu, R. Mateescu

PO46: The economic pressure exerted on forest ecosystems from Tulcea County, Romania - Radu-Daniel Pintilii, Cristian-Constantin Draghici, Daniel Peptenatu, Ion Andronache, Anamaria Ciobotaru, Camelia Teodorescu, Daniel Diaconu

PO47: Community awareness and participation in mapping the areas with Common Sea Buckthorn (*Hippophae rhamnoides*) & Sand Morning Glory (*Convolvulus persicus*) along the Black Sea coast - Sfântu Gheorghe Case study, Eugenia Marin, Ion Navodaru, Mihai Doroftei

PO48: Farmers awareness on judicious use of pesticides as a first step in prevention of water pollution in the Black Sea basin - Liliana Panaitescu, Simona-Mariana Pricop, Irina Moise, Daniela Jitariu