

EUROqCHARM Capacity building workshop

Constanța, Romania, 11-15 July 2023



Elena Stoica



Marinella Farré

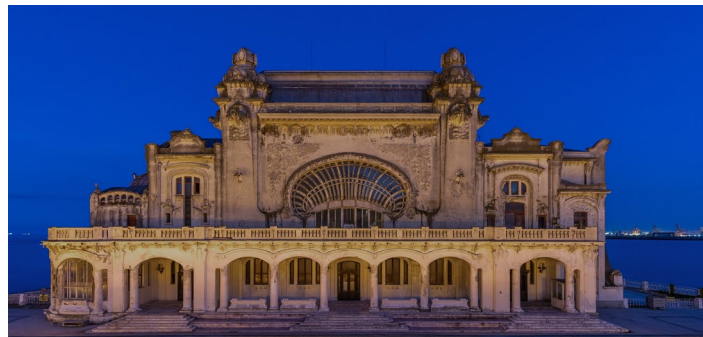
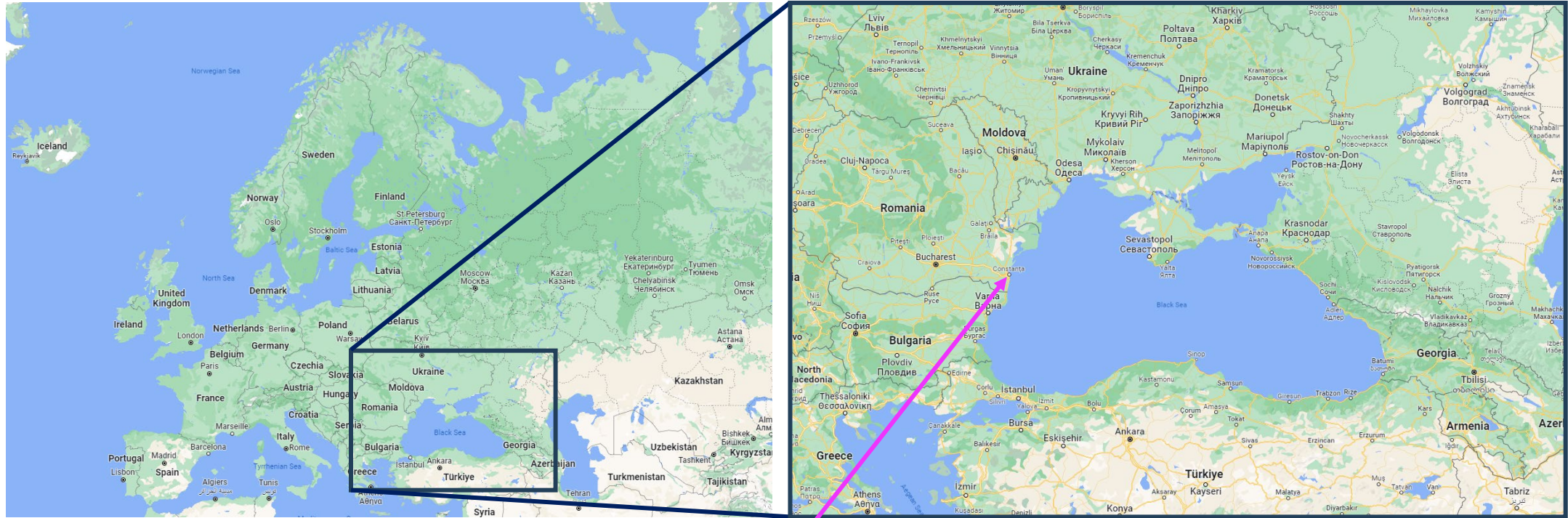


Vladimir Nikiforov



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Constanța

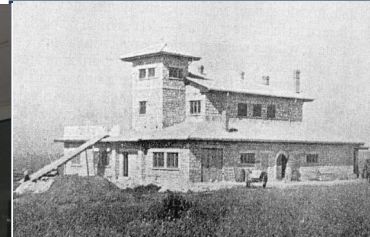
264 thousand people, 4th largest
Principal port on the Black sea
Founded ca 600 BC
Exile place of Ovid, 43 BC – 17 AD



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Maps, fotos and facts – from Wikipedia

EUROqCHARM Capacity building workshop National Institute for Marine Research and Development “Grigore Antipa”



Prof. Grigore Antipa, 1867 – 1944
Romanian naturalist and Darwinist
biologist, director of National museum of
natural history, founder of the institute

The main responsibilities of NIMRD at national and international levels:

- presidency and secretariat of the Romanian National Oceanography Committee/RNC-UNESCO;
- the Permanent Technical Secretariat of the National Coastal Zone Committee;
- coordinator and secretary of the International Secretariat for the South-Eastern Europe of the Balkan Environmental Association;
- coordinator and secretary of the Regional Activity Center for Environmental Aspects Fisheries and Other Marine Living Resources Management, as well as five other national focal points (the Black Sea Commission);
- scientific representation of Romania in international bodies (UNESCO/COI, CIESM, FAO, CGPM, CECAF, ICES, NATO, GEF/ Black Sea, ACCOBAMS).



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Main facts

- 5 days workshop: lectures, lab work, field trips, interactive sessions
- over 20 on-site and ca 10 online participants
- Bulgaria, Moldova, Romania, Turkey, Ukraine
- Germany, Italy, Netherlands, Norway, Romania, Spain, Turkey
- universities, research institutes, NGOs, control bodies, governments, business
- hybrid format worked well
- participants: workshop was a success; **increase the knowledge together with prevention are key**



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Morning program

AGENDA

Sunday, July 9, 2023	Monday, July 10, 2023	Tuesday, July 11, 2023	Wednesday, July 12, 2023	Thursday, July 13, 2023	Friday, July 14, 2023
Arrival of participants	All day lectures <i>Local Time (Bucharest time, EEST)</i>	Field trip for collecting samples <i>Local Time (Bucharest time, EEST)</i>	Lectures & laboratory training <i>Local Time (Bucharest time, EEST)</i>	Lectures & laboratory training <i>Local Time (Bucharest time, EEST)</i>	Morning session lecture & Closing ceremony <i>Local Time (Bucharest time, EEST)</i>
	08:45-09:30 Registration of participants	08:00-09:30 Field trip departure from the NIMRD location (mini bus provided by organizer)	08:45-09:30 Keynote: Vladimir Nikiforov (NILU, Norway)	08:45-09:30 Keynote: Marinella Farré Urgell (CSIC-IDAEA, Spain)	08:45-09:30 Keynote: Elena Stoica (NIMRD, Romania)
	09:30-10:00 Opening of the Workshop & welcoming words (Elena Stoica/NIMRD representative)	09:30-10:30 Field trip for collecting samples: sampling procedures on macroplastics from beach sediment	09:30-10:30 "Quantitative analytical techniques for polymers and plastic additives: liquid chromatography coupled to high-resolution mass spectrometry and gas chromatography pyrolysis high-resolution mass spectrometry", <i>in-person lecture</i> , Marinella Farré Urgell (CSIC-IDAEA, Spain)	09:30-10:00 "General QA/QC in micro plastic analyses", <i>pre-recorded lecture</i> , Ike van der Veen (VUA, The Netherlands)	09:30-10:00 "EU marine litter (and Plastic) data management and ambitions to link to a Global harmonized data management: an overview of the EMODNET Chemistry experience", <i>online lecture</i> , Matteo Vinci & Maria Eugenia Molina Jack (OGD, Italy)
	10:00-10:30 Introduction on behalf of the EUROqCHARM project (Bert Van Bavel, Project Coordinator)	10:30-11:30 Field trip for collecting samples: sampling procedures on microplastics from beach sediment	10:30-11:30 Hands-On Lab: Laboratory analysis of MPS from beach sediments, (Elena Stoica & Andreea Ciuca, NIMRD, Romania)	10:00-11:30 Hands-On Lab: Laboratory analysis of MPS chemical composition (Vladimir Nikiforov, NILU, Norway & Marinella Farré Urgell, CSIC-IDAEA, Spain)	10:00-11:30 Questions, discussions



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Afternoon program

Always room for improvement:

Better internet

Location closer to airport

More online material

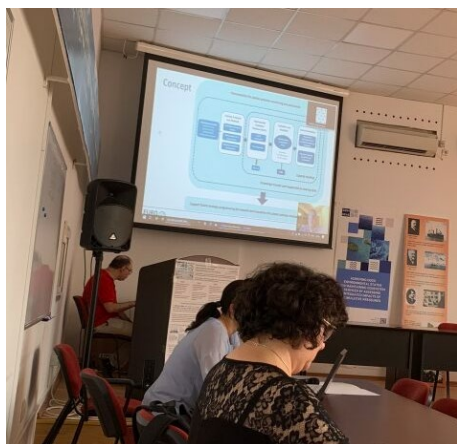
	10:30-11:00 Coffee break		11:30-12:30 Coffee break	11:30-12:30 Coffee break	11:30-12:30 Coffee break
Arrival	11:00-12:00 Introduction the participants (Presentation of the experiences, doubts and challenges of each participant)	11:30-12:30 Field trip for collecting samples: sampling procedures on microplastics from seawater	12:00-13:00 Hands-On Lab: Online demonstrative laboratory training on seabirds ingested plastics (Jan A. van Franeker & Susanne Kühn, Wageningen Marine Research, The Netherlands)	12:00-13:00 Hands-On Lab: Laboratory analysis of MPS from air (Vladimir Nikiforov, NILU)	Conclusions; closing the event
	12:00-13:30 Lunch	12:30-13:30 Drink & Lunch box	13:00-14:30 Lunch	13:00-14:30 Lunch	Departure
	13:30-14:30 "Monitoring methods for plastic pollution in the marine environment", <i>online lecture</i> , Giuseppe Suaria (CNR-ISMAR, Italy)	13:30-15:00 Field trip for collecting samples: sampling procedures on atmospheric microplastics	14:30-16:00 Hands-On Lab: Laboratory analysis of MPS from seawater (Vladimir Nikiforov, NILU, Norway, Elena Stoica, NIMRD, Romania)	14:30-16:00 Hands-On Lab: Laboratory analysis of MPS from air (Vladimir Nikiforov, NILU) - <i>continuation</i>	
	14:30-15:30 "Plastic in air: how do we measure and what do we know?", <i>in-person lecture</i> Vladimir Nikiforov (NILU, Norway)				
	15:30-16:00 Coffee break		16:00-16:30 Coffee break	16:00-16:30 Coffee break	
	16:00-17:00 "Assessment of micro(plastics) from marine sediments by μ FTIR measurements", <i>online lecture</i> , Sebastian Primpke, (AWI, Germany)	15:00-16:00 Field trip for collecting samples: sampling procedures on microplastics from biota	16:30-17:30 Hands-On Lab: Laboratory analysis of MPS from seawater (Vladimir Nikiforov, NILU, Norway, Elena Stoica, NIMRD, Romania) - <i>continuation</i>	16:30-17:30 Hands-On Lab: Laboratory analysis of ingested MPS by marine biota (fish), Madalina Galatchi (NIMRD, Romania)	
Welcome drink & Dinner	17:00-18:00 "Monitoring of plastic and microplastics in biota" <i>online lecture</i> , Ulgen Aytan (RTEU, Turkey) (<i>tbc</i>)	16:00-17:30 Arrival to the NIMRD location (mini bus provided by organizer)			
	19:00 Dinner	19:00 Dinner	19:00 Dinner	19:00 Dinner	

The only schedule failure: Discussion continued...



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Bert van Bavel, opening



Agilent FTIR training



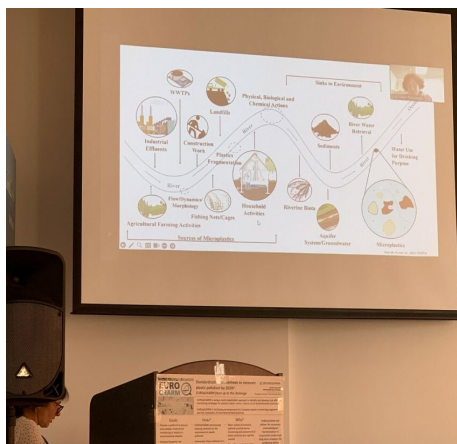
All-metal air sampler, NILU



Beach: Micro-NIR works!



Btw, how much is the fish?



Ülkü Nihan Tavşanoğlu



Micro-NIR practicum



Sample sand properly!



Elena Stoica, briefing



On air: radio Constanța



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fotos: E. Stoica, S. Mihova, V. Nikiforov

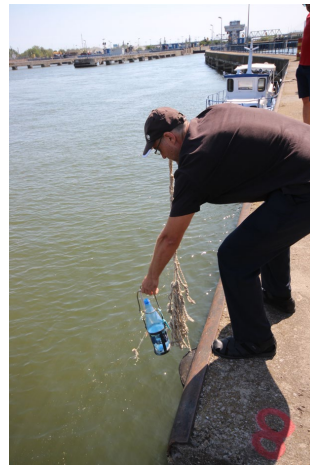


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Visiting Danube - Black Sea Canal Authority



No plastic found
in this case!



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Conclusions/perceptions by the participants

- Monitoring is important, but it is prevention that can make a difference and education is a key to success.
- More emphasis on research and monitoring in biota, as it is what can be affected.
- Therefore, there is a need for nanoplastics assessment using methods as Py-GC-HRMS or LC-HRMS because small particles can produce higher impacts on biota
- Social networking should go along with education; innovative monitoring technology shall be used, e.g., those able to assess nanoplastics, drones for micro-mesoplastics, AI ...
- Adults are the toughest group for education, especially those who have not heard yet of the problem in their education period.
- Interaction face-to-face is still the most important and that is why the workshop was a success.



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Conclusions/perceptions by the participants

The future is :

- in bioplastics in terms of reduce the carbon footprint during production, however the degradation of these new materials still too long and their potential impacts are unknown
- Increase and improve waste management and recycling processes
- Each participant shall share what they learned with their colleagues and contacts.
- Workshops like this, with involvement of scientists, water-treatment practitioners, NGOs, students, regulators, controllers allow thinking out of the box and direct implementation of scientific advances in a common workplace.



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