From small scales to large scales – The Gulf of Finland Science Days 2017

9th - 10th October, 2017

Estonian Academy of Sciences, Kohtu 6, Tallinn, ESTONIA

Day 1: Monday, 9th October

9:30-10:00  Coffee and registration

Welcome speeches
10:00-10:10  Tarmo Soomere, President, Estonian Academy of Sciences
10:10-10:20  Marko Pomerants, Chair of the Constitutional Committee of Estonian parliament

Plenary: Chair Tarmo Soomere
10:20-10:30  Kai Myrberg: Notes from the Trilateral Collaboration
10:30-11:00  KEYNOTE Efim Pelinovsky: Modelling of the Internal Waves in the Baltic Sea
11:00-11:20  Laura Tuomi: Progress in the modelling of surface waves in the Gulf of Finland and the Baltic Sea
11:20-11:40  Vivi Fleming-Lehtinen: Assessing the sea together - HELCOM HOLAS II eutrophication assessment

11:40-12:40  Lunch break

Plenary: Chair Kai Myrberg
12:40-13:00  Georg Martin: Estonian Marine Institute, University of Tartu: Challenges of mapping and assessment of status of benthic habitats
13:00-13:20  Urmas Lips: Marine Systems Institute, Tallinn University of Technology: Monitoring of eutrophication: observations and recommendations emerging from the GOF assessment work and the most recent data
13:50-14:05  Mihhail Fetissov: Ecosystem-based Maritime Spatial Planning – impact on navigational safety from offshore renewable energy developments
14:05-14:20  Anneliis Peterson: Environmental vulnerability profile and HELCOM Baltic Sea Pressure Index as tools in site selection of offshore wind farms

14:20-15:00  Coffee break

Afternoon parallel session

Session A, Chair Efim Pelinovsky
15:00-15:15  Robert Aps: Systems approach based maritime traffic safety management in the Gulf of Finland (Baltic Sea)
15:15-15:30  Jani Häkkinen: Developing the guidelines for the ecological post-spill monitoring of the accidental chemical spills
15:30-15:45  Juho Lappalainen: The intensity of leisure boating and services for sailors – does the supply meet the demand?
15:45-16:00  Dmitriy Burkov: The state and environmental consequences of pollution air pool of the Gulf of Finland transport emissions
16:00-16:15  Andrey Tronin: Nitrogen dioxide over the Gulf of Finland
16:15-16:30  Natalia Lemesheko: Greenhouse Gas Inventory as the first stage of reducing energy consumption in the Leningrad region

16:30-16:45  Day 1 - discussion
16:45-17:45  Poster session

19:30-  Reception in the Embassy of Finland in Tallinn, Kohtu 4
Day 2: Tuesday, 10th October

Morning parallel session
Session A, Chair Daria Ryabchuk

9:00-9:15  Veronica Tarbaeva: HELCOM hot spots. Current status and plans for elimination. Russian overview from the catchment area of the Gulf of Finland

9:15-9:30  Yulia Polyak: Toxic cyanobacteria of the Eastern GoF: their ecology, toxicological effects, and control

9:30-9:45  Sergei Golubkov: Contribution of the carbon from green tides in the coastal food webs in the eastern Gulf of Finland: stable-isotope estimate using Bayesian mixing model

9:45-10:00 Yulia Gubelit: Green tides in the eastern Gulf of Finland: factors affecting the biomass accumulation and its consequences for the coastal zone

10:00-10:15 Mikhail Golubkov: Influence of weather conditions on midsummer primary production and mineralization of organic matter in the Neva Estuary (eastern Gulf of Finland, Baltic Sea)

10:15-10:30 Ekaterina Voyakina: Phytoplankton structure in eastern part of the Gulf of Finland

10:30-11:00 Coffee Break

Plenary: Chair Robert Aps

11:00-11:30  KEYNOTE Jan Harff: What determines the dynamics of Baltic Sea coasts?
11:30-11:45  Kristijan Herkül: Spatial overlap of nature values, protected areas, and human uses in the Baltic Sea
11:45-12:00  Petri Ekholm: Reducing agricultural phosphorus load by gypsum: results from the first year after amendment
12:00-12:15  Jouni Lehtoranta: Iron–manganese concretions contribute to benthic release of phosphorus and arsenic in anoxic conditions in the Gulf of Finland
12:15-12:30  Darya Ryabchuk: Sedimentary processes and pollution history of Neva Bay bottom sediments (eastern Gulf of Finland, Baltic Sea)

12:30-13:30 Lunch break

Plenary: Chair Jan Harff

13:30-13:45  Tatyana Kuznetsova: Development of a new approach in the assessment of biological effects of pollution in the Gulf of Finland
13:45-14:00  Elena Mikhailova: Implication of genetic approaches for biosystem state and dynamics survey of the Gulf of Finland
14:00-14:15  Alexandr Rybakko: Facies features (geodiversity) of sedimentation in the Eastern Gulf of Finland and their use for proper assessment of the results of geochemical monitoring of hazardous substances
14:15-14:30  Evgenii Daev: Preliminary assessment of water and sediment pollutions in littoral zone of the Kotlin Island
14:30-14:45  Grigory Frumin: Dynamics of water quality of the transboundary River Narva
14:45-15:00  Jaakko Mannio: Towards harmonisation of monitoring hazardous substances
15:00-15:15  Henry Vallius: Sediment quality in Estonian western Gulf of Finland

15:15-15:25  Day 2 - discussion, concluding remarks

15:30  Closing the Science Days

Session B, Chair: Laura Tuomi

9:00-9:15  Olga Vähä-Piikkiö: Modelling Surface Stokes drift in the Baltic Sea
9:15-9:30  Jan-Victor Björkquist: A spatially extensive validation of three different wave models in the Helsinki coastal archipelago
9:30-9:45  Andrea Giudici: Patchiness of the sea surface under the combined effects of winds and currents
9:45-10:00 Nadia Kudryavtseva: Non-Stationary Extreme Value Modeling of Trends in Extreme Water Levels in the Gulf of Finland
10:00-10:15 Vladimir Ryabchenko: Coastal erosion caused by storm surges and protection measures for the Kotlin Island’s coastline in the Gulf of Finland: data analyses and modeling
10.15-10.30 Germo Väli: Eulerian and Lagrangian sub-mesoscale coherent structures on the sea surface driven by coastal upwelling: a case study for the Gulf of Finland
<table>
<thead>
<tr>
<th>Posters:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Balushkina*, S. Golubkov</td>
<td>Water quality and biodiversity of benthic animals in the Neva Estuary under anthropogenic stress</td>
</tr>
<tr>
<td>L. Barabanova*, E. Mikhailova, S. Galkina</td>
<td>Cytogenetic characteristics of amphipoda Gmelinoides fasciatus - biodiversity component of the Gulf of Finland.</td>
</tr>
<tr>
<td>J. Bublichenko*, M. Verevkin</td>
<td>Aerial survey of waterfowl spring stopovers in the Russian part of the Gulf of Finland</td>
</tr>
<tr>
<td>A. Lappo, L. Danilova*, E. Milenina</td>
<td>MSP Law in the Russian Federation: a place in the system of strategic planning documents. Suggestions</td>
</tr>
<tr>
<td>A. Demchuk*, A. Uspenskiy, S. Golubkov</td>
<td>Feeding patterns of the abundant coastal fish species in the Eastern Gulf of Finland</td>
</tr>
<tr>
<td>T. Eremina*, E. Lange, A. Ershova</td>
<td>Influence of temperature and salinity variability on late-summer phytoplankton structure in the eastern Gulf of Finland</td>
</tr>
<tr>
<td>E. Glazkova*</td>
<td>Melica Picta in the Baltic region: distribution and habitats</td>
</tr>
<tr>
<td>A. Jolma*</td>
<td>SmartSea toolbox for Maritime Spatial Planning</td>
</tr>
<tr>
<td>N. Kamardin*</td>
<td>Using of the microcosm method to determine the pollution of the shores of the eastern part of the Gulf of Finland.</td>
</tr>
<tr>
<td>O. Liashenko*, E. Svetashova, S. Ekimova, A. Ponomarenko</td>
<td>Toxicological investigation of the bottom sediments of the Gulf of Finland</td>
</tr>
<tr>
<td>N. Litina*, E. Zakharchuk, N. Tikhonova</td>
<td>The relative contributions of advection, turbulent diffusion, and the components of the freshwater balance in the salinity changes of the Gulf of Finland</td>
</tr>
<tr>
<td>N. Odegov*, E. Kuprina, A. Jakola, A. Naumova</td>
<td>Dynamics of bacterioplankton development of the Neva bay Gulf of Finland</td>
</tr>
<tr>
<td>E. Pankova*, A. Brodsky, D. Safronova</td>
<td>Littoral communities monitoring in the Neva river estuary: case study of Zelenogorsk and Olgino</td>
</tr>
<tr>
<td>M. Polyak*</td>
<td>Web-based geographic information system for analyzing and visualising biological monitoring data from the Neva Bay and the Eastern part of the Gulf of Finland</td>
</tr>
<tr>
<td>V. Sukhachev*, E. Zakharchuk, U. Lips, N. Tikhonova, I. Suhhova</td>
<td>Currents of the Gulf of Finland: instrumental measurements and numerical hydrodynamic modeling</td>
</tr>
<tr>
<td>A. Uspenskiy*</td>
<td>Distribution of invasive gobies in the Eastern Gulf Of Finland</td>
</tr>
</tbody>
</table>