

The Gulf of Finland Science Days

“Facing Our Common Future”

The House of Estates, Snellmaninkatu 9-11, Helsinki, 13th -14th November, 2019



Programme

Day 1: Wednesday 13th November

9.30–10.00 Coffee and registration

Opening Session, Chair Kirsi Kostamo

10.00–10.50 Welcome and Opening speeches

President Tarja Halonen

Permanent Secretary Hannele Pokka, Ministry of the Environment of Finland

Deputy Mayor for Social Services and Health, Sanna Vesikansa, City of Helsinki

Plenary Session, Chair Kirsi Kostamo

10.50–11.10 Kirsti Jylhä: Changing climate of the Gulf of Finland region, Finnish Meteorological Institute

11.10–11.30 Jonne Kotta: Climate change, human impacts and marine ecosystems, Estonian Marine Institute

11.30–12.00 Coffee

Plenary Session continues, Chair Kirsi Kostamo

12.00–12.20 Alf Norkko: Our changing Baltic Sea – climate and biodiversity change as drivers of ecosystem processes, University of Helsinki

12.20–12.40 Daria Ryabchuk: Geological records of the past - clue to understanding of the Gulf of Finland environment and climate change, VSEGEI

12.40–13.00 Laura Tuomi: Changes in the sea level and wave conditions in the Gulf of Finland, Finnish Meteorological Institute

13.00–14.30 Lunch: 13.15 Group A, 13.40 Group B

Session 1, Chair Laura Tuomi Multidisciplinary studies which describe in an integrated way present state & future of the Gulf of Finland

14.30–14.45 Mariliis Kõuts: Modeling eutrophication in the Gulf of Finland – oxygen and nutrient dynamics

14.45–15.00 Jaakko Mannio: Sediment stratigraphy can reveal that regulation of hazardous substances is working

15.00–15.15 Alexandra Ershova: Beached marine litter in the Russian part of the Gulf of Finland: monitoring methods and accumulation trends

15.15–15.30 Andrei Lappo and Larisa Danilova: Towards the formation of a Russian national position on the development of the Blue economy in view of the Blue Growth initiative for the Baltic Sea and Black Sea regions

Session 3, Chair Laura Tuomi Young scientists, **Room 15**

Round table: Marine Spatial Planning, Room 13

- 15.30–15.45 Susanna Jernberg: Important habitats for ecosystem services production in the Northern Baltic Sea
- 15.45–16.00 Natalia Sukhikh: Coexistence of native *Eurytemora affinis* and invasive American *E. carolleae* in the GoF
- 16.00–16.15 Hedi Kanarik: Effect of surface currents on modelled wave fields in the Gulf of Finland
- 16.15–16.30 Liangliang Lu: Oil spill risk management in ice infested Northern Baltic Sea

MSP Round table discussion

New Interreg Baltic Platform Flagship Project "Capacity4MSP - Strengthening the capacity of MSP stakeholders and decision makers" with its goals to develop the BSR MSP Cooperation Platform and the Russian MSP Road Map for the Baltic Sea, as well as the Estonian MSP and Finish future scenarios for the development of the use of the sea areas.

16.30–17.30 *Poster Session (oral presentation max 1 min per poster)*

18.00–20.00 *Evening reception, Old Court House, Aleksanterinkatu 20, Empire Room*

Day 2: Thursday 14th November

Parallel sessions

	Room 15 <i>Session 2, Chair Daria Ryabchuk</i> Reports on ongoing, joint projects on the Gulf of Finland	Room 13 <i>Session 1, Chair Alexandra Ershova</i> Multidisciplinary studies which describe in an integrated way present state & future of the Gulf of Finland	Room 17 <i>Session 2, Chair Meri Kallasvuo</i> Reports on ongoing, joint projects on the Gulf of Finland
9.30–9.45	<u>Alina Nazarova</u> : The project GET READY for the Cross-Border Challenges: Capacity Building in Sustainable Shore Use	<u>Natalia Lemeshko</u> : Issues of identifying climatic factors in zooplankton dynamics in the eastern part of the GoF	<u>Tatiana Zagrebina</u> : Water meets people: learn, act, influence - SEVIRA' – the implementation of the international cooperation
9.45–10.00	<u>Anatoly Burkov, Tatiana Pantina</u> : Maritime and Inland Shipping: Gulf Connecting Inland Waterways	<u>Nikolai Kovalchuk</u> : <i>Fucus</i> belt and "brown" algal mats in coastal waters of the PAs Kurgalsky Berezovye Islands and East GoF (Ingermanlandsky)- current situation and possible perspectives	<u>Mart Jüssi</u> : Findings from the ongoing study of 'ringed seals' habitat use in the GoF
10.00–10.15	<u>Ivan Kuprijanov</u> : Assessment of Hazardous substances in the eastern GoF: interregional monitoring and comprehensive approaches in the course of HAZLESS project	<u>Ekaterina Chebykina</u> : Different aged macrophyte thickets of anthropogenic origin: role in the ecosystem of the Eastern GoF	<u>Robert Aps</u> : ADRIENNE: Increasing capacity of environmental protection to maintain biodiversity and ecosystem performance under multiple human uses as well as climate change
10.15–10.30	<u>Pentti Kujala</u> : Future potential of inland waterways	<u>Dmitry Lajus</u> : Threespine stickleback: a successful species in the Anthropocene?	<u>Yulia Polyak</u> : New microbiological indicators for the heath assessment of the eastern GoF
10.30–10.45	<u>Anne-Mari Luhtanen</u> : Blue Platform project: gathering blue bioeconomy actors and information together	<u>Oksana Liashenko</u> : A retrospective analysis of the biota status of the Luga Bay of the GoF over a 25-year period	<u>Anneliis Peterson</u> : GRASS: unlock the potential of macroalgae as a sustainable biomass in the Baltic Sea Region
10.45–11.00	Session 3 Young scientists <u>Mihhail Zujev</u> : Examples of reconstruction of fine-grid SST and SSS patterns using less than 0.5% of grid coverage by observation	<u>Urmas Raudsepp</u> : Long-term mean, interannual and seasonal circulation in the GoF — the wide salt wedge estuary or gulf type ROFI	<u>Mehis Rohtla</u> : Fish migration and provenance studies in the GoF using otolith microchemistry

Day 2: Thursday 14th November

Parallel sessions continue

	Room 15 <i>Session 3, Chair Susanna Jernberg</i> Young scientists	Room 13 <i>Session 1, Chair Mariliis Kõuts</i> Multidisciplinary studies which describe in an integrated way present state & future of the Gulf of Finland	Room 17 <i>Session 2, Chair Anna Kiiski</i> Reports on ongoing, joint projects on the Gulf of Finland
11.30–11.45	<u>Daria Navolotskaya</u> : OneDrop – A Novel Mobile Water Purification Plant: Possibilities for the GoF Water Treatment	<u>Jenni Attila</u> : Earth observations in monitoring and status assessment	<u>Elli Leinikki</u> : The ecological role of FeMn concretions in the GoF
11.45–12.00	<u>Roman Nekrasov</u> : Efficacy estimation of electron irradiation and sodium ferrate usage for purification of water samples contaminated with diclofenac	<u>Grigory Frumin</u> : Dynamics pollution by metals of the Neva Bay	<u>Vladimir Karentinkov</u> : Inland waterways fairway technologies
12.00–12.15	<u>Pinja Näkki</u> : The effects of tire rubber powder and its leachates on the Baltic clam (<i>Limecola balthica</i>)	<u>Vladimir Ryabchenko</u> : On the distribution of microplastics in the Neva Bay and the eastern part of the GoF	<u>Ketki Kulkarni</u> : Maritime Risk Assessment through collaborative projects in Finland
12.15–12.30	<u>Mark Polyak</u> : Controllable predator-prey model with nutrients	<u>Mikhail Golubkov</u> : Eutrophication indicators in the Neva Estuary in 2003–2019: response to temperature and precipitation patterns	<u>Riikka Tevalj</u> : Maritime Cultural Heritage in the GoF – The BalticRIM-project
12.30–12.45	<u>Olga Vähä-Piikkiö</u> : Modelling the drift of objects in the GoF	<u>Aleksandr Rybalko</u> : Organization and results of the geological environment monitoring in the GoF and prospects for its development	<u>Robert Aps</u> : Maritime Cultural Heritage impact assessment strategy for MSP
12.45–13.00	<u>Oksana Vladimirova</u> : Uncertainties of modelling the dissolved organic matter and its components in the GoF		

13.00–14.30 **Lunch**: Restaurant Factory, Aleksanterinkatu 13, 5th floor: 13.05 Group A, 13.30 Group B

Afternoon Concluding Session, Paula Kankaanpää

14.30–14.50 Tarmo Soomere: Emerging research challenges in the dynamics of the Gulf of Finland, Estonian Academy of Sciences

14.50–15.05 Laura Höijer: Protecting the Baltic Sea - the knowledge needs of the NGOs, Baltic Sea Action Group

15.05–15.20 Annamari Arrakoski-Engardt: New opportunities to showcase & celebrate Baltic Sea research, John Nurminen Foundation

15.20–15.30 Kai Myrberg, concluding remarks, Finnish Environment Institute

Posters

Andreeva I.V., Voyakina E.Yu.	Dynamics of phytoplankton structure and chlorophyll <i>a</i> in eastern part of Gulf of Finland.
Nadezhda Berezina , Alexey Maximov, Yulia Gubelit, Andrey Sharov, Yulia Polyak, Anna Demchuk , Oksana Vladimirova, Nikolay Kamardin, Tatyana Shigaeva, Valeria Kvitkovskaya, Alexey Isaev, Tatyana Kuznetsova, Sergey Kholodkevich	Monitoring of hazardous substances and biotic responses in the eastern Gulf of Finland: first results of field survey of 2019
Zoya Zhakovskaya, Larisa Metelkova, Anastasia Egorova, Galina Kukhareva	Non-targeted and targeted analysis of emerging pollutants in the bottom sediments of the Eastern Part of the Gulf of Finland
Andrey N. Sharov, Nadezhda A. Berezina, Alexey A. Maximov	Bioassay using amphipod and bivalve mollusk endpoints as a good tool for active monitoring of bottom sediments in the Gulf of Finland
Ekaterina Chernova, Iana Russkikh, Zoya Zhakovskaya	Occurrence of some pharmaceuticals in the waters of the Gulf of Finland, the Baltic Sea
Yulia Gubelit, Yulia Polyak, Tatyana Shigaeva, Ludmila Bakina, Valentina Kudryavtseva	Can the “green tides” affect the metal distribution in the coastal sediments? A case study in the eastern Gulf of Finland, Baltic Sea
N.N.Kamardin	Study of the coastal territories of the Neva Bay with the land mollusk <i>Arianta arbustorum</i>
Oksana Liashenko, Andrey Pedchenko	The phytoplankton of Luga Bay of the Gulf Finland under the dredging and climate changes
Litina Ekaterina, Zakharchuk Evgenij	The influence of dynamic processes on the change in the oxygen regime in the Baltic Proper and in the Gulf of Finland
Medvedeva N., Kuzikova I., Zaytseva T., Zinovieva S., Russu A.	Degradation of NPs in microcosm using Gulf of Finland sediments
Natalia Alekseeva, Tatiana Shigaeva, Yulia Polyak, Anna Demchuk, Yulia Gubelit, Valentina Kudryavtseva	Heavy metal content in the bottom sediments and benthic animals in the coastal zone of the eastern Gulf of Finland
Sami A. Jokinen', Joonas J. Virtasalo, Tom Jilbert, Jérôme Kaiser, Olaf Dellwig, Helge W. Arz, Jari Hänninen, Laura Arppe, Miia Collander, Timo Saarinen	Unprecedented deoxygenation of the coastal Archipelago Sea over the 20 th century inferred from a 1500-year sediment record
S.V. Kholodkevich, A.N. Sharov, T.V.Kuznetsova	Assessment of ecological state (health) of aquatic ecosystems on the base of cardiac activity monitoring in indigenous Bivalves
Andrei Lappo, Larisa Danilova	The Marine Cultural Heritage of the eastern Gulf of Finland in maritime spatial plans
S.V.Sladkova, N.N. Kamardin, A.N.Sharov	The effect of Cd on the respiratory activity of <i>Limecola balthica</i> (Linnaeus, 1758) of the Koporye Bay of the Gulf of Finland
Aladin N.V., Gontar V.I., Plotnikov I.S., Smurov A.O., Zhakova L.V.	Delta-horohalinity in the Baltic Sea
Tatiana V. Kuznetsova, Sergey V. Kholodkevich, E.V.Matveeva	Preliminary study on adaptive potential of indigenous bivalves from transborder Narva River: searching reference site and reference values
Joonas Virtasalo , Harri Kankaanpää , Okko Outinen , Satu Huurtomaa , Hedi Kanarik , Laura Tuomi , Jouko Nuorteva	Highly dynamic hydrographic conditions at a submarine channel in the western Gulf of Finland
Bublichenko J.N. , Bublichenko A.G.	Birds and mammals as an alien species in the Gulf of Finland: problems and outlooks
Elena Glazkova	<i>Alisma wahlenbergii</i> in the Gulf of Finland: distribution and status
Dmitrij V. Nikushchenko	Simulators for Improving Cross-Border Oil Spill Response in Extreme Conditions
Antti Westerlund	Circulation patterns in the Gulf of Finland from daily to seasonal timescales
Smirnova K.A., Demchuk A.S.', Kvitkovskaya V.A., Ivanov M.V., Ivanova T.S., Lajus D.L.	Feeding interactions between three-spined stickleback (<i>Gasterosteus aculeatus</i> L.) and nine-spined stickleback (<i>Pungitius pungitius</i> L.) in the eastern part of Gulf of Finland
Fang Li, Pentti Kujala	Numerical simulation of ship operation in ice
Prischepenko D., Sergeev A., Grigoriev A., Ryabchuk D., Zhamoida V., Budanov L., Krek A.	New data about geochemistry and sedimentation processes of the eastern Gulf of Finland during Holocene based on high resolution sediment core study