INTERNATIONAL SCIENTIFIC FORUM
«GULF OF FINLAND – NATURAL DYNAMICS AND ANTHROPOGENIC IMPACT», DEVOTED TO 50TH ANNIVERSARY OF TRILATERAL GULF OF FINLAND CO-OPERATION

PROGRAMME
Russia, St. Petersburg, October 17–18, 2018

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Nord Stream 2 AG

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October 17, Wednesday

09:00–10:00  Registration of Forum participants

10:00–11:30  Plenary session
             Opening of the Forum

Oleg PETROV (VSEGEI Director General)
Greetings from the Ministry of Natural Resources and Environment of the Russian Federation and the Federal Agency for Mineral Resources of the Russian Federation
Kari KULMALA (Head of Parliament Commission on the Baltic Sea)
Greetings from Parliament of Finland
Margus HAUGAS (Consul of Estonia in St. Petersburg)
Greetings from the Ministry of the Environment of Estonia
Igor GRIGORIEV (Head of the Committee for Nature Use, Environmental Protection and Ecological Safety of St. Petersburg)
Greetings on behalf of the City of St. Petersburg
Valeriy MIKCHEEV (Rector of the Russian State Hydrometeorological University)
Greetings from the Russian State Hydrometeorological University
Dr. Dirk von AMELN (Nord Stream 2 AG)
Surveys and initiatives to preserve the environment of the Gulf of Finland

11:30 – 11:45  Coffee break

11:45 – 13:15  Plenary session
               Convener: Daria RYABCHUK (VSEGEI, Russia)

11:45 – 12:00  Kai MYRBERG (SYKE, Finland)
               50 years of the Trilateral Gulf of Finland co-operation. History, results, perspectives

12:00 – 12:15  Greeting the veterans of the Trilateral Gulf of Finland co-operation (Russia, Finland, Estonia)

SESSION: GEO- AND BIODIVERSITY OF THE GULF OF FINLAND

12:15 – 12:30  Kirsi KOSTAMO (SYKE, Finland)
               From ecosystem functions to ecosystem services – a key to sustainable use of marine environment

12:30 – 12:45  Jorma RYTKÖNEN (SYKE)
               Recent development of oil pollution prevention preparedness – does it meet the current safety level?
SESSION: FISH AND FISHERY

12:45–13:00 Alexander ANTSULEVICH (Nord Stream 2 AG)
Compensation measures to the Gulf of Finland fishery undertaken by Nord Stream 2 project in 2018 year

SESSION: MARINE SPATIAL PLANNING AND MANAGEMENT

13:00–13:15 Oleg KORNEEV (Sevmorgeologia), Aleksander RYBALKO (VNIIOkeangeologia), Sergey GOLUBKOV (ZIN RAS), Andrey PEDCHENKO (VNIRO)
Experience of the Marine Spatial Planning tool using for Russian part of the Gulf of Finland

13:15–14:00 Lunch

SESSION: EVOLUTION OF NATURAL ENVIRONMENT OF THE GULF OF FINLAND. CLIMATE CHANGE AND ANTHROPOGENIC PROCESSES

14:00–14:15 Dmitry Gerasimov (MAERAS, Russia), Aivar Kriiska (University of Tartu, Estonia), Kerkko Nordkvist (Oulu University, Finland), Margarita Kholkina (VSEGEI)
Cross-Gulf cooperation in the Stone Age study: new results, continuing projects and research perspectives

14:15–14:30 Daria Ryabchuk, Vladimir Zhamoida, Alexander Sergiev, Olga Kovaleva (VSEGEI, Russia), Igor Leont’ev (IO RAS, Russia), Kaarel Orviku (Tartu University, Estonia)
Geological hazards of the Eastern Gulf of Finland coastal zone

14:30 – 14:45 Ivan Seribrtsky (Committee for Nature Use, Environmental Protection and Ecological Safety)
On the Master Plan of the Coast Protection in St. Petersburg

SESSION: ENVIRONMENTAL MONITORING OF THE GULF OF FINLAND

14:45–15:00 Henry Vallius, Aarno Kotilainen (GTK, Finland), Daria Ryabchuk (VSEGEI) and EMODnet-Geology partners
The EMODnet-Geology project – delivering harmonized geological maps of the European seas

15:00–15:15 Tatiana Eremina, Alexandra Ershova (RSHU), Georg Martin (University of Tartu), Alexey Isaev, Vladimir Ryabchenko, Stanislav Martianov (Institute of Oceanology RAS)
Marine litter study in the estuary of the River Neva: results of monitoring and mathematical modelling
15:15–15:30  Taavi LIBLIK, Michael NAUMANN, Pekka ALENIUS, Martin HANSSON, Urmas LIPS, Günther NAUSCH, Laura TUOMI, Karin WESSLANDER, Jaan LAANEMETS, Lena VIKTORSSON (Tallinn University of Technology, Leibniz Institute for Baltic Sea Research (LG), Finnish Meteorological Institute, Swedish Meteorological and Hydrological Institute)
Impact of the Major Baltic Inflows to the Gulf of Finland

15:30–15:45  Mikhail VEREVKIN (RAS, Russia), Leonid VOYTA (ZIN RAS, Russia), Mart JÜSSI (MTÜ Pro Mare, Estonia), Mervi KUNNASRANTA (Natural Resources Institute Finland)
Aerial survey of ringed seals (Pusa hispida botnica) in the Gulf of Finland in 2018

15:45–16:00  Marina ORLOVA (ZIN RAS, Russia)
Biological invasions in the heated area of the Kopora Bay for the last 5 years: facilitations, limitations and perspectives

16:00–16:15  Coffee break

16:15–17:30 Poster session

17:50  Departure to the General Consulate of Finland in St. Petersburg

19:00 – 21:00 Reception in the General Consulate of Finland in St. Petersburg

October 18, Thursday

9:30 – 11:00  Parallel sessions

SESSION: GEO- AND BIODIVERSITY OF THE GULF OF FINLAND
Room 70, 1st Floor
Convener: Kirsi KOSTAMO (SYKE, Finland)

9:30 – 9:45  Mart JÜSSI, Mikhail VEREVKIN, Martin SILTS (MTÜ Pro Mare, SRCES RAS, University of Tartu)
Advances in ringed seal (Pusa hispida botnica) sea-use studies in the Gulf of Finland

9:45 – 10:00  Yulia POLYAK, Tatyana SHIGAEVA, Yulia GUBELIT, Lyudmila BAKINA, Valentina KUDRYAVTSEVA (SRCES RAS, SPb SU, ZIN RAS)
The major determinants for populations of culturable bacteria in coastal sediments of the Eastern Gulf of Finland, Baltic Sea
10:00 – 10:15 Sergey GOLUBKOV, Mikhail GOLUBKOV, Alexei TIUNOV, Anna DEMCHUK (ZIN RAS)
Anthropogenic carbon as a basal resource in the benthic food webs in the Neva Estuary (Eastern Gulf of Finland)

10:15 – 10:30 Evgenia BALUSHKINA, Sergey GOLUBKOV (ZIN RAS)
Effect of eutrophication, toxic pollution and dredging on biodiversity of benthic animals, and water quality of the Neva Estuary

10:30 – 10:45 Antonio SANTANIELLO (Nord Stream 2 AG)
Large infrastructural projects and biodiversity conservation – the example of the Nord Stream 2 development in the Gulf of Finland

10:45 – 11:00 Mikhail GOLUBKOV, Vera NIKULINA, Sergey GOLUBKOV (ZIN RAS)
Effects of environmental variables on midsummer dinoflagellate community in the Neva Estuary

SESSION: ENVIRONMENTAL MONITORING OF THE GULF OF FINLAND
Big Hall
Convener: Vladimir RYABCHENKO (IO RAS, Russia)

9:30 – 9:45 Grigory FRUMIN (RSHU)
Input of nutrients to the Gulf of Finland from Russian and transboundary rivers

9:45 – 10:00 Victor GORNYY, Andrei KISELEV, Sergei KRITSUK, Iscander LATYPOV, Andrei TRONIN (SRCES RAS)
Satellite mapping of threats of ecological safety in the coastal zone of the Gulf of Finland

10:00 – 10:15 Veronika TARBAEVA, Natalia OBLOMKOVA, Ekaterina VOOBYEVA (RSHU, IEEP – branch of FSAC VIM)
Potential of reducing nutrient load from Russian «hot spots» of HELCOM in the catchment area of the Gulf of Finland

10:15 – 10:30 Oksana VLADIMIROVA, Tatyana EREMINA (RSHU), Alexey ISAEV, Vladimir RYABCHENKO (Institute of Oceanology), Oleg SAVCHUK (St. Petersburg State University, Baltic NEST Institute)
Spatio-temporal variability of dissolved organic nutrients in the Gulf of Finland

10:30 – 10:45 Sergey FEDOROV (FSBI «North-West AHEM»)
The influence of natural factors on the formation of Peipus lake basin surface water composition
SESSION: MARINE SPATIAL PLANNING AND MANAGEMENT
Room 114, 2nd Floor
Convener: Oleg KORNEEV (Sevmorgeologia, Russia)

9:30 – 9:45  Andrei LAPPO, Larisa DANILLOVA (SRI «Ermak NorthWest»)
Active coastal population in the process of maritime spatial planning. MSP Business Game as an effective channel of communication and dissemination

9:45 – 10:00  Maria HÄNNINEN (Kotka Maritime Research Centre)
A review of multidisciplinary research on sustainable maritime traffic in the Gulf of Finland

10:00 – 10:15  Natalia LEMESHKO, Vladislav EVSTIGNEEV (SPb SU)
Extreme air temperature conditions in the Baltic region

10:15 – 10:30  Mark POLYAK (Saint-Petersburg State University of Aerospace Instrumentation)
A GIS system for biological monitoring data from the Neva Bay and the Eastern part of the Gulf of Finland and its possible applications

10:30 – 10:45  Kristiina NUOTTIMÄKI, Jaana JARVA, Philipp SCHMIDT-THOMÉ (GTK)
Geosciences supporting urban flood mitigation

11:00 – 11:15  Coffee break

11:15 – 12:30 Parallel sessions
SESSION: GEO- AND BIODIVERSITY OF THE GULF OF FINLAND
Room 70, 1st Floor
Convener: Sergey GOLUBKOV (ZIN RAS, Russia)

11:15 – 11:30  Anastasiya YURTSEVA, Anton USPENSKYIY, Elena BOROVIKOVA, Dmitriy BOGDANOV (GosNIORKh)
The invasive round goby (Neogobius melanostomus) in the Eastern Gulf of Finland

11:30 – 11:45  Elena MIKHAILLOVA, Larisa BARABANOVA (SPb SU)
The amphipod Gmelinoides fasciatus as an example species used to investigate the Gulf of Finland biological systems by means of molecular genetic methods

11:45 – 12:00  Irina KUZIKOVA, Nadezda MEDVEDEVA, Tatyana ZAYTSEVA (SRCES RAS)
Effects of endocrine-disrupting chemicals on microbiota inhabiting the Gulf of Finland

12:00 – 12:15  Nikolai ALADIN, Igor PLOTNIKOV, Alexey SMUROV, Valentina GONTAR, Lubov ZHAKOVA, Mikhail DIANOV (ZIN RAS), Alexander EGOROV (Institute of Limnology RAS)
Systematization of the biodiversity of the Gulf of Finland in the zone of critical salinity, the study of brackish-water species in order to elucidate the similarities and differences in the evolution of their faunas and their role in brackish-water ecosystems
Andrey PEDCHENKO (VNIRO)
Dynamics of the catch of herring and sprat in the Baltic Sea and Gulf of Finland: assessment of climate impact

SESSION: ENVIRONMENTAL MONITORING OF THE GULF OF FINLAND
Big Hall

Convener: Henry VALLIUS (GTK, Finland)

11:15 – 11:30 Anton EVDOKIMENKO, Andrey GRIGORIEV, Vladimir ZHAMOIDA, Daria RYABCHUK, Alexander KREK, Alexander SERGEEV, Igor NEEVIN (VSEGEI, SPb SU, IO RAS)
Geochemical structure of the Fe-Mn concretions of the Eastern Gulf of Finland: natural processes and anthropogenic impact

11:30 – 11:45 Laura KAIKKONEN, Henrik NYGÅRD, Elina VIRTANEN, Riikka VENESJÄRVI, Aarno KOTILAINEN, Sakari KUIKKA, Kirsi KOSTAMO (University of Helsinki, SYKE, LUKE, GTK)
Environmental impacts of seabed mineral extraction – Towards a comprehensive risk assessment

11:45 – 12:00 Aleksandr RYBALKO, Mikhail TOLAREV, Dmitriy SUBETTO, Vjacheslav POLOVOKOV, Oleg KORNEEV (VNIIOkeangeologia, Seismic Data Analysis Center, MSU RSPU, Sevmorgeo)
Problems of monitoring geodynamic processes in the Gulf of Finland and Lake Ladoga

12:00 – 12:15 Alexander SERGEEV, Olga KOVALEVA, Daria RYABCHUK, Vladimir ZHAMOIDA (VSEGEI), Kaarel ORVIKU (Tartu University)
Coastal dynamics of the Eastern Gulf of Finland: toward a quantitative assessment

12:15 – 12:30 Olga KURAPOVA, Valeria LEBEDEVA, Tatiana SHIGAEVA, Valentina KUDRYAVTSEVA, Vladimir KONAKOV (SPb SU, SRCES RAS)
Structure and sorption properties of the in-shore zone bottom sediments of the Western part of the Gulf of Finland

SESSION: MARINE SPATIAL PLANNING AND MANAGEMENT
Room 114, 2nd Floor

Convener: Maria HÄNNINEN (Kotka Maritime Research Centre, Finland)

11:15 – 11:30 Mikhail SHILIN, Nikolay BOBYLEV (SPb SU)
Capacity Building in Sustainable Shore Use
11:30 – 11:45  
Leena LAAMANEN (SYKE)  
Developing cumulative anthropogenic impact models for sustainable sea use planning

11:45 – 12:00  
Vladimir ZHIGULSKY, Vladimir SHUISKY, Ekaterina MAKSIMOVA, Vladimir FEDOROV, Anton USPENSKIY, Vitaly PANICHEV, Lubov ZHAKOVA, Tatyana BYLINA, Maria BULYSHEVA, Anna BULYSHEVA («Eco-Express-Service» LLC, SPb SU, National Research Institute of Lake and River Fisheries, ZIN RAS)  
Research programme «Macrophyte thicket ecosystems in the Eastern Gulf of Finland

12:30 – 13:00  
Plenary session  
Discussion. Closing of Forum

13:00 – 14:00  
Lunch

14:00 – 20:00  
Foreign participants and members of the Trilateral Expert Group. Cultural Program  
Guided tour of the Catherine Palace in Pushkin
LIST OF POSTERS

SESSION: GEO- AND BIODIVERSITY OF THE GULF OF FINLAND

1. Nadezhda Berezina (ZIN RAS), Kari Lehtonen (SYKE). Reproductive disorders and malformed embryos of amphipods for control of environmental state in the Gulf of Finland

2. Anna Demchuk, Sergey Golubkov (ZIN RAS). Feeding of abundant coastal fish species in the Eastern Gulf of Finland

3. Elena Glazkova (BIN RAS). Long-term monitoring of the vascular plant flora of the Russian islands of the Gulf of Finland: dynamics of native and alien flora

4. Nikolay Kamardin (SRCES RAS). The shell color polymorphism of the littoral mollusks Bradybaena fruticum (Mull.), associated with micropollution by HM of the South-Eastern part of the Gulf of Finland

5. Tatiana Kuznetsova, Sergey Kholodkevich, Andrey Sharov, Anton Kurakin (SRCES RAS, SPb SU). Experience on ecological status assessment based on adaptive potential diagnostics in selected invertebrates of the Baltic Sea sub-regions

SESSION: ENVIRONMENTAL MONITORING OF THE GULF OF FINLAND

6. Ekaterina Chernova, Iana Russkikh, Ekaterina Voyakina, Elena Ezhova, Evgeniia Lange, Zoya Zhakovskaya (SRCES RAS, IO RAS). Cyanotoxins Occurrence in Gulfs of Baltic Sea

7. Andrey Grigoriev, Diana Prishchepenko, Vladimir Zhamoida (VSEGEI). Geochemistry of Late Pleistocene – Holocene deposits of the eastern Gulf of Finland

8. Dmitry Lalomov (Fertoing Ltd). Geophysical exploration of geological hazards in the Eastern Gulf of Finland

9. Ekaterina Litina (SOI SPb Branch). Dynamics of hypoxia in the open Baltic and the Gulf of Finland at the turn of the 20th and 21st centuries.

10. Larisa Metelkova, Zoya Zhakovskaya, Galina Kukhareva, Daria Ryabchuk, Mariia Kapustina, Andrey Grigoriev, Igor Neevin (SRCES RAS, VSEGEI, IO RAS). Organotin compounds in surface sediments from the deep water part of the Eastern Gulf of Finland (Russia)

11. Igor Neevin, Vladimir Zhamoida, Alexander Sergeev, Daria Ryabchuk, Andrey Grigoriev, Leonid Budanov, Alexander Krek (VSEGEI, IO RAS). New data about pockmark development in the Eastern Gulf of Finland (near the Gogland Island)


13. Ekaterina Voyakina (SRCES RAS). Dynamics of phytoplankton and chlorophyll a in Eastern part of Gulf of Finland

14. Vladimir Zhamoida, Daria Ryabchuk, Alexander Sergeev, Andrey Grigoriev, Leonid Budanov (VSEGEI, SPbSU). Transformation of geological environment of the Eastern Gulf of Finland and its coastal zone as a result of anthropogenic impact

SESSION: EVOLUTION OF NATURAL ENVIRONMENT OF THE GULF OF FINLAND. CLIMATE CHANGE AND ANTHROPOGENIC PROCESSES

15. Margarita Kholkina, Kerkko Nordqvist (VSEGEI, University of Helsinki). Pottery typology as a tool for relative and absolute dating of Stone Age sites in the Eastern Gulf of Finland region

16. Elena Mikhailova (SPb SU). Communication of the population around the Gulf of Finland in the Early Middle Ages. Archaeological evidence
17. Maria Razzak (Institute of the History of Material Culture RAS). The population to the South of the Gulf of Finland in the first centuries AD – the sites of Tarand-grave culture in the Leningrad region

18. Vladimir Sukhachev, Evgeny Zakharchuk (SPb SU). Dangerous sea level rises in the Gulf of Finland in a changing climate


SESSION: FISH AND FISHERY

20. Daria Safronova, Vassily Lyubimtsev, Sergey Kholodkevich (SPb SU, SRCES RAS). The possibility of usage a bioelectronic system based on the control of changes in the cardioactivity of freshwater crayfish for detection of cases of instantaneous pollution of brackish waters in the Eastern part of the Gulf of Finland
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