RACE FOR THE BALTIC

YEAR IN REVIEW 2021

RACE FOR THE BALTIC

Race For The Baltic (onward referred to as RFTB) is a non-profit organization with a mission to ensure a healthy Baltic Sea.

To achieve the greatest positive impact, RFTB's efforts are focused on solving the root problem of the Baltic Sea - Eutrophication. Of the various environmental pressures on the Baltic Sea, eutrophication has by far the largest environmental impact. Beyond dead sea bottoms, eutrophication also leads to algal blooms, fish mortality and poor water transparency.

RFTB is a business oriented non-profit organization, with vast experience from the private sector. The work is focused on solution-oriented and cost-effective projects with measurable impact.

The organization works in close collaboration with researchers, governmental institutions, non-profit organizations, entrepreneurs, and the private sector.

RFTB is funded by a small group of philanthropists. The organization was founded, and continues to be supported, by Zennström Philanthropies.

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RACE FOR THE BALTIC
YEAR IN REVIEW 2021

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2021 IN A NUTSHELL

The impact of our projects in 2021

In 2021 our projects diminished phosphorus in the Baltic Sea by 6 tons. This is equivalent to 6 000 tons less algae (1).

COST EFFICIENCY

6 tons per year is more than Sweden has achieved on an annual budget of several hundred million SEK.*

YEARLY REDUCTION

Until 2021 RFTB's project portfolio has contributed to a yearly reduction of 24 tons phosphorus.

[1] Calculation made by Finnish Environmental Institute for John Nurminen Foundation. 1 kg phosphorus (P) = 1 ton algae

*The 2020 budget for direct eutrophication measures was 240 MSEK, press release, September 6, 2019, Regeringskansliet. According to HELCOM document: "Calculation of the fulfilment of the nutrient input ceilings by 2017" Sweden reduced phosphorus input by 15 tons in 2014-2017 to the Baltic Proper

KEY RESULTS

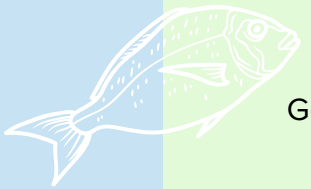
PORT

3 new prevention covers in 2 countries

Sharing of best practice material to all dry bulk handling ports in the Baltic Sea

Included as key measure in HELCOM's updated Baltic Sea Action Plan (2)

Growing relations with ports in Poland and Lithuania



FISH

Going from 3 to 10 fishers

Cyprinid servings to more than 10 000 consumers

Fishing of more than 18 tons of bream and ide

HORSE

Added as a new measure in HELCOM's updated Baltic Sea Action Plan (3)

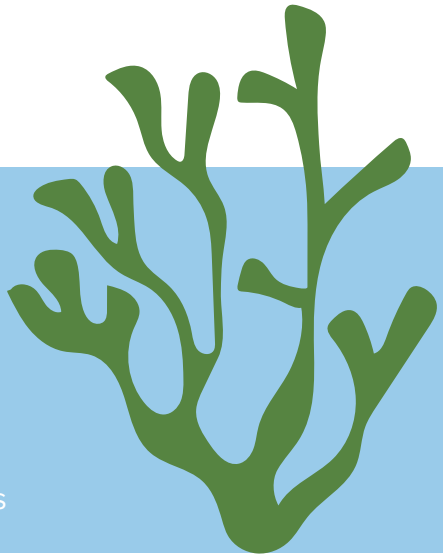
Included as key measure in Water Information System Sweden (VISS)

Horse module added to Greppa Näringen advisory

BSCAC

Official launch of the Baltic Sea City Accelerator Club!

6 workshops with 17 different municipalities from 5 different countries



BALTIC SEA DAY

Celebrated by more than 30 organisations in Sweden

Internationally celebrated in 6 countries, 20 cities and by more than 220 organisations

[2] Activity S21 in the Baltic Sea Action Plan 2021 update
[3] Activity E14 in the Baltic Sea Action Plan 2021 update

Photo: Jonas Jacobsson

A YEAR OF PROJECT IMPLEMENTATION AND BUILDING FOR THE FUTURE

A message from Peter Wiwen-Nilsson, CEO

Another year of operating under pandemic restrictions has passed. While the restrictions have put substantial constraints on how we work, they have not held us back. Thanks to the passion, creativity, and hard efforts of my colleagues, we have found new ways to implement our projects, been able to keep our plans and achieve great results.

The organization's impact efficiency has been quite remarkable and this probably is what distinguishes us the most. Our dedicated team of five co-workers managed to operate five different projects, launch the Baltic Sea Day in Sweden, and gather the executives of the leading Baltic Sea organizations, to mention just a few of the most obvious examples from the past year.

More than 6 tons of phosphorus have been stopped from reaching the Baltic Sea in 2021 alone. Even more is expected in the near future, as a result of our work in 2021. To put this into perspective, a reduction of 6 tons per year is more than what the entire country of Sweden (4) has been able to achieve on an annual budget of several hundred million SEK.

In addition to results that can be quantified in tons of phosphorus, our projects also have contributed to other important results such as:

- new measures being included in HELCOM's updated Baltic Sea Action Plan,
- new guidelines in The Swedish Environmental Protection Agency's (Naturvårdsverket) handbook "Guidance on the supervision and examination of ports",
- additional modules in Greppa Näringen, and
- the addition of a key measure in Sweden's Water Information System (VISS).

Further, in the past year RFTB was invited to provide expertise to the Ministry of the Environment, the Government Offices of Sweden, and HELCOM, as well as to participate as experts in several EU project applications.

For RFTB, 2021 has been an important year of project implementation. The great results that have been achieved have verified our strategy and given us the confidence to start growing our impact.

By the end of the year, we strengthened our organization with the addition of several new colleagues and increased our focus on Poland. We also opened our funding for additional like-minded philanthropists.

We look forward to 2022 – a year with new projects with great potential, existing projects in exciting phases, new initiatives under investigation, and hopefully a reopening of the world.

Photo: RFTB

[4] According to HELCOM document: "Calculation of the fulfilment of the nutrient input ceilings by 2017" Sweden reduced phosphorus input by 15 tons in 2014-2017 to the Baltic Proper. The 2020 budget for direct eutrophication measures was 240 MSEK, press release, September 6, 2019, Regeringskansliet

THE CHALLENGE

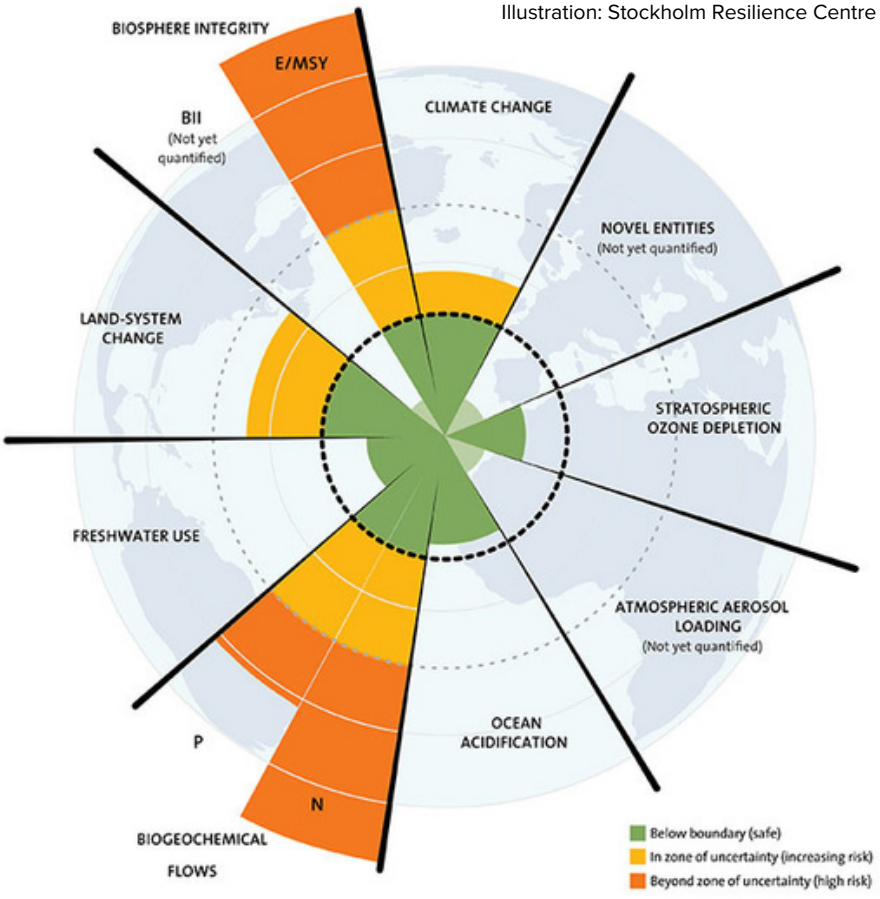
Eutrophication a global issue

The Baltic Sea is one of the world's most polluted seas and 97 % suffers from eutrophication (5). It also has the world's largest hypoxic area (dead zone) caused by humans (6). The dead zone covers an area larger than Denmark and Skåne combined (7). Of the various environmental pressures on the Baltic Sea, eutrophication has by far the largest environmental impact. Beyond dead bottoms, eutrophication also leads to algal blooms, fish mortality and poor water transparency.

The flow of nitrogen and phosphorus, that causes eutrophication, is not only a local problem but one of the globally most pressing environmental problems. According to some research nitrogen and phosphorus flows are two of the three most critical risks towards our planetary boundaries, even more critical than climate change (8).

The state of the Baltic Sea is the biggest environmental issue in the Baltic region and involves all surrounding countries. No country meets the agreed targets so the challenge also requires actions across nine countries and many sectors with varied interests. The Baltic Sea cannot be solved by one party alone, therefore an international approach and cooperation between the parties is essential.

Illustration: Stockholm Resilience Centre



[5] Helcom http://stateofthebalticsea.helcom.fi/pressures-and-their-status/eutrophication/
[6] Carstensen et al. "Deoxygenation of the Baltic Sea during the last century"
[7] In 2019 the anoxic and hypoxic conditions covered an area larger than 80 000 km2 according to SMHI "Report Oceanography No. 67, 2019
[8] "Planetary boundaries: Guiding human development on a changing planet" Steffen et al. 2015 and Stockholm Resilience Centre, The nine planetary boundaries

THE OPPORTUNITY

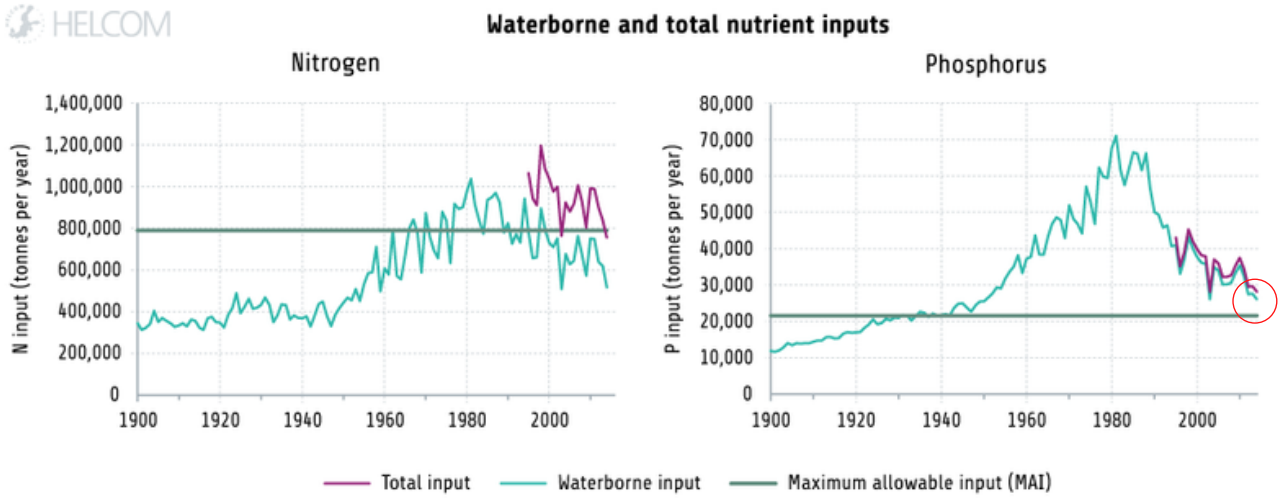
Closing the gap

A lot has been done to reduce the inflow of nutrients since the Helsinki Convention was signed in 1974. But we still have not been able to shift the tide and reach the agreed targets (MAI) (9), where the Baltic Sea status starts improving every year.

The most crucial remaining challenge is the inflow of phosphorus. While we have reduced the annual inflow by more than 40 000 tons since the 80-ties, there still remains another 6 350 tons (10) before we have reached the MAI.

With a focused effort and structured approach, RFTB believes this can be achieved by 2030. If we can achieve this the Baltic Sea will start to restore itself.

Calculations also show that the financial value of a healthy Baltic Sea substantially outweighs the cost of reaching that status. A BCG analysis (11) compared the impact on three industries between a clear water state and a continued degradation and found an economic value add of 32 BEUR annually and 550 000 jobs.



Benefits of investing in clean water

SUSTAINABLE BUSINESS DEVELOPMENT: growth in water technology industries making the Baltic Sea region a global exporter

AESTHETIC VALUE: beautiful cities attracts both citizens and businesses, and increases property values

TOURISM UNAFFECTED BY EUTROPHICATION: citizens and tourists enjoy healthy rivers, lakes, shorelines, and beaches, and are healthier with access to clean water and recreational activities

[9] MAI (Maximum Allowable Input) are targets for nutrient inputs agreed upon by the Baltic States. If the MAI's are met, the Baltic Sea is assumed to restore itself. Gustafsson et al. (2012), Savchuk et al. (2012)
[10] According to HELCOM data October 2021, phosphorus input in 2019 was at 28 066 tons and the agreed MAI is 21 716 tons.
[11] BCG report, "Turning adversity into opportunity", 2013

OUR APPROACH

RFTB is run by people with a background in the private sector. The strategy is based on an analysis of how to maximize impact. This has led us to focus on hands-on, and measurable, projects that reduce the inflow of phosphorus.

We are firm believers that more can be achieved by cooperating with others. Therefore RFTB has taken an active role to gather, share information with, and cooperate with, other Baltic Sea organizations.

Many of RFTB's projects are run together with other organizations.

Projects are prioritized based on their impact efficiency with the overall objective to achieve maximum return (for the Baltic Sea) on the foundation's assets.

Return is measured as reduction of phosphorus (12) in the Baltic Sea.

The evaluation considers several aspects such as cost per kg reduced phosphorus, likeliness of success, scalability, and strategic fit with the organization.

Photo: Joakim Honkasalo

[12] The Baltic Sea Impact Index is a ranking of pressures themes attributed to cumulative impacts at regional scale. For further explanation see HELCOM (2018E)

VISION

Ensure a healthy Baltic Sea for future generations by 2030

MISSION

Be the most impact efficient and established as a leading non profit in the field.

OPERATING PRINCIPALS

Impact efficiency
Solution oriented
Measurable results
Collaborative
Effective altruism
Private sector methodology

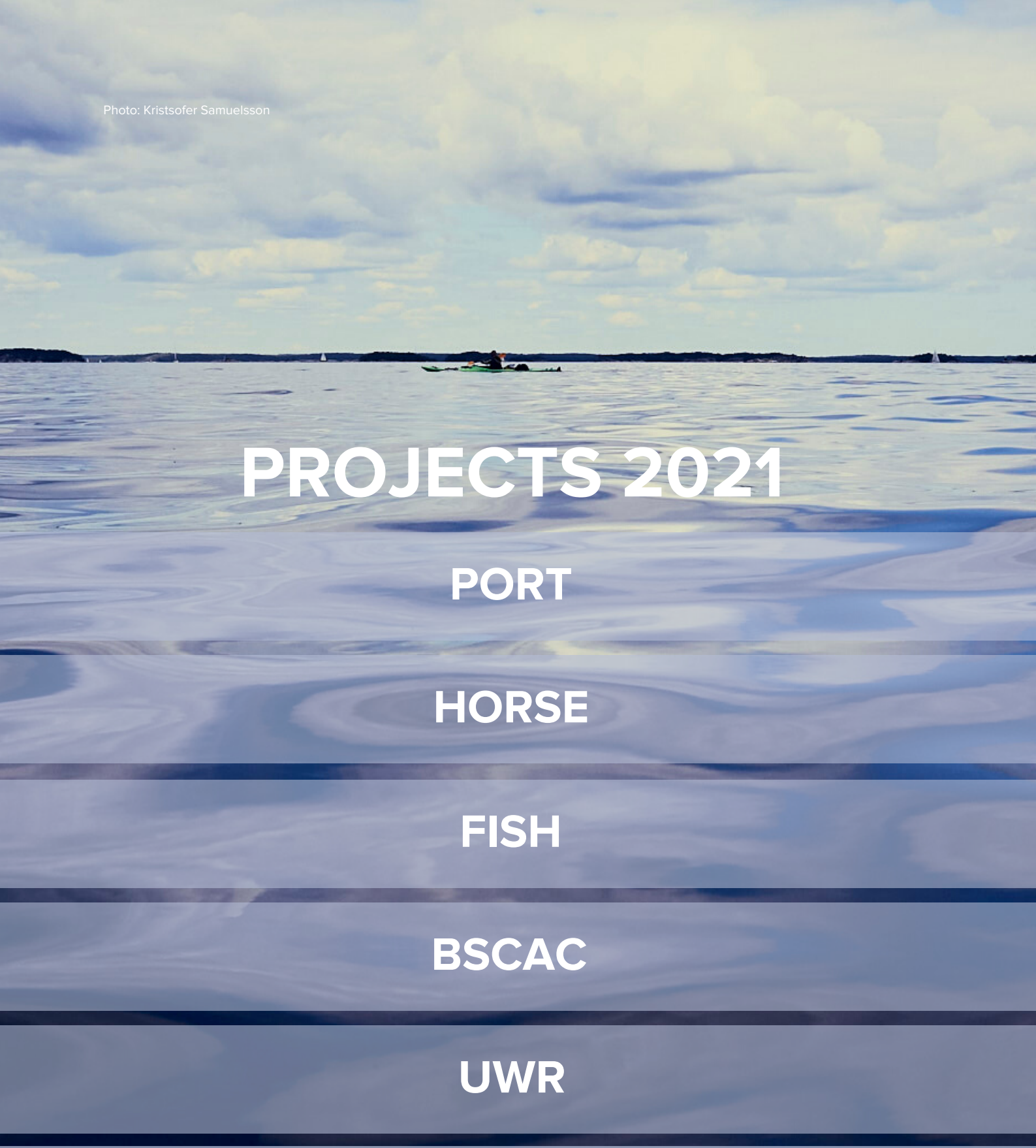


Photo: Kristsofer Samuelsson

PROJECTS 2021

PORT

HORSE

FISH

BSCAC

UWR

RFTB's projects addresses, SDG 6 (clean water and sanitation), SDG 9 (industry, innovation and infrastructure), SDG 11 (sustainable cities and communities), SDG 12 (responsible consumption and reduction) SDG 14 (life below water) and SDG 17 (partnership for the goals).

PORT PROJECT

Recent reports have indicated a significant nutrient discharge to the Baltic Sea related to the shipping of fertilizers. Every year, millions of tons of dry bulk mineral fertilizers are transported and handled at ports in the Baltic Sea region. Until now, the loading, transport, and unloading of dry bulk mineral fertilizer in ports has been overlooked as a potentially significant source of nutrients contributing to the inflow of excess nutrients into the Baltic Sea.

In collaboration with ports, dry bulk equipment companies, other non-profit organizations, and fertilizer producers, RFTB has researched and developed cost-effective methods to minimize the loss of dry bulk fertilizer during handling in ports.

Together with Boston Consulting Group, RFTB have put together the business case “Reducing discharge of nutrients at ports” which is a hands-on tool defining the leakage spots for fertilizer in dry bulk when unloading and loading. The business case also displays the return on investment by upgrading the equipment in the port and other cost-effective solutions to reduce the leakage.

During 2021, RFTB developed a brochure on best practices for the handling of dry bulk fertilizer in ports. These brochures have been translated into four different languages and sent out to all dry bulk ports in the Baltic Sea. In total the material was distributed to more than 40 ports, municipalities and other relevant stakeholders.

Some of the main achievements for the port project in 2021 were;

- Installation of three new prevention covers in two different countries
- Stopping over 6 tons of phosphorus from ending up in the Baltic Sea
- Developing "best practices" for handling of fertilizers in ports and spreading them to all major dry bulk ports around the Baltic Sea
- Changing the guidelines for the handling of fertilizers in The Swedish Environmental Protection Agency’s (Naturvårdverket) handbook “Guidance on the supervision and examination of ports”
- Contributing to the handling of fertilizers in ports being one of the selected areas in HELCOM's Baltic Sea Action Plan
- Visiting and developing relations with ports in Poland and Lithuania

RFTB would like to thank Postkodstiftelsen for their contribution to the port project and for making a difference for the Baltic Sea.

Photo: GettyImages

Photo: Port of Vordingsborg

HORSE PROJECT

Inspired by the previous work by BalticSea2020, RFTB started the horse project in mid 2019. The project aims to help horse owners achieve substantial positive effects on the Baltic Sea. Horse manure has until recently been a neglected source of nutrients leaking to the Baltic Sea. Studies indicated that with relatively small measures - especially more frequent mucking of pastures and paddocks - this leakage can be substantially reduced.

To quantify and fill out remaining knowledge gaps, RFTB initiated a study on what impact mucking frequency had on phosphorus leakage from horse manure. The study was done in cooperation with SLU, Uppsala University and Ecoloop.

RFTB also conducted surveys and stakeholder interviews to map the knowledge and mocking situation among the horse owners.

Based on the results from the study and surveys, RFTB engaged the horse community and launched the campaign Varje Skit Räknas. The purpose was to increase knowledge about the impact of horse manure on eutrophication and encourage horse keepers to muck more frequently.

To measure any changes in behaviour a statistically validated survey was performed, together with Norstat, before and after the campaign. The surveys indicated a change in behavior and together with the results from the study, an estimated reduction of 2 tons of phosphorus leaking to the Baltic Sea was achieved. This corresponds to a reduction of 2 000 tonnes (13) of algal blooms and is equivalent to the phosphorus reduction of 75 average wetlands (14).

While the horse project came to an end in 2021, RFTB will maintain a pressure on the topic and continue to measure how manure handling in the horse community is developing.

Photo: HNS

[13] Calculation made by Finnish Environmental Institute for John Nurminen Foundation. 1 kg phosphorus = 1 tons of algae
[14] Average effect within Landsbygdsprogrammet 2,6 - 4,5 kg P/ha according to Jordbruksverket, Rapport 2015:7 “Näringsavskiljning i anlagda våtmarker i jordbruket”. 2 tonnes P would equal 75 wetlands of 6 acres each.

FISH PROJECT

The Baltic Fish was initially launched in 2019 in Sweden and on Åland after great success with a similar project in Finland 2015-2019. After discussions on a cooperation, John Nurminen Foundation and RFTB decided to join forces on a continuation of the initial Finnish project. The Baltic Fish project has been led by the John Nurminen Foundation, while RFTB has been responsible for the Swedish part, the Fish project, in cooperation with local fishers.

Cyprinid fish such as bream, ide and roach, thrive in eutrophicated waters and are therefore abundant in many parts of the Baltic Sea. By fishing these species, the excess of nutrients in the water can be circulated back to land, and thereby decreasing eutrophication in the Baltic Sea. In eutrophic lakes their abundance has been proven to disturb the marine ecosystem.

The aim of the Fish project has been to create good conditions for sustainable fishing of the so far unused fish species bream and ide and thus contribute to reducing eutrophication in the Baltic Sea. In addition, the project provides consumers with a new locally sourced and healthy protein, as well as a new revenue stream for our local fishers.

In early 2021 updated fishing regulations were signed by fishers in time for the fishing season and the number of involved fishers grew from 3 to 10. Over the year, municipalities have ordered more than 20 000 fish patties and 300 kg of minced bream that has been served in schools, day care facilities, and other municipal kitchens.

In Q4 2021 the Baltic Fish project entered its final phase. The main focus going forward is to establish stable demand and convince the authorities to take over responsibility for the sustainable management plan. Discussions are already ongoing with the Swedish Agency for Marine and Water Management, County Administrative Boards and researchers that have been involved in the project from the Swedish University of Agricultural Sciences (SLU).

Main achievements for the fish project in 2021;
- Growing the number of fishermen from 3 to 10
- Fishing of more than 18 tonnes of bream and ide
- Serving of the new fish products to tens of thousands of consumers
- Getting official acceptance for the project with authorities being involved and funding research parts of the project

For more information please visit www.braxen.nu

Photo: Marie Sparreus

BALTIC SEA CITY ACCELERATOR CLUB

In 2021 we officially started our Baltic Sea City Accelerator Club (BSCAC). This club is a continuation of the Baltic Sea City Accelerator, and a way for RFTB and the municipalities previously involved in the Accelerator programmes, to sharpen the work on eutrophication by a deepened cooperation, expanded knowledge exchange and improved funding opportunities.

The municipalities with their local knowledge and mandate, combined with their access to financing are vital in solving the challenges of the Baltic Sea. The Baltic Sea City Accelerator Club is a unique international network focused on eutrophication, where the municipalities get access to leading research and solutions, hands-on assistance on their challenges, knowledge exchange with other municipalities and guidance on financing opportunities.

The kick-off of the Club was a great success and took place in March 2021.

12 municipalities, from 4 different countries, participated. The program included presentations from some of the leading solution providers and researchers as well as hands-on group work. The topics were selected based on feed-back from the municipalities and specific knowledge of RFTB.

In October another workshop with the Baltic Sea City Accelerator Club was conducted with 15 participating municipalities from 4 different countries. This workshop was especially focused on funding opportunities and how eutrophication can be linked to the SDGs.

The next meeting is scheduled for the 26th - 28th of April 2022. Is your municipality interested in joining the next meeting and to be part of this network? Email Julia Gerlach for more information at julia@raceforthebaltic.com

BALTIC SEA City Accelerator Club

THE BALTIC SEA CHALLENGE

UNDERWATER RESTORATION PROJECT

In Q2 RFTB started a new project called Underwater Restoration Project (UWR). The project aims to add new knowledge and expand the use of one of the more effective and promising technologies for treating the abundant phosphorus in the bottom sediments. By treating the bottom sediment with a mineral aluminium liquid, the mineral permanently binds the abundant phosphorus, and locks it into the sediment.

The treatment is an effective method that gives rapid positive effects on marine life with reduced algal blooms and better water transparency. The project is managed in close collaboration with research institutes and companies.

A lot of the work in 2021 was focused on defining the necessary research and structuring a research cooperation as well as to identify relevant places for treatments. This has involved treatment demonstrations with municipalities and a research collaboration with LIFE IP Rich Waters to study the internal load in selected coastal bays and how the water exchange is affecting the long-term effect of a treatment.

To easily share and spread relevant information, an information material has been put together. The plan is to spread the material in 2022 and generate inspiration and involvement among decision makers. Focus entering 2022 is also to secure a suitable treatment in order to initiate the research efforts.

Photo: Azote

VATTENRESURS

Life

SLU

Swedish Agency for Marine and Water Management

Rich Waters

6 CLEAN WATER AND SANITATION

14 LIFE BELOW WATER

17 PARTNERSHIPS FOR THE GOALS

EVENTS 2021

THE BALTIC SEA DAY

The Baltic Sea Day was launched by the John Nurminen Foundation in 2019 in Finland. It is an annual celebration of the sea and occurs on the last Thursday of August with various events and rallies.

In 2021 RFTB took the initiative to coordinate and spread the Baltic Sea Day also in Sweden. The day creates an excellent opportunity for cooperation between organizations engaged in the Baltic Sea. By joining forces it becomes possible to break through the noise and spread awareness of the Baltic Sea situation.

Despite the pandemic restrictions, the Baltic Sea Day 2021 was celebrated by more than 30 organizations in Sweden including; Stockholm University, HRH Crown Princess, Apotea, Skansen, Sjöhistoriska Museet, Isabella Lövin former Minister for Environment and Climate, and Sveriges Radio.

Internationally the day was celebrated in six countries, 20 cities and by more than 220 organizations.

Are you and your organization interested in participating on Baltic Sea Day 25 August 2022? Please join in and contact RFTB at info@raceforthebaltic.com, www.östersjödagen.fi

Photo: Ålandsbanken

Baltic NGO Collaboration meeting

We see cooperation as both obvious and crucial to speed up the work for a healthier Baltic Sea. In August we initiated a meeting between some of the leading NGO's on the Baltic Sea issues to expand cooperation opportunities.

Thank you for your participation and commitment WWF, Coalition Clean Baltic (CCB), Baltic Sea Action Group, John Nurmisen Säätiö and Voice of the Ocean. Extra thanks to Ålandsbanken Abp who made this meeting possible.

LIFE IP Rich Waters conference for improved water quality

Photo: RFTB

A day filled with inspiring presentations and successful networking with many possible partners.

Inspirational day on measures to prevent eutrophication

Photo: Robin Frejd, BTH

Event at Blekinge Institute of Technology in Karlskrona with excellent presentations and discussions about the state of the Baltic Sea and measures that can be employed to address eutrophication in local waters.

2021 ACTIVITIES

MONTH	ACTIVITY	SUBJECT	ROLE	LOCATION
JANUARY	Meeting with The Swedish Environmental Protection Agency	Port findings	Organiser	Digital
JANUARY	Meeting with Government Offices and State Secretary	Manure handling	Organiser	Digital
MARCH	Meeting with municipal environmental inspectors with focus on ports	Port findings	Organiser	Digital
MARCH	Baltic Sea City Accelerator Club kick-off	Municipality networking	Organiser	Digital
APRIL	Eutrophication segment team in HELCOM	Updated Baltic Sea Action Plan	Participant	Digital
APRIL	Working Group on Reduction of Pressures from the Baltic Sea Catchment Area	Updated Baltic Sea Action Plan	Participant	Digital
MAY	Workshop with John Nurminen Foundation	Cooperation	Organiser	Digital
JULY	Östersjödagarna at Almedalen	Sustainable blue food	Presenter	Digital
AUGUST	Meeting between the executives of the leading Baltic Sea NGOs	Cooperation	Organiser & participant	Finland
AUGUST	Baltic Sea Day	Annual theme day	Co-organiser & presenter	All over Sweden
SEPTEMBER	Baltic Sea Water Talks	Inspiration & cooperation	Presenter	Utö, Sweden
SEPTEMBER	EUSBSR's 12th Annual Forum of the Strategy for the Baltic Sea Region	Gypsum, Structural Lime	Participant	Digital
OCTOBER	Participated in workshops arranged by EU project WATERDRIVE, where RFTB is an associated partner	International cooperation	Participant	Digital
OCTOBER	Krinova workshop	Port findings	Presenter	Digital
OCTOBER	Meeting with the Swedish Agency for Marine and Water Management (SwAM), County Administrative Boards as researchers from the Swedish University of Agricultural Sciences (SLU).	Fish project	Organiser	Digital
OCTOBER	Baltic Sea City Accelerator Club workshop	Municipality networking	Organiser	Digital
NOVEMBER	Group on Sustainable Agricultural Practices in HELCOM	Update HELCOM recommendations	Participant	Digital
NOVEMBER	Working Group on Reduction of Pressures from the Baltic Sea Catchment Area	Updated Baltic Sea Action Plan	Participant	Digital
NOVEMBER	Meetings with prominent ports and important stakeholders	Partnership	Organiser	Poland & Lithuania
NOVEMBER	LIFE IP Rich Waters conference	Networking	Presenter	Stockholm, Sweden
NOVEMBER	Meeting with Stockholm Stad	Phosphorus reduction	Organiser	Stockholm, Sweden
DECEMBER	Inspirational day at Blekinge Institute of Technology	Networking	Co-organiser & presenter	Karlskrona, Sweden

Photo: Marie Sparreus

ORGANISATION 2021

PETER WIWEN-NILSSON
CEO

EMMA GABRIELSSON
Business Manager
Fish Project and Baltic Sea City Accelerator Club

FANNY THAM
Business Manager
Port Project

NICLAS ANVRET
Business Manager
Horse Project and Underwater Restoration

JULIA GERLACH
Business Manager
Port Project and Baltic Sea City Accelerator Club
Joined in November

HELENE ISANDER
Communication Director
Joined in December

ANNA ANDERSSON
Junior Content Manager
Joined in September

BOARD

TOMAS JOHANSSON
Chairman of the Board

HENRIK ÖSTERBLOM
Board member

SOPHIA BENDZ
Board member

NIKLAS ZENNSTRÖM
Founder

PARTNERS

We are truly grateful for the support that our partners provide in terms of expertise, resources and venues. Our partners are just as passionate about the Baltic Sea as we are and together we can make a difference. We thank our partners for the generous assistance and encouragement in the advancement of our mission, a clean and healthy Baltic Sea.

MANNHEIMER SWARTLING

ÅLANDSBANKEN

BCG BOSTON CONSULTING GROUP


RACE FOR THE BALTIC
We work to ensure a healthy Baltic Sea
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