



# Greener Agriculture for a Bluer Baltic Sea

– Agriculture – production and consumption contributing to the  
Eutrophication of the Baltic Sea

5-6 November 2015

Ozeaneum, Stralsund, Germany



Photo WWF/Ola Jennersten

## Table of contents

Introduction to A Greener Agriculture for a Bluer Baltic Sea 2015 .....	3
Welcoming words by WWF .....	3
Session I: Production and consumption of agricultural goods in the Baltic region	
Theatrical performance of the Baltic Harbour Porpoise .....	4
German perspective on production and consumption of agricultural goods .....	4
Agriculture policy for a greener Baltic Sea – successes and challenges from Northern Germany.....	4
Nutrient management in planetary boundaries: Global to local.....	5
Session II. How to foster sustainable resource management? .....	7
Fostering solutions on taking action to change the trends and reduce the effects on Baltic Sea .....	7
Discussion and wrap up .....	8
Session III: WWF Baltic Sea Farmer of the Year Award 2015.....	11
Session IV. What needs to be put in place to deliver Baltic friendly production and consumption? .....	13
Eating for the Baltic.....	13
Production with reduced impact and nutrient losses.....	15
Policy driven tools.....	16
Summary from the parallel sessions.....	16
Session V. What next? Summary and action.....	18
Plenary discussion with former project leads and public sector representatives.....	18
Closing remarks .....	19
Annex 1 Programme .....	20
Annex 2 Participant list .....	23

## A Greener Agriculture for a Bluer Baltic Sea

The Greener Agriculture for a Bluer Baltic Sea Conference (GABBS) has a long history of gathering key representatives from agricultural and environmental authorities, academic institutions, farmers' unions and advisory organisations, farmers, agri-environmental NGOs and enterprises providing an important opportunity for the sharing of ideas, solutions and collaborative approaches to reducing the impacts of agriculture to the Baltic Sea.

This year the conference was hosted by the World Wide Fund for Nature (WWF) in cooperation with UBA - the German Federal Environment Agency with financial support from the Swedish Water and Marine Agency (SWaM) and the Swedish University of Agricultural Sciences (SLU).

The conference featured the role and shared responsibility of additional actors throughout the production and consumption chain from farm to plate in how to help reduce the effects of eutrophication as well as enhance biodiversity in the region. Some 100 participants from 12 countries with various backgrounds – from science to farming, from ministerial level and European policy to environmental NGOs, from advisors to business – attended and made vital contributions to a successful conference in Stralsund.

This summary conference report has been compiled by WWF and all the presentations can be found on [WWF webpage](#).



Field visit organised in conjunction to the conference to the Insel e.V. farm in Kransdorf, Rügen with the 2015 National Winners of the Baltic Sea Farmer of the Year Award. Photo WWF/Carsten Bartel

## Welcoming words by WWF

Pauli Merriman, Director of the WWF Baltic Ecoregion Programme – opened the conference by welcoming all participants and by thanking the organizers and co-sponsors for their efforts to co-host this year's conference. She highlighted WWF's conservation work through its regional network and its support for the long lasting cooperation WWF has had with GABBS since its first year in 2009 where the Baltic Sea Farmer of the Year Award was also launched for the first time. She noted that while the format and arrangements from previous conferences is different, thanks to a new host of partners who have come together to make these days possible, the conference continues to offer a compelling forum for the region's stakeholders and thus the possibility to maintain the momentum that has been built over the last six years. With this in mind she shared WWF felt it was important to continue the strong tradition of holding the GABBS conference welcome its continuance in the future to enable the added value it brings to networking and making practical change in agri-environmental measures on the field.

## Plenary Session I: [Production and consumption of agricultural goods in the Baltic region](#)

### [Theatrical performance of \*Phocoena phocoena\* – the Baltic harbour porpoise](#)

Barbara Geiger – gave a compelling performance of her vivid theatrical recount of Alfred Brehm's best seller "Life and Times of Animal" in "*Phocoena phocoena* – the Baltic harbour porpoise by Frollein Brehm's Life of Animal" – resulting in Frollein guiding the audience in the evolutionary history of the Baltic Sea and the endemic Baltic harbour porpoise through to the latest scientific observances of this particular marine mammal which goes by many names in the region – from 'tumlare' in Sweden to 'marsvin' in Denmark to 'pringli' in Estonia to 'Schweinswal' in Germany - and how scientists have found ways to avoid for its bycatch in fishing nets through a new technology of sonar alerts – the main cause of death for this unique little porpoise found mainly in the southern Baltic.

### [Germany's perspective on the production and consumption of agricultural goods](#)

Dr. Dietrich Schulz from the German Federal Environment Agency, who co-hosted the conference with WWF, and serves as cChair of the HELCOM Agriculture Working Group gave a recount on the status of the nutrient loads in the region and the further work needed to reduce the nutrient emissions to meet the reduction targets set in the HELCOM Baltic Sea Action Plan (BSAP), which was passed by the environment ministers of the HELCOM Contracting Parties in 2007. Dr. Schulz outlined the progress in legislative tools in Germany that are sharpening the reduction of emissions in form of an amendment of the ordinance on fertilization (Düngeverordnung). In the new ordinance fertilizer application after harvest will only be allowed if winter crops or intercrops are cultivated; manure must be incorporated into arable land within 4 hours; tolerable surpluses for both nitrogen and phosphorus will be lowered; farmgate balances will be introduced for large animal farms by 2018, just to mention a few measures described – all of these which will take force probably by July 2016. Air emissions of ammonia are also being addressed as is support for increased ecological farming and reduction of food waste. There is progress and discussions in the HELCOM Agri Working Group on addressing manure standards and to make nutrient book-keeping more comparable between the countries along the Baltic Sea coast. The presentation concluded with hopeful words acknowledging the winners of the Baltic Sea Farmer of the Year Award to be the lighthouse examples showcasing the solutions needed in the region and suggested the newly adopted Sustainable Development Goals by the United Nations in September should give direction for the next 15 years and support the goals of the Baltic Sea Action Plan that are to be achieved by 2021.

### [Successes and challenges from Northern Germany on agriculture policy](#)

Dr. Peter Sanftleben, State Secretary of Ministry of Agriculture Mecklenburg-Vorpommern, Germany reiterated the uniqueness of the Baltic Sea making it a sensitive sea for eutrophication with importance to take responsibility of land sourced activities to protect the marine environment. Dr. Sanftleben stressed the importance of HELCOM and the efforts particularly made in the Federal State of Mecklenburg-Vorpommern underlining that marine protection starts with land based mitigation: decrease in livestock, increase organic farms, to 11% by 2020 from current 9,1%, ordinance on fertilizer application, increased funding on waste water treatment, monitoring, and water protection to implement the Water Framework Directive and Marine Strategy Framework Directive. Also noted, was the emphasis that will be made on nature protection and agricultural environmental measures in the new period of EU subsidies in the Federal State of Mecklenburg-Vorpommern, especially as regards wetland restoration. One of the most critical measures to apply is the amendment of ordinance on fertilization along with consistent implementation and ordinance on federal states level for stressed areas. He concluded with the reminder that there is only one earth and thus we should all be aware of what it is really worth to have enough to eat while maintaining a beautiful nature.

### Nutrient management within the planetary boundaries: a global to local outlook

Professor Helena Kahiluoto from Natural Resources Institute in Finland brought a global perspective to the use of the finite resources of nitrogen and phosphorous in relation to the planetary boundaries of both these elements. Science has shown that the carrying capacity of nutrient sources are already exceeded and that the main reason for this is the planets agriculture system where especially nitrogen and phosphorous are overexploited in the system for production and lost through food waste and poor nutrient recycling. Therefore there is a real need to change the currents behaviors to live with much less nutrient availability. Professor Kahiluoto underlined through her slides that even through a shift to vegetarian diets and better recycling of nutrients it would not secure the nutrients to return within the adequate planetary boundaries. There is still a large volume that is lost in waterways and collected in the sediment of sea beds. Her presentation touched upon the spatial inequity in access to nutrients where two tipping points cross – internal loading and undeveloped countries having insufficient replenishment of nutrients on their fields leading to erosion and carbon emissions. She noted her studies comparing the nutrient use in Ethiopia with Finland showing the overuse in Finland whereas there is limited availability of nutrients in Ethiopia due to poor soil quality and increased vulnerability to climate change. Much of the nutrients in Africa are exported instead of used locally. She concluded that society needs to minimise the overuse of nutrients currently practiced today and need to recycle and process them in a much more efficient way to not loose and continue the unequal balance of the available nutrients across the world. She finalised with a question on whether there is a need to distribute the nutrients more equally on a global scale and develop global circular economy and fair nutrient economy – by establishing a pilot case for sustainability governance.

### *Thoughts from the presenters in a Question and Answer round*

A number of topics were raised by the speakers with participation from the audience:

The panel discussion focused mainly on the agriculture landscape of Germany, which is a net importer of fodder and exporter of meat leaving the country with the side products of the meat production chain, i. e. excessive amounts of manure concentrated locally. There is a vision to spread intensive livestock farming more evenly throughout the country to reduce hotspots of manure (more equal distribution of animal manure). However, the main priority at present in the sense of a second best solution is using cross compliance measures and to address the problem with technical measures such as fertilizer accounts and nutrient bookkeeping and to transport excessive manure to regions with cash crop production to close the nutrient cycle.



From left to right: Prof. Helena Kahiluoto, Dr. Sanftleben, Barbara Geiger and Dr. Dietrich Schulz. Photo WWF/Cartsen Bartel

Internal load versus at source nutrient loss – based on the presentation from Professor Kahiluoto there was discussion on the time period it will take to return the Baltic Sea to a healthy state – which. According to some estimates could take around 130 years. There is an internal load originating from nutrients at the seabed bottom (sediments) that could be re-introduced by natural processes into the Baltic Sea ecosystem and thus counteract nutrient reductions from land based sources. Some even propose to make nutrients from sediments available as fertilizers to replace mineral fertilizers (whose industrial synthesis demands high amounts of energy and thus lead to greenhouse gas emissions). However there was much discussion and debate by the panel and audience regarding what was the best solution and investment. Countries like Sweden stated that much effort has been put in place to invest in solutions to retrieve the internal load by supporting small scale pilot studies in lakes and coastal areas that can be applied more widely to retrieve the nutrients at seabed and reduce the anoxic areas. It was suggested that much of the mitigations on land are reaching their maximum potential which was another reason that it was suggested that one must look to measures reducing the internal load. This was argued against by claiming that tests to date had only been on small pilot projects with too little tests to prove adequate at large scale in very deep waters and reminded also of the environmental implication that can come from moving sediment at the sea bottom (hazardous substances; explosives from Second World War). The reduction of nutrients from land must still be addressed and the improvements will take time. Best would be to work from both ends but mainly work to stop the 'at the source' inputs which still are a large problem.

Performance to get the message across – theatrical performances has been an effective way for Barbara Geiger to get messages across about the importance of biodiversity and the importance of soil quality. Everything has an effect – to highlight the soul and celebration of animals is an effective method to increase our empathy towards animals that live with and around us. This alternative way to present scientific data can have a strong impact on audiences and interest to get engaged.

Motivating agri-environmental practices – there is concern that national policies applied to enhance farmers to adopt agri-environmental schemes may result in reduced income for the farmer. The state secretary Dr. Peter Sanftleben highlighted that research has shown that good practices can be done without losing money. Giving subsidies to farmers is one way to help them move the process forward

towards applying better practices. For example, in Germany the organic farmers are getting more money from the second pillar of the CAP for applying organic methods on their land. Support for applying agri-environmental measures can improve income indirectly through crop-rotation and using legumes which gives better soil and better crops in the long-term and hence increased income.

Economy versus biodiversity: The discussions rounded off to conclude the need for changing the overall agriculture policy aims that are to chase the economic gains through export of agricultural products which simultaneously causes adverse impacts to the environment and society. Agriculture practice is essentially a societal debate on what values are prioritized. What do we want to base our society and lifestyle on? By producing less, we can have more nature and get closer to the biodiversity targets set by European policy which at present Germany and many other countries in the region are failing to meet.

## Session II: [How to foster sustainable resource management?](#)

### Presentation: [How can consumers actively promote biodiversity?](#)

A pioneer project 'Agriculture for Biodiversity' in cooperation with organic farmers, retailers and consumers based in Germany was presented by Dr. Karin Stein-Bachinger, Leibniz-Centre for Agricultural Landscape Research (ZALF) e.V. The project has been initiated by the organic association Biopark together with WWF Germany in the region of Mecklenburg-Western Pomerania, Northern Germany. Supported by the Ministry of Agriculture, Environment and Consumer Protection of the State of Mecklenburg-Western Pomerania and the large German retailer chain Edeka. Scientific investigation and implementation are carried out by the Leibniz-Centre for Agricultural Landscape Research. The aim of the project is to demonstrate the increase in biodiversity of wild animals and plants in agricultural habitats thereby



reversing the decline of indigenous flora and fauna. As a base for the certification system a comprehensive catalogue of nature conservation measures for grassland, arable land and landscape elements has been developed. A point system evaluates the conservation value per measure for wild species as well as the occurrence of target species and the quality of different habitats for flora and fauna based on organic farming standards. Conservation advisory services, independent control structures and monitoring for scientific evaluation of selected measures are in development to support the farmers. An important objective is to increase transparency through labelling while remunerating farmers for nature conservation services.

Dr. Karin Stein-Bachinger from Leibniz-Centre for Agricultural Landscape Research (ZALF) e.V. Photo WWF/Carsten Bartel

The initiative is completely voluntary and offers the farmers an additional qualification for special achievements in the promotion of biodiversity. Moreover,

it enables an improved transparency of where the products originate from. So far fifty-five farms are involved in the project. With every purchase of 'Agriculture for Biodiversity' products, consumers can actively promote biodiversity and at the same time support the extra work put in by the farmers. The project also improves the documentation, monitoring and evaluation of implementing a broad spectrum of conservation measures that in the long term can prove the added effects of the measures applied on the farm and surrounding nature.

For the Baltic Sea, this network of farms can serve as a starting point to replicate the farmers' farming methods to other regions. In combination with the already existing network, from the former EU project BERAS (Baltic Ecological Recycling Agriculture & Society) Implementation ([www.beras.eu](http://www.beras.eu)), around the Baltic Sea a strong alliance of all actors in the food production chain can be developed in order to provide examples for consumers, politicians and retailers on the possibilities to improve farming and conservation in the region with good practical examples. A better knowledge among consumers will increase the appreciation for a better remuneration for farmers for provable environmental and nature conservation performances.

#### *Plenary panel discussion:*

Four panellists joined Karin Stein-Bachinger on the stage from different stakeholder interests to discuss how different actors can take responsible actions to reduce nutrients runoff to the Baltic Sea while simultaneously increasing biodiversity.

Markkus Eerola – Finnish organic crop farmer and national winner of the Baltic Sea Farmer of the Year Award 2015 shared that sustainability on the farm is a key issue for him. He has run his farm organically for the last 5 years in an area surrounded by 1 million people where he has put great emphasis on precision farming. Situated nearby to 7 tile factories, resulting in very clay soil, it was important to get help and advice where on the farm he could make improvements and optimize his crops. It has resulted in avoiding to plow his fields for the last 17 years. Mr. Eerola noted that it is important for a farmer to make his business successful but there is also a social and ethical dimension to farming to show how the food production is in line with other societal values as high nature value of landscapes and the protection of biodiversity.



Markkus Eerola and Marta Szkaradkiewicz Sylla. Photo WWF

Marta Szkaradkiewicz Sylla, Community Supported Agriculture (CSA), Wroclaw University of Environmental and Life Sciences, Poland

Shared that she started a community based support group two years ago, which buy their products directly from local farms and distribute the food among the consumer association. The reason for setting up the association was the high costs for organic food. By establishing a direct partnership between consumers and farms the costs are more reasonable for the consumer. It is common to set longer-term agreements and the cooperation works well with the farmer as the consumers share the risk in production with a pay in advance system for the produce for the entire production season.

Catarina Heilborn, Food Strategist, Haninge Municipality, Sweden

No one used to be interested in how tax money was being used for public meals. But this has changed in Sweden when the government set policies on what type of food should be used for public institutions steered through public procurement. Approximately 4-8% of the food sold in Sweden is sold to the public sector. Haninge municipality spends annually 5 million euro on public procurement for meals. They have raised goals for organic food every year with a vision to reach 50% of the assortment by 2017 (currently at 30%). Given increased costs for organic produce the municipality has to be creative by procuring less meat and more vegetables. Ms Heilborn underlined that changing food habits takes time!

Dr. Reinhold Stauß, State Agency for Agriculture, Environmental and Rural Areas of the German Federal State Schleswig-Holstein

It is important to include actors in rural regions in the whole discussion right from the beginning. The confrontation between the agriculture and environmental sector is counter-productive. It is important to overcome this confrontation and come to a dialogue. The Baltic Sea Farmer of the Year Award is a very good example for this. The administration everywhere does not have enough staff to control the farmers. They can only do a minimum of cross compliance checks. With pure control mechanisms we will not be successful, we need to give positive support and motivate the farmers and the sector, in order to change the overall behavior in the agriculture sector.

#### Question – are consumers willing to pay?

Karin Stein-Bachinger - First step in the project for the German retailer Edeka was to support a system where the whole farm can be assessed with regard to nature conservation achievements and to make them visible. The farmers will get remuneration for their efforts through higher prices for the raw products, while consumers' costs do not change. The idea is to inform consumers for the benefit of farming for biodiversity and incentivize buying organic products. In general, food products are too cheap as the real cost of production is not being captured in the overall food production at the end of the chain. However, negative environmental effects are not based on the Polluters Pays Principle. It has to be taken into account that consumers in Poland, Russia and the Baltic States spend considerably more money for food based on their income than other countries around the Baltic Sea.

Marta Szkaradkiewicz Sylla – Unfortunately, 'normal' consumers are not so concerned about biodiversity. They do not get into details about how many species there are when they buy their food. From a consumer perspective, they want the information and decision to make purchases of food products to be simple.

Catarina Heilborn– In Sweden the policies outlined by the municipalities with their goal clearly states how much organic food is being or needed to be purchased. This sends a clear signal to the market and producers across the country.

Markkus Eerola - This conference is one good example of exchanging ideas and experiences on how to create working interaction in the food production chain. Also climate change is a reality which will most likely steer the value in food as well and be an even stronger factor in coming years.

### Question - Are there too many labels? Does it make sense to introduce yet more labels?

Dr. Reinhold Stauß – Questioned whether there is need for new labels or local actors who are willing to take responsibility for their region as suggested by the project presented. He had much doubt that a new label will save the Baltic Sea.



The panelists from left to right: Markus Eerola, Marta Szkaradkiewicz Sylla, Catarina Heilborn and Dr. Reinhold Stauß. Photo WWF/Carsten Bartel

Marta Szkaradkiewicz Sylla– Commented there are already too many labels which confuse the consumer in what is the right goods to buy – would be simpler with less labels and more communication on their meaning.

Catarina Heilborn – It is a question of communicating clearly the motivation behind the aims of why we choose to buy and serve organic food products. Within the entire municipality it is communicated in a way that everyone understands and clearly informs of the reasons behind the initiative.

Birgit Wilhelm, Sustainable Agriculture & Resource Management, WWF – Agree that in small communities it is easy to see the transparency and the source of products like the example in Poland by the consumer association. However in a large supermarket in Berlin for example it is very difficult to have the same transparency back to the farm. She viewed labeling as a helpful guidance for a consumer and thought there is a need for more transparency in the food production chains.

Jan Wärnbäck, Agriculture Expert, WWF – Shared an example of a large agriculture produce cooperation working in cooperative with farmers who have initiated the steering of their own production line from farm to final product when it comes to wheat based products. The initiative is focused to set criteria on more climate and environmentally friendly production of the crops used. These products receive their own

distinct label for having gone through the criteria process. What is interesting is that this is also applied to addressing improvements in conventional farming. However, the problem is the current large monopoly in retail chains which hinders such possible initiatives. In Sweden alone, 85% of the market is shared by three main retailers – how can you negotiate with this market set up?

Knut Ellenberg, German National Winner of Baltic Sea Farmer Award - Uses many ways to communicate to consumers. In Lubeck, Germany we have five huge health shops where the products from 36 farmers are retailed creating a direct link to the farmers respectively. There are many more ways besides labeling to ensure transparency and get in direct contact with the farm production. However consumer associations do not work if you are in a rural area.

Lennart Gladh, Eutrophication Senior Expert, WWF – The bulk of food is sold in shops and therefore we are still missing the link between the farmer and consumer. Much of the processing industries are huge enterprises. Swedish Arla for example, used to promote a cooperative of farmers producing milk. Now the company works in 81 countries and is based in Copenhagen. How do you deal with these large enterprises of production since they also need to be on board?

Catarina Heilborn – In the last year's food procurement process, the municipality broke up the food groups into 16 pieces to ensure a variety of sources where the food is bought from. One could get one farmer to sell eggs, another to sell meat and so on. We are doing business with at least 10 different kinds of companies to try sharing and spreading the investments. Yet from a consumer perspective still want to keep it simple.

### *Round-up of panel*

The panel rounded up the discussions with each panelist sharing their thoughts on how to scale up best practices in agriculture such as the project presented by Karin Stein-Bachinger. Most agreed that information and education were vital. Motivation is also key in demonstrating why and what differences in practices can have. By farmers creating production associations they can deliver good quality food (like good wines) – why not have more joint initiatives to support one another? Maybe food should not be more expensive but farmers should be paid for ecosystem services they are preserving – clean water, clean air, biodiversity!

### Session III: WWF Baltic Sea Farmer of the Year Award

Farmers from the whole catchment area of the Baltic Sea play a crucial role if we want to change the current situation, since they have the opportunity to reduce nutrient losses from their farms. The aim of the WWF Baltic Sea Farmer of the Year Award is to inspire farmers in the entire Baltic Sea region to take an active part in combating eutrophication. Before the conference dinner, WWF announced all the 9 national winners of the 2015 competition along with the regional winner of this year's contest. The innovative measures to help reduce nutrient runoff to the Baltic Sea and achieve sustainable farming from the individual farms were shared with the audience while receiving a diploma for their achievements with the hope their good examples will be replicated by others.

The regional winners of 2015 were Markus Eerola and Minna Sakki-Eerola from Finland. They are awarded for their precise and innovative techniques that have created optimal soil structure and successful retention of nutrients at their organic crop farm Knehtilä. Precision agriculture methods form the basis for [all activities at the Knehtilä farm](#). This includes using advanced technology to analyze the soils and adapting use of equipment to fit different conditions. These efforts have resulted not only in optimal yields but also increased economic returns for their farm.

More information on the winning farmers can be found in the [brochure](#).



Markus Eerola and Minna Sakki-Eerola from Finland receiving the prize for the Regional winners of the WWF Baltic Sea Farmer of the Year Award 2015 from Marco Vollmar, Executive Director of Public Relations and Policy, WWF Germany. Photo WWF/Carsten Bartel

Film clip on past winners of the award showcasing how farmers are leading the way to improve the situation for agriculture and Baltic Sea can also be viewed [here](#). As well as more information on the WWF project of the Award at [www.panda.org/baltic\\_farmer](http://www.panda.org/baltic_farmer)



Evening prize ceremony with all nine national winners of the WWF Baltic Sea Farmer of the Year Award 2015. Photo WWF/Carsten Bartel

#### Session IV: [What needs to be put in place to deliver Baltic friendly production and consumption?](#)

Three parallel sessions looked at the solutions that need to be put in place to deliver Baltic friendly farming within the focus of consumption trends, production with reduced impact and nutrient losses and policy driven tools.

##### *Session 1 – Eating for the Baltic*

One of today's biggest challenges is the increasing consumption of meat. At the same time, the way meat is produced has also effects on the environment with implications on biodiversity, global warming and more importantly in the context of the conference – eutrophication. The session addressed the issue of how to raise the awareness of consumers in understanding the linkages between meat consumption and the consequence it has on the Baltic Sea concerning eutrophication. Furthermore, it focused on what different actors in the chain from field to plate, as individual consumer and business, can do to improve the status of the Baltic Sea by eating for the Baltic.

David Gustavsson from Sweden Water Research showed the increase in meat consumption has a direct correlation to increase nitrogen in water sewage treatment. It is estimated that 70% of increased purchase of protein is due to increased purchase of animal based protein and that currently in Sweden consumers are consuming hugely over the recommended WHO recommendations. The reason for the increase, looking between the years 1990-2006, is a reduced meat price by 12%, other food price has increased by 5% and possible trends in protein based diets.

So what does this mean for a waste water treatment system? Based on the increase in N, it shows that the removal needs to be increased from 12 to 14 g N person<sup>-1</sup> day<sup>-1</sup> which assuming needs for further investments for nitrogen removal would estimate to cost approximately 830,000 Euro per year ([see presentation](#) for more detailed calculations).

Jan Wärnbäck, Agriculture Expert WWF Sweden – presented the dilemma of the reactive nitrogen in the system and the cost of using nitrogen which exceeds hugely the gains from this nutrient. He underlined that agriculture is a major source of P and N to the Baltic Sea even though there has been and still much being done to reduce the runoff from farms. WWF has chosen to address the problem through daily consumption habits – in terms of how much meat we can consume to help also this reduction. Today in Sweden, 1 kg of meat is consumed per week which has increased by 70% from the 1970s. WWF has developed a consumer recommendation guide for meat consumption based on 4 criteria that gives recommendations on animal husbandry, biodiversity, use of pesticides, animal welfare and climate. WWF recommends to eat less but better meat, meaning 500 grams of meat per week which is in line with the Swedish National Food Agency recommendation for health.

Catarina Heilborn, Food Strategist for the Haninge Municipality Sweden – presented a concrete example of how to change consumer trends by setting regulatory policies to support and guide the way to more sustainable system in serving public gastronomy meals to public institutions (schools, retirement homes, hospitals). The meals are sustainable based on the following criteria; less and better meat, increase organic and more vegetarian based meals that are seasonal and local. The initiative also supports local producers in the local areas and decrease transport emissions. Link to document on: [Guidelines for primary schools, secondary schools and youth recreation centres.](#)

Kaspars Zurins, Latvian Rural Advisory & Training Centre – shared the developments in Latvia the last three years in moving to more sustainable food consumption in municipalities through public procurement processes. Has started with a focus to increase the serving of vegetables however development is slow and back steps has also occurred. The Rural Advisory and Training Centre has tried to give more information to raise awareness to school chefs and consumer food circles. However not as easy like Sweden to set an overall general procurement policy for meals in public institutions since they are not run or overseen by the municipalities.

Each speaker was asked to comment on: [Whose task should it be to change consumer behavior?](#)

David Gustavsson: change is connected to social aspects, need models and examples, opinion leaders to inspire others to adopt new behaviors.

Catarina Heilborn: obligation in the schools (since publicly financed) to offer good food. She hoped that kids would learn to use more sustainable food and get even their parents to change their consumer behavior and patterns.

Jan Wärnbäck: food is too cheap. The trend to try to make organic food as cheap as conventional is not good since it drags both in the bulk-price level. The production is invisible. One needs to make it visible how the food is produced. When the public sees and understands how the production works, he thinks it makes people prepared to pay a bit more for sustainable production.

Kaspars Zurins: as a producer you want to be able to sell your products at reasonable prices. As a farmer you want to produce in a sustainable way, but it can not be economically impossible. New technology and innovations can help. There are people who do not care, but for those who care, there should be labels which make it easier on how to choose.

## *Session 2 – Production with reduced impact and nutrient losses*

Numerous measures have been undertaken in the Baltic Sea region to improve farming standards and ensuring Baltic friendly farming yet all types of farming causes environmental impact. Nutrient runoff, changes in biodiversity and ecosystems and soil structure are some commonly known examples. Whatever the type of agricultural production system, there is a need to produce food for an increasing population with less impact on nature and ecosystems. Sustainable agricultural production needs to reduce the use of fossil fuels as well as Nitrogen and Phosphorous and other necessary resources while at the same time deliver products to the market and consumers meeting their needs and wishes. With this perspective there will most likely be a continued need for different production systems, including both conventional and organic agriculture.

Presentations were given by the following:

Mogens Erlingson - Head of Strategy & Business Development, Yara Nordic  
Present the phosphorous deficiency found in different areas of Swedish arable land. High yields require a good content of P and thus it is critical to apply best practices to enable optimal yield output while retaining P in the soil structure. Yara showed some of their technics to stabilize soil particles for reduction of nutrient leaching such as the N sensor and using calcium in the soil.

Dr. Michelle McCrackin, Baltic Eye, Baltic Sea Centre - Fertilizers are used across all of Europe and directly related to the amount of nutrients found in the rivers. In the Baltic Sea region, both river N and P loads have decreased 22% in the past 20 years. It is important to recognize the progress/success in reducing nutrient load resulting from a number of measures such as improved sewage treatment and improved nutrient management in agriculture. Nutrient bookkeeping is an important tool needed to monitor the use of nutrients however the policies are different between Baltic Sea countries making it hard to make an overall analysis.

Mikhail Durkin, Executive Secretary, Coalition Clean Baltic – showed the scale of agriculture in the Baltic region and the divisions of use of the EU Common Agriculture Policy direct payments per country. A lot depends on the economic situation in countries and there is clear competition between countries instead of a joint 'branding' of Baltic products. Also, there is clear miscommunication on the importance of the environmental footprint of agriculture. His presentation showed a map underlining how mitigation measures need to also be adopted beyond the coastal Baltic Sea countries that have an impact within the catchment area.

Ari Kultanen, ProAgria – Project Manager of NUTRINFLOW – presented the Central Baltic Interreg project NUTRINFLOW (Practical actions for holistic drainage management for reduced nutrient inflow to Baltic Sea) that started September 2015, for a duration of 3,5 years. The partner countries are Finland, Latvia and Sweden where the lead partner is ProAgria based in Southern Finland, an agricultural advisory organization. The project partners are local or regional authorities, research institutions and farmer's organizations.

The project aims to establish good practical examples of win-win measures and methods for the society and agricultural producers in water management for the retention of nitrogen and phosphorus. Pilot areas in each country are targeted in river catchments or sub-catchments, where all parts of nutrient runoff and

water management are considered: starting from the fields and soil, subsoil drainage, open main drains and brooks to the rivers.

Knut Ellenberg representative from Hof Klostersee farm and National Winner of the Baltic Sea Farmer of the Year Award 2015 in Germany - commented the presentations of the workshop by noting much of the solutions presented are 'end of pipe' solutions and should instead focus on the beginning of the chain – the source of the nutrients by working directly with farmers on the practical measures in farming. One of the basic measures is to see to the soil composition and structure to ensure less leakage of nutrients. Knut Ellenberg showed this by displaying various types of soils and what these have for characteristics in retaining nutrients. He made the point to underline that each field is different – one solution does not always fit all.

### *Session 3 – Policy driven tools*

There are a broad number of different policies implemented in the Baltic Sea region to foster agriculture with less nutrient runoff. Some are already in place since some years and others were just recently introduced. The focus of the session was on the effectiveness of these policies in order to improve the runoff reduction and to identify gaps in current policy schemes on how farmers in cooperation with the retailers and the consumers can contribute to the goal of a 'Bluer Baltic Sea'.

Two presentations were given by Frederike Balzer (German Federal Environment Agency) and Weert Sweers (Chamber for Agriculture of Lower Saxonia, Germany) on the situation in Germany on how to meet the maximum allowable inputs (MAI) published within the HELCOM Baltic Sea Action Plan (BSAP) in a situation where point sources are basically under control and the main focus thus is on the diffuse sources. Firstly, the question was raised on the tools needed to mitigate the diffuse sources by regulations, voluntary measures (including compensation and incentives), levies and taxes. However Germany is currently redesigning its legal system of nutrients. One of the central mechanisms will be the farm bookkeeping system which controls and monitors the used nutrients on the farm.

Secondly, the question taken up was how to secure money for investment services

- How effective are taxes and levies?
- How to get more positive stress to farmers – proactive
- What do you think of cost effectiveness – when it comes to bookkeeping?

### *Plenary discussion between participants and rapporteurs of each session*

There was concern that by reducing the consumption of meat it will only move the problem to exporting more of the meat produced. Many countries in the Baltic region are already heavily focused on export like for example Denmark and Germany. Therefore it is important to look at the effects on the local market as well as on the population – in some instances much higher value meat pieces are consumed locally and lower value meat is exported so therefore could send a strong market signal while also minimizing the local effects of increased nitrogen to be filtered in waste water plant treatments.

There was a discussion that there should not be a specific separation between organic and conventional farming when it comes to the nutrient cycles – more emphasis should be made on the nutrient cycle than what type of farming is practiced.

Too often we are giving farming advice from an economic optimum – what if we instead worked from the perspective of an ecological optimum. Representative from the business sector argued there is no conflict between economic and ecological optimum in agriculture as technology enables the two to be balanced when applying fertilizer through precision farming.

From a farming perspective, it was stated that the Greening Programs in the current CAP will likely have a deeper effect than monitoring since farmers will learn to invest in their crop rotation and learn new techniques which will lead to a bigger change than other programs. – i.e. goals can be achieved in other ways (besides nutrient bookkeeping which was discussed as a measure farmers must adopt in Germany).

Poland has very little organic farming, accounting for less than 1%, thus better to preserve small farmers in Poland and not just push for them to become organic. An organic farmer depends more on labor force so if Poland invests in organic farming they will have a strong market advantage to export goods to neighboring countries like Germany.



Some 100 participants from 12 countries with various backgrounds – from science to farming, from ministerial level and European policy to environmental NGOs, from advisors to business participated in the conference. Photo WWF/Cartsen Bartel

## Session V: Plenary panel discussion: What next? Summary and Action to be taken

The conference continued with a plenary panel discussion between different stakeholders from research, eNGO, ministry, regional coordination, agriculture advisors and regional project leads to discuss the future of the GABBS concept and conference.

Paula Biveson, Project Director at Baltic Sea Action Group – suggested the conference should in future focus on the thematic network and highlighted the possibility to retrieve funding for the next GABBS through applying for funds from Horizon 2020 which had a call open and promised to be engaged in trying to find a way forward for the future of GABBS.

Staffan Lund, Head of Unit Vice-Chancellor's Office Grant Office – Swedish University of Agricultural Sciences (SLU) - pushed to initiate further collaborative projects. Next conference could be focused on innovative ideas – in all aspects. He saw the added value of the conference and in future thought it should be used as an opportunity to bring forward new ideas that could be discussed and evaluated in a more interactive way than past conferences have done.

Andrzej Podscianski, National Water Management Authority and Coordinator for EUSBSR Policy Area Nutri, Poland– will organize similar conference in the coming year related to agriculture issues and nutrient reduction with the aim in trying to build a stakeholder list and should include all of the conference participants from this 2015 GABBS conference. He stressed the importance and question of how to move messages to a more general public. He noted there was a lack of a clear message to politicians about the discussions at the conference and thus external communications should be improved in future. HE also suggested for organizers of the conference to reflect on the past 7 years of the GABBS and underlined that the content should be less scientific in future.

Ari Kultanen, Expert International Projects at ProAgria – promised to use the project funds of his current project Nutrinflow to support a future GABBS conference.

Kaspars Zurins, Latvian Rural Advisory and Training Centre – suggested to host the next GABBS in Latvia (the birth of the first conference in 2009)!

## Closing remarks

Dietrich Schulz, Environmental Protection Agency, Germany wrapped up the conference by explaining his enjoyment in taking part in the GABBS conference thanks to its relaxed atmosphere and intensive and fruitful discussions. For him it is always the ceremony of the farmers organised by WWF which show that environmentalists are engaged not only to criticise but to also promote good practices. This is an excellent initiative which should be developed further and built on. He personally promised to try his best and convince Federal Environment Agency to continue to contribute to this conference series to make also a 2016 conference happen. He closed the conference by noting it is important to have positive incentives and that there is something to win even next year!

On behalf of the whole organising group Dietrich Schulz expressed thanks to all organisers, the moderator, sponsors and all participants including the farmers.



Guided tour of the Insel e.V. farm in Kransdorf, Rügen with the 2015 National Winners of the WWF Baltic Sea Farmer of the Year Award. Tour guide shared their lessons learned and experience of running a cooperative organic farm. Photo WWF/Carsten Bartel

## Annex 1 Programme

### 'A Greener Agriculture for a Bluer Baltic Sea'

Moderation by: Sonja van Renssen

Programme Day 1: Thursday, 5 November 2015	
12:30-13:00	Registration and sandwiches
Theme: Production and consumption of agricultural goods in the Baltic region	
13:00 – 13.10	Opening address and welcome Pauli Merriman, WWF Baltic Ecoregion Programme
13:10 – 13:35	"Phocoena phocoena – The Baltic harbour porpoise by Frollein Brehm's Life of Animal" Barbara Geiger
13:35 – 13:55	National perspective on the production and consumption of agricultural goods Dr. Lilian Busse, Environment Protection Agency (UBA) – Germany
13:55 – 14:15	Agriculture policy for a greener Baltic Sea - successes and challenges from North Germany Dr. Peter Sanftleben, Ministry of Agriculture Mecklenburg-Vorpommern, State Secretary Germany
14:15-14.45	Nutrient management in planetary boundaries: Global to local Prof. Dr. Helena Kahiluoto, Natural Resources Institute Finland
14:45-15:30	Q & A round with the speakers
15.30 – 16:00	<i>Coffee Break</i>

Theme: How to foster sustainable resource management?	
16:00– 16:15	Presentation of Baltic Sea Farmer of the Year Award (film clip)
16:15 – 17:45	How to find solutions on taking action to change the trends and reduce the effects to the Baltic Sea.  How consumers can actively promote biodiversity? - A pioneer project for biodiversity in cooperation with farmers, retailers and consumers presented by: Dr. Karin Stein-Bachinger, Leibniz-Centre for

	<p>Agricultural Landscape Research (ZALF) e.V.</p> <p><i>Panel discussion with the following</i></p> <ul style="list-style-type: none"> <li>- Markus Eerola – Finnish national winner of the Baltic Farmer 2015</li> <li>- Marta Szkaradkiewicz - Agriculture Supported by the Community (ASC), Poland</li> <li>- Dr. Karin Stein-Bachinger, Leibniz-Centre for Agricultural Landscape Research (ZALF) e.V.</li> <li>- Dr. Reinhold Stauß, (State Agency for Agriculture, Environment and Rural Areas of the German Federal State Schleswig-Holstein)</li> <li>- Catarina Heilborn, Food Strategist for Haninge Municipality, Sweden</li> </ul>
17:45 – 18:00	Wrap up of first day and outlook for the workshops next day
18:00 – 19:00	
19:00 – 01:00	WWF Baltic Sea Farmer of the Year Award Ceremony followed by dinner banquet

Day 2: Friday, 6 November 2015	
9.00 – 9.10	Introduction to theme: What needs to be put in place to deliver Baltic friendly production and consumption? <i>Introduction of the workshops</i>
9:10-10:45	Workshop Breakout sessions : Three parallel workshops address : What are the necessary steps and tasks for households, consumers, producers, farming and policy makers
	(1) Eating for the Baltic (moderation: Ottilia Thoreson, WWF Baltic Ecoregion Programme)
	(2) Production with reduced impact and nutrient losses (moderation: Lennart Gladh, WWF Sweden)
	(3) Policy driven tools (moderation: Dietrich Schulz, UBA Germany)
10:45-11:15	<i>Coffee Break (with snacks) in the main conference room</i>
11:15-12:15	Plenary: Report back from workshops by rapporteurs and moderators Discussion
12:15 – 13:00	What next? – Summary and Action to be taken <ul style="list-style-type: none"> <li>· Anders Alm – Ministry of Environment &amp; Energy, Sweden</li> <li>· Paula Biveson – Project Director, Baltic Sea Action Group</li> <li>· Ari Kultunen– Expert, International Projects at ProAgria</li> <li>· Staffan Lund - Swedish University of Agricultural Sciences</li> <li>· Kaspars Zurins – Latvian Rural Advisory &amp; Training Centre</li> <li>· Andrzej Podscianski - National Water Management Authority and Coordinator for EUSBSR Policy Area Nutri, Poland</li> </ul>
13:00 – 13:10	Closing words Dietrich Schulz, Environment Protection Agency (UBA) – Germany
13:15 (latest)	<i>End of conference</i>
<p>Information: All participants of the conference have the possibility to visit the Ozeaneum <a href="http://www.deutsches-meeresmuseum.de/en/ozeaneum/besucherinformationen/">http://www.deutsches-meeresmuseum.de/en/ozeaneum/besucherinformationen/</a> with reduced entrance fee of 8.- EUR (instead of 16.- EUR)</p>	

## Annex 2 Participant list

Last name	First name	Organization	Country
Alm	Anders	Ministry of the Environment and Energy	Sweden
Anholm	Elin	Baltic Farmer Award Winner	Denmark
Anholm	Mogens	Baltic Farmer Award Winner	Denmark
Antwi	Ignatus	International Agriculture & Environmental Development Studies	Ghana
Ariberti	Gerlinde	Baltic Farmer Award Winner	Germany
Balzer	Frederike	Federal Environment Agency	Germany
Berninger	Kati	Tyrsky Consulting Ltd.	Finland
Biniek	Lukasz	YARA Poland	Poland
Biveson	Paula	Baltic Sea Action Group	Sweden
Böhmer	Michaelae	NDR television	Germany
Bondgaard	Frank	SEGES	Denmark
Briedis	Andrejs	Latvian Rural Advisory and Training Centre	Latvia
Busse	Lilian	German Federal Environmental Agency	Germany
Cholovska	Nataliya	Environmental Lviv Municipul Public Organization (LMPO)	Ukraine
Chreptowicz-Liszewska	Magda	National Water Management Authority	Poland
Durkin	Mikhail	Coalition Clean Baltic	Sweden
Eerola	Markus	Baltic Farmer Award Winner	Finland
Eiden	Benedikte	WWF Germany	Germany
Ellenberg	Knut	Baltic Farmer Award Winner	Germany
Erkkilä	Elina	WWF Finland	Finland
Erlingson	Mogens	YARA Sweden	Sweden
Frank-Kamenestky	Dmitry	HELCOM	Finland
Galtsova	Valentina	Baltic Farmer Award Winner	Russia
Galtsova	Vladimir	Baltic Farmer Award Winner	Russia
Geiger	Barbara	Frollein Brehm's Life of Animal	Germany
Gelin	Lotta	Baltic Farmer Award Winner	Sweden
Gelin	Hubert	Baltic Farmer Award Winner	Sweden
Gladh	Lennart	WWF Sweden	Sweden
Gramling	Roland	WWF Germany	Germany
Granhholm	Kaj	Swedish University of Agricultural Sciences	Sweden
Gustavsson	David	Sweden Water Research	Sweden
Hagen	Steffi	LMS Agricultural Consultancy GmbH - WRRL-Consultancy	Germany

Heilborn	Catarina	Municipal administration of Haninge	Sweden
Hillmann	Melanie	WWF Germany	Germany
Kaasinen	Susanna	HELCOM	Finland
Kahiluoto	Helena	Natural Resources Institute Finland (Luke)	Finland
Kalinowska	Marta	WWF Poland	Poland
Karhunen	Anni	Ministry of the Environment of Finland/ Programme to promote the recycling of nutrients	Finland
Kasak	Kuno	Estonian Fund for Nature	Estonia
Kazotnieks	Janis	Latvian Rural Advisory and Training Centre	Latvia
Khan	Muqarab	Institute of health and management sciences	Pakistan
Kiehn	Annika	Journalist	Germany
Kislyak	Marina	Interreg Baltic Sea Region Managing Authority/Joint Secretariat	Germany
Kosin	Weronika	National Water Management Authority	
Krämer	Inga	Leibniz ScienceCampus Phosphorus Research Rostock	Germany
Kultanen	Ari	Nutrinflow ProAgria Southern Finland	Finland
Lamp	Jochen	WWF Germany	Germany
Lapina	Vera	Baltic Fund for Nature	Russia
Lavenieks	Juris	Jelgava Local Municipality	Latvia
Ludley	Horst	German Biogas Association	Germany
Lund	Staffan	Swedish University of Agricultural Sciences, SLU	Sweden
Luomanpera	Seija	Yara Suomi Oy	Finland
Martin	Ines	Deutsches Meeresmuseum	Germany
Mccrackin	Michelle	Stockholm University Baltic Sea Centre	Sweden
Meißner	Matthias	WWF Germany	Germany
Merriman	Pauli	WWF Baltic Ecoregion Programme	Sweden
Nadiradze	Kakha	Association for Farmers Rights Defense, AFRD	Georgia
Nielsen	Mogens	YARA Denmark	Denmark
Palm	Ola	JTI - Swedish Institute of Agricultural and Environmental Engineering	Sweden
Petrosiute	Julija	Lithuanian Fund for Nature	Lithuania
Pirimäe	Kristja	Estonian Fund for Nature	Estonia
Podscianski	Andrzej	National Water Management Authority	Poland
Pohl	Silke	WWF Germany	Germany
Pölma	Merje	Ministry of Rural Affairs	Estonia
Ponomarev	Mikhail	Northwest Research Institute of Agricultural Economics	Russia
Pulturs	Rihards	Malpils Biotechnology Center	Latvia

Pulturs	Larsens	Malpils Biotechnology Center	Latvia
Purgalis	Ingus	Pasaules Dabas Fonds Latvia	Latvia
Rannik	Katrin	Ministry of Rural Affairs	Estonia
Reitzig	Andreas	Baltic Farmer Award Winner	Poland
Reitzig	Elzbieta	Baltic Farmer Award Winner	Poland
Sakki-Eerola	Minna	Baltic Farmer Award Winner	Finland
Sammler	Lii	Estonian Farmers Weekly "Maaleht"	Estonia
Sanftleben	Peter	Ministry of Agriculture Mecklenburg-Vorpommern	Germany
Schulman	Anna	Ministry of Agriculture and Forestry	Finland
Schulz	Dietrich	Federal Environment Agency	Germany
Sosnowska	Anna	WWF Poland	Poland
Sprukule	Maira	Baltic Farmer Award Winner	Latvia
Sprukulis	Juris	Baltic Farmer Award Winner	Latvia
Staniszewska	Maria	Polish Ecological Club/Coalition Clean Baltic	Poland
Stauß	Reinhold	State Agency for Agriculture, Environment and Rural Areas of the German Federal State Schleswig-Holstein (LLUR)	Germany
Stein-Bachinger	Karin	Leibniz Centre for Agricultural Landscape Research (ZALF e.V.)	Germany
Surovtsev	Vladimir	Northwest Research Institute of Agricultural Economics	Russia
Svanbäck	Annika	Stockholm University, Baltic Sea Centre	Sweden
Sylla	Marta	Wroclaw University of Environmental and Life Sciences	Poland
Szkaradkiewicz	Marta	Agriculture Supported by the Community (ASC)	Poland
Thoreson	Otilia	WWF Baltic Ecoregion Programme	Sweden
Torkler	Peter	International Baltic Sea Foundation for Nature Conservation	Germany
van Renssen	Sonja	Freelance climate energy & environment journalist	Belgium
Vollmar	Marco	WWF Germany	Germany
Wallenberg	Peter	Federation of Swedish Farmers	Sweden
Wärnbeck	Jän	WWF Sweden	Sweden
Wilhelm	Birgit	WWF Germany	Germany
Živatkauskas	Valdonijus	Baltic Farmer Award Winner	Lithuania
Živatkauskienė	Vilma	Baltic Farmer Award Winner	Lithuania
Zurins	Kaspars	Latvian Rural Advisory and Training Centre	Latvia