



Document title	Additional information on the BSAP actions relevant for the Agri group
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Agenda Item	2 - Additional information for the actions in the updated BSAP
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Background

As outlined in the workplan for the BSAP update, the HELCOM Working Groups will in spring 2021 collect additional information for the actions planned to be included to the updated BSAP. HOD 59-2020 agreed that such additional information include, for example, the possible effect of the action, relevant pressures and activities targeted by the actions and the implementing entity. The additional information is planned to be used to support the implementation of the actions as well as the follow-up.

AGRI 11-2021 considered the additional information on BSAP actions related to the Agri group, agreed on proposals for some actions as well as agreed to organize an intersessional meeting to complete the task. The meeting took note that most of the formulations for the remaining actions had been recently agreed and requested the Secretariat to compile additional information for these actions and circulate it to the Agri group by 11 May 2021.

This document includes draft additional information for the remaining actions compiled by the Secretariat. The cells that contain information that was already agreed by AGRI 11-2021 are coloured grey and the cells with the information for consideration by AGRI 11A-2021 are coloured white.

The list of pressures and activities to be linked to the action is contained in a separate Excel attachment.

Action requested

The Meeting is invited to agree on the additional information for the remaining BSAP actions related to Agri group.

Table 1. Draft supplementary information to be provided for the actions relevant for the Agri group in the eutrophication segment

Code	Action	Type of action	Rationale	Potential effect (if available)	Implemented by	Overseeing WG/ EG	Indicator for achievement	Activities	Pressures
<i>Theme: Agriculture</i>									
EN01	Establish site specific buffer zones to reduce nutrient losses from agricultural land, for example on parts of fields where surface runoff and erosion occurs, along ditches or at surface water inlets	Measure	A site-specific buffer zone (perennial crop such as grass) can be established and maintained on parts of the agricultural land where erosion and surface runoff frequently occur. It can, for example, be on erosion-prone parts of a field, along ditches, streams and lakes or at surface water inlets to the drainage system. The location, size and shape of the buffer zone is adapted to the specific site.	Buffer zones reduce the risk of nutrient losses caused by soil tillage close to ditches and watercourses and fertilizers being unintentionally spread outside the field or directly into the water. The effectiveness is higher in places where there is a high risk of erosion or runoff.	National	AGRI	Relevant regulation or support scheme in place for establishing site-specific buffer zones. Advice and/or modelling available for farmers to find suitable sites.	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources
EN02	Balance fertilization rates site specifically and promote precision fertilization practices to improve nutrient use efficiency and reduce nutrient losses	Measure	To balance fertilization rates site specifically conditions at the specific site and in the specific year are considered. For nitrogen, relevant techniques include applying nitrogen fertilizer in multiple doses. For example, unfertilized plots, N-sensors and satellite photos can be utilized to assess how much nitrogen to apply during the season, and to adapt the application rate within different parts of a field. For phosphorus, information on the soil	The measure can reduce over-fertilization and thus nutrient losses. The effectiveness of the measure depends greatly on how efficiently nutrients are currently used, i.e. how much efficiency can be improved.	National	AGRI	Relevant regulation, support scheme or advice in place to support farmers in site-specific fertilization and precision farming.	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources

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			phosphorus content is utilized to target the fertilization site specifically.						
EN03	Develop [by 2025] and apply [by 2027] the best practices to improve soil structure and aggregate stability on clay soils to reduce phosphorus losses from agricultural lands, for example by using soil structure lime or gypsum	Measure	A large proportion of phosphorus losses from clay soils are in particulate form and measures that improve soil structure and increase aggregate stability have potential to reduce phosphorus losses from these soils. Incorporation of structural lime (mix of CaO and Ca(OH) ₂ with CaCO ₃) or gypsum (CaSO ₄ · 2H ₂ O) into the topsoil are measures which immediately improve the soil structure. There could be also other measures to improve soil structure with justified environmental effect.	Studies on structural liming have showed 0-60% reduction of phosphorus losses from clay soils. Studies have demonstrated that gypsum amendment of fields reduces phosphorus loads from clay fields by around 50%. Gypsum contains sulphate, which is gradually flushed away from soil to nearby waterways, and thus gypsum can only be utilized in arable fields along waterways running into the sea.	Joint/national	AGRI	Best practices to improve soil structure and aggregate stability on clay soils to reduce phosphorus losses from agricultural lands are compiled in a regional document. The best practices are applied nationally in areas where the measures are applicable e.g. with the help of support schemes, regulation or guidelines.	Agriculture	Input of phosphorous — diffuse sources, point sources
EN04	Promote organic farming to increase its proportion to at least 25% of agricultural land by [2030].	Measure	The main difference between organic and conventional farming systems are significant restrictions for the use of fertilizer and pesticides on organic farms. Additionally, import of fertilizers, fodder, manure, pharmaceuticals, cleansing agents and stocking densities are limited. Therefore, organic farming has a	Organic farming can reduce nutrient losses. A study shows that conventional farming emits on average 27.3 kg N/ha, while organic farming emits only 17 kg N/ha. Organic farming also reduces phosphorus losses through a reduction in erosion. In organic farming erosion is reduced by 26% compared to	National	AGRI	The proportion of organic farming is 25% of the agricultural land.	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources; Input of other substances (e.g. synthetic substances, non-

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			high potential to contribute to the protection of the Baltic Sea. It reduces the emissions of nutrients, pesticide and veterinary medical products, thereby protecting surface and groundwaters and the Baltic Sea. There can also be added benefits for the biodiversity and human health.	conventional farming. Due to a prohibition of the use of chemical-synthetic pesticides in organic farming their input is reduced to zero.					synthetic substances, radionuclides) — diffuse sources, point sources, atmospheric deposition, acute events
EN05	Discourage application of manure and other organic fertilizers in the autumn at fields without green plant cover in winter	Measure	Timing of manure use is one of the most important aspects for ensuring a high utilization effect of manure and field trials document that leaching risk is highest for manures that are applied in autumn.	Reducing the post harvest application of manure is an effective way of addressing nutrient loss as most nutrient leaching occurs during winter, when soils are frozen, water saturated and plant growth is minimal.	National	AGRI	Relevant regulation or support scheme in place and advice available to discourage application of manure and other organic fertilizers in the autumn at fields without green plant cover in winter.	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources
EN06	Improve knowledge exchange by establishing dialog between farmers, authorities and decision makers	Supporting action	Improved knowledge exchange from farmers to the decision makers and vice versa is important for making decisions that are applicable in the farming practices, and communicating the reasoning behind the decisions in an understandable way is important to make them better acceptable among farmers. Direct contacts should be promoted for communication between		Joint/ National	AGRI	Organization of a regular Baltic Sea regional forum to exchange knowledge between farmers, authorities and decision makers Ensuring ways or means for regular exchange of knowledge nationally	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources

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			scientists, policymakers and farmers.						
EN07	Enhance mutual learning among farmers on best practices and innovative technologies	Supporting action	Transfer of innovations and mutual learning among farmers across several BSR countries can be one of the effective and relatively cost-efficient measures that could help to disseminate and adopt nutrient abatement sensitive technologies for less price and at the same time save spending in other cost categories.		National	AGRI	Farmer mutual learning groups, cross visits, demonstration activities, collaboration with researchers, advisors and technology companies in disseminating and introducing new technologies.	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources
EN08	Develop [by 2025] recommendations for BAT/BEP to reduce ammonia and GHG emissions from livestock housing, manure storage and spreading.	Measure	Certain technologies and practices for handling and spreading manure have long been surpassed by newly developed technologies in terms of environmental performance. These outdated practices are often still used because they are cheaper or easily accessible. Utilizing the best available technologies is needed to reduce the emissions.	Utilizing the Best Available Technologies and Best Environmental Practice will reduce the emissions of ammonia and greenhouse gases.	Joint	AGRI	Regional document such as Recommendation or guideline on BAT/BEP to reduce ammonia and GHG emissions from livestock housing, manure storage and spreading	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition
EN09	Develop [by 2025] recommendations for manure management specifically for horses, sheep, goats, and fur farming	Measure	There is no consistent approach to manure management for horses, sheep, goats, and fur farming across the Baltic Sea region. The situation regarding these animals (number of animals and current regulation) varies	Improving the manure management for these animal groups will reduce the nutrient emissions especially if the number of animals is large and there is currently no proper management.	Joint	AGRI	Regional document such as Recommendation or guideline for manure management specifically for horses, sheep, goats, and fur farming	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous —

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			in different Baltic Sea region countries.						diffuse sources, point sources
EE01	Apply as a minimum the updated EU's BREF document and Conclusions on BAT for intensive rearing of poultry and pigs, especially for the facilities located within areas critical to nutrient losses	Measure	The EU BAT reference document (BREF) presents the Best Available Technologies for intensive rearing of poultry and pigs. Utilizing BAT especially within areas critical to nutrient losses is important to minimize nutrient emissions.	Implementing BAT will reduce nutrient emissions. The possibility to prevent or reduce nutrient emissions by using BAT is described in the document for different technologies.	National	AGRI	The EU BREF or similar national document is utilized when permitting intensive rearing of poultry and pigs.	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources
EE02	Review national regulation and voluntary measures and – if relevant – implement further or revised measures, as compiled in the revised palette of measures for reducing phosphorus and nitrogen losses from agriculture.	Measure	The revised palette of measures for reducing phosphorus and nitrogen losses from agriculture adopted at the Ministerial Meeting 2013 is intended to support implementation of part II Annex III of the 1992 Helsinki Convention "Prevention of pollution from agriculture". The Palette contains technical, managerial and legislative measures, based on best available knowledge and sought to help in implementation of the aforementioned provisions.	Implementing the measures can reduce nutrient inputs from agriculture. The potential effect of the different measures is included in the palette of measures.	National	AGRI	Review of national and voluntary agri-environmental measures. Measures included in the palette of measures implemented into regulation or voluntary measures based on the review, if found relevant.	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources
EE03	Implement and enforce the provisions of part 2 of Annex III "Prevention of pollution from agriculture" of the 1992 Helsinki Convention	Measure	Part 2 of Annex III of the Helsinki Convention sets out provisions for prevention of pollution from agriculture. By 2021 the provisions have yet	Implementing the provisions of the annex on plan nutrients, plant protection products and environmental permits will reduce the input of	National	AGRI	Provisions of part 2 of Annex III "Prevention of pollution from agriculture" of the Helsinki Convention implemented and enforced nationally.	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition;

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			not been implemented by all HELCOM countries.	nutrients and hazardous substances.					Input of phosphorous — diffuse sources, point sources; Input of other substances (e.g. synthetic substances, non-synthetic substances, radionuclides) — diffuse sources, point sources, atmospheric deposition, acute events
EE04	Agreement on national level by 2023 on measures to reduce nutrient surplus in fertilization practices to reduce nutrient losses	Measure	A large nutrient surplus in fertilization practices increases the risk of nutrient losses. There are several measures, technologies and restrictions that can be applied to reduce the nutrient surplus.	Reducing the nutrient surplus in fertilization practices will decrease the risk of nutrient losses. The potential effect of some of the possible measures that can be utilized is included in the palette of measures.	National	AGRI	Agreement on national level on measures to reduce nutrient surplus in fertilization practices to reduce nutrient losses Information on measures for reducing nutrient surplus, e.g. limits for surplus	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources
EE05	Investigate opportunities for taxation of mineral fertiliser and/or taxation of nitrogen surplus and/or payments for agri-environment measures [by 2024], and implement them building on the experiences available in various countries.	Measure	Financial instruments such as taxes or payments can be utilized to incentivise making better use of nutrients available in manure and other organic fertilizers, thus reducing mineral fertilizer use, enhancing nutrient recycling and reducing nutrient losses.	Potential effects will be investigated as part of the action.	Joint/national	AGRI	A HELCOM report on experiences in the BSR countries and the effects of financial instruments such as taxation of mineral fertiliser and/or taxation of nitrogen surplus and/or payments for agri-environment measures to enhance nutrient recycling and reduce nutrient losses. Suitable measures implemented nationally building on the experiences	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources

Code	Action	Type of action	Rationale	Potential effect (if available)	Implemented by	Overseeing WG/ EG	Indicator for achievement	Activities	Pressures
							available in various countries.		
EE06	Apply innovative water management measures where appropriate, for example, lime filter ditches, sediment traps and controlled drainage, and nature-based solutions, such as two-level ditches and constructed wetlands, when upgrading and renovating agricultural drainage systems	Measure	Upgrading and renovating agricultural drainage systems is currently topical in many Baltic Sea region countries. Applying innovative water management measures where appropriate, for example, lime filter ditches, sediment traps and controlled drainage, and nature-based solutions, such as two-level ditches and constructed wetlands, can reduce nutrient losses.	Innovative water management measures can reduce the input of nutrients from agriculture. The potential effect of some of the proposed measures is included in the palette of measures.	National	AGRI	Relevant legislation, advice and/or support schemes is in place to support the application of innovative water management measures.	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources
<i>Theme: Atmospheric nitrogen emissions</i>									
EE16	Revise [by 2023] the HELCOM Recommendation 24/3 on “Measures aimed at the reduction of emissions and discharges from agriculture” ensuring reduction of agricultural ammonia emissions and considering relevant BAT and BEP	Measure	According to the EMEP assessment of emissions of nitrogen in the region and its deposition on the Baltic Sea water area, proportion of nitrogen emissions from agriculture has increased and it has been acknowledged that some countries are at risk to exceeding national ammonia emission ceilings of the NEC directive. It has been agreed that the Recommendation 24/3 is outdated and requires revision.	The revised HELCOM Recommendation 24/3 will be a tool to reduce ammonia emissions in the Baltic Sea region.	Joint	AGRI	Revised HELCOM Recommendation 24/3 on “Measures aimed at the reduction of emissions and discharges from agriculture” ensuring reduction of agricultural ammonia emissions and considering relevant BAT and BEP	Agriculture	Input of nitrogen — diffuse sources, point sources, atmospheric deposition
<i>Theme: Nutrient recycling</i>									

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EE07/ EN10 a/ EN10 b	Develop [by 2025] legal and institutional tools to advance towards making annual field-level fertilization planning and farm-gate nutrient balancing for nitrogen (N) and phosphorus (P) a requirement for all farms in the Baltic Sea Region to reduce nutrient surplus on farmlands to the highest possible degree.	Measure	Making a field-level fertilization plan before sowing and farm gate nutrient balance after harvesting are tools to follow the nutrient use efficiency of the farm and help reduce overfertilization and nutrient surplus that increases the risk of nutrient losses to the environment. Nutrient balances can be also made on the field level to follow the nutrient flows even more precisely.	Reducing the nutrient surplus and increasing nutrient use efficiency reduces the risk of nutrient emissions.	National	AGRI	Legal and institutional tools to advance towards making annual field-level fertilization planning and farm-gate nutrient balancing for nitrogen (N) and phosphorus (P) a requirement	Agriculture;	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources
EN11 / EE08	Implement adequate measures, especially in agriculture and wastewater management, to achieve the objectives of the Baltic Sea Regional Nutrient Recycling Strategy [by 2027]	Measure	The Baltic Sea Regional Nutrient Recycling Strategy includes six objectives: Baltic Sea region as a model area for nutrient recycling, Reducing environmental impacts, Safe nutrient recycling, Knowledge exchange and awareness raising, Creating business opportunities and Improving policy coherence. The Strategy includes a list of possible measures and the BSAP includes priority action son nutrient recycling.	Implementing the adequate measures to achieve the objectives of the Strategy will reduce the nutrient inputs to the Baltic Sea and minimize the input of hazardous substances.	National	AGRI; PRESSURE	The actions on nutrient recycling in the BSAP are implemented as well as other measures as relevant.	Agriculture; Waste waters (urban, industrial, scattered dwellings, stormwaters)	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources; Input of heavy metals; Input of microbial pathogens; Input of pharmaceuticals; Input of other substances (e.g. synthetic substances, non-synthetic substances, radionuclides) — diffuse sources,

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									point sources, atmospheric deposition, acute events
EN12	Enhance the use of recycled nutrients in agriculture making use of best available technologies and fertilize according to crop needs	Measure	To increase nutrient recycling, the use of recycled nutrients should be enhanced, and the use of mineral fertilizers and imported feed reduced.	Making use of the best available technologies for recycling the nutrients and fertilizing according to crop needs reduces the risk of nutrient losses by ensuring high nutrient use efficiency.		AGRI; PRESSURE		Agriculture; Waste waters (urban, industrial, scattered dwellings, stormwaters)	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources
EN13	Develop [by 2027] safety requirements for recycled fertilizer products and minimise the occurrence of harmful compounds in these products to comply with the requirements.	Measure	Developing safety requirements for recycled fertilizer products is a tool to ensure safe nutrient recycling by minimizing the release of hazardous substances.	Requirements for the safety of recycled fertilizer products will reduce the release of hazardous substances to the environment.	Joint/National	AGRI; PRESSURE	Regional document on the safety requirements for recycled fertilizer products Compliance with the requirements nationally with relevant regulation	Agriculture; Waste waters (urban, industrial, scattered dwellings, stormwaters)	Input of heavy metals; Input of microbial pathogens; Input of pharmaceuticals; Input of other substances (e.g. synthetic substances, non-synthetic substances, radionuclides) — diffuse sources, point sources, atmospheric deposition, acute events
EN14	Increase the knowledge and promote education and advisory services on nutrient recycling	Supporting action	To increase nutrient recycling, there is a need to increase knowledge and promote education and advisory services on nutrient recycling. The topic is still not widely known and there are	N/A	National	AGRI		Agriculture; Waste waters (urban, industrial, scattered dwellings, stormwaters)	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous —

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			many misconceptions on what it means.						diffuse sources, point sources
EN15 / EN17	Improve the conditions for the development of a market for recycled fertilizer products by setting incentives with the aim of making the use of such products equally attractive to farmers as the use of mineral fertilizers	Supporting action	Currently, mineral fertilizers can be more attractive to farmers than recycled fertilizers products due to e.g. lower prizes and familiarity. To reallocate nutrients from regions where there is an excess of nutrients to other regions, the excess nutrients should be processed to recycled fertilizer products and there should be a market for these products. Incentives such as support for the use or production of such products could facilitate creating the market.	N/A	National	AGRI; PRESSURE	Incentives set to improve the conditions for the development of a market for recycled fertilizers	Agriculture; Waste waters (urban, industrial, scattered dwellings, stormwaters)	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources
EN16	Enhance cooperation and share experiences between sectors and actors to create a holistic view on sustainable food systems including nutrient recycling across sectors	Supporting action	Nutrient recycling requires a system change in the society. A holistic view on the sustainable food system is needed across various sectors	N/A	National	AGRI; PRESSURE		Agriculture; Waste waters (urban, industrial, scattered dwellings, stormwaters)	Input of nitrogen — diffuse sources, point sources, atmospheric deposition; Input of phosphorous — diffuse sources, point sources