

How to integrate technology and policy in international cooperation on the Baltic Sea Region level?

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Mikhail Durkin, HELCOM
A Greener Agriculture for a
Bluer Baltic Sea - Visions for
nutrient management



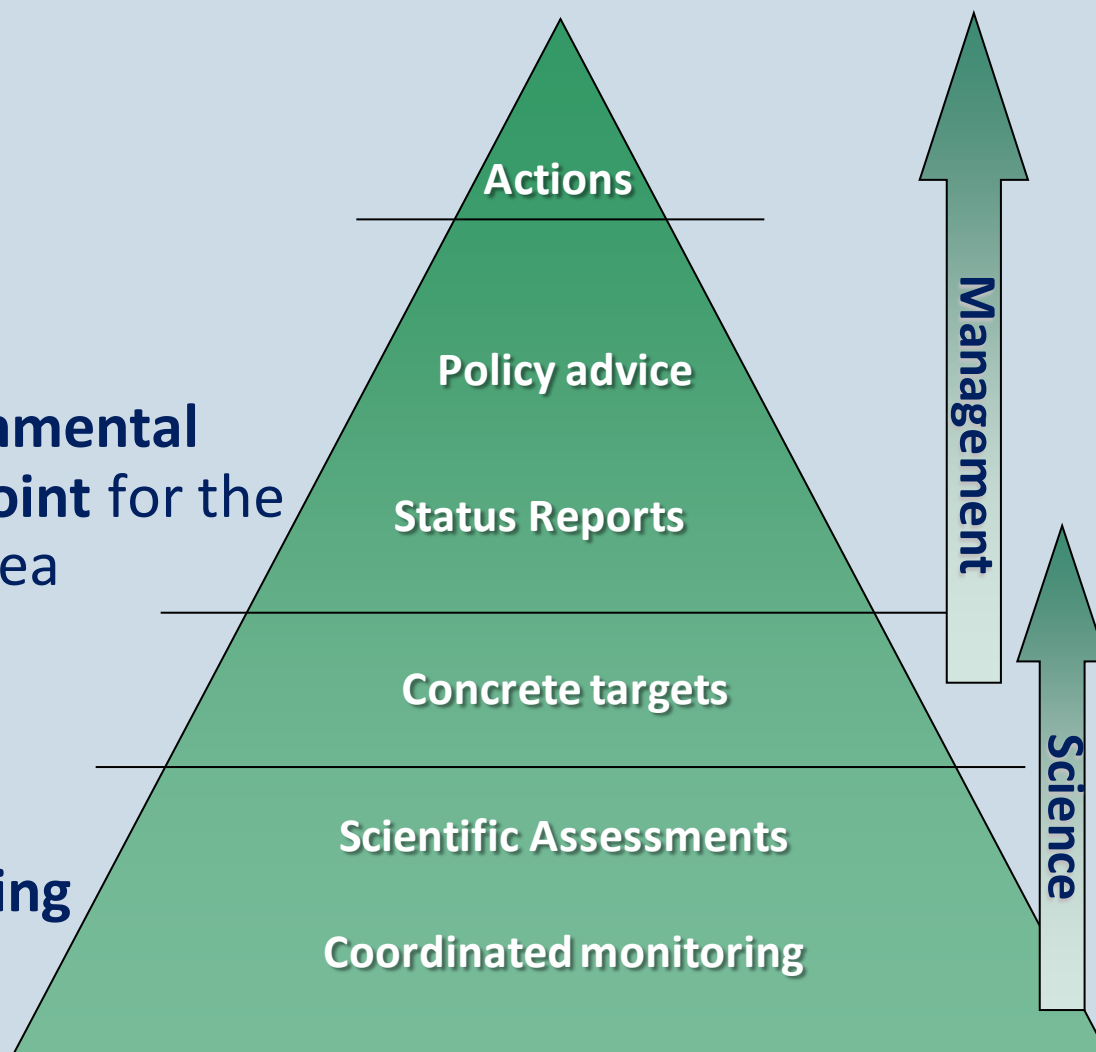
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HELCOM's role in the Baltic

**Environmental
policy maker**
developing common
objectives
and actions

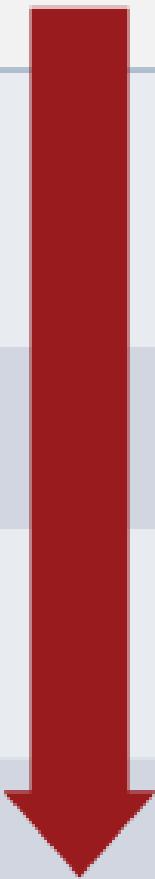
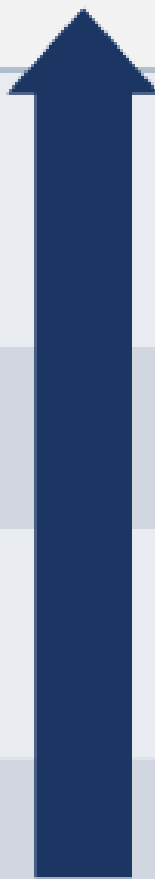
**Environmental
focal point for the
Baltic Sea**

**Coordinating
body**



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Conservative vs. innovative

Industrial policy	21st century innovation policy
 Top-down	 Bottom up
Picks winners: invests in specific companies, specific technologies	Forms the league, paints the lines: invests in cross-cutting platforms, shared resources, and encourages competition among many technologies to accomplish same goal
Linear model of innovation with research and production in separate silos	Network-lifecycle approach to innovation, encourages collaboration among interdependent stakeholders
National focus, blind to regional strengths and needs	Regional focus, leverages and builds on existing technological, industrial, human capital assets of regional economies and business ecosystems
Makes heavy use of tax-expenditures	Targeted, strategic investments from agencies

<http://scienceprogress.org/2012/08/a-21st-century-approach-to-manufacturing-innovation/>



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Top-down vs. Bottom-up, AEM



Example 1. Bottom-up approach



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Example 2. Top-down approach

- ✓ *Smart nutrient management as an opportunity to address nutrient losses*
 - ➔ *Environmentally-acceptable levels of nutrient surplus in fertilization practices*
 - ➔ *Use of available instruments to reach tolerable nutrient surplus in agriculture*
 - ➔ *Introduction of annual nutrient accounting at farm level*
 - ➔ *Full utilization of nutrient content of manure in fertilization practices (application of manure nutrient content standards nationally)*
- ✓ *Targeted measures to bring greatest environment effect*
 - ➔ *As a first step address areas critical to nutrient pollution/losses*
- ✓ *Strengthening of agri-environment regulations, both regional and national*
 - ➔ *Initiate revision of Annex III, Helsinki Convention,*
 - ➔ *Apply new BAT for intensive rearing of poultry and pigs under IED,*
 - ➔ *Support implementing of EU CAP greening (e.g. in ecological focus areas)*
- ✓ *Continued policy and stakeholder dialogue*
 - ➔ *Broaden the scope and format of Agriculture and Environment Forum*
 - ➔ *Annual stakeholder forum, thematic workshops, policy inputs*
 - ➔ *Knowledge and technology exchange and transfer*



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A. Soil management	<ul style="list-style-type: none"> a. Plant cover in winter b. Minimal cultivation systems c. Cultivate land for crop establishment in spring rather than autumn d. Catch crops e. Ploughing of ley on sandy soils in autumn f. Controlled sub-surface drainage
B. Fertiliser and manure management	<ul style="list-style-type: none"> a. Fertilization plans and Nutrient balances b. Conversion from conventional to organic production c. Reduced fertilisation d. Application techniques of manure e. Integration of fertiliser and manure nutrient supply f. Liming g. Avoiding the application of fertilisers and manure to high-risk areas h. Avoiding the spreading of fertilisers and manure during high-risk periods i. Increasing the capacity of manure storage j. Transporting manure to neighbouring farms k. Slurry separation l. Composting solid manure m. Biogas production from manure and other agri-waste biomass n. Pelletisation o. Incineration
C. Animal feeding	<ul style="list-style-type: none"> a. Adopting phase feeding of livestock b. Reducing dietary nitrogen and phosphorus intakes c. Animal feed supplementation (phytase and amino acids) d. Wet feed and fermentation
D. Farm infrastructure	<ul style="list-style-type: none"> a. Establishment of wetlands b. Buffer zones c. Converting arable land to extensive grassland
E. Other	<ul style="list-style-type: none"> a. Effective purification of runoff waters b. Ditch Filters and Dams c. Systematic on-farm Advisory Services

**List of examples (Palette) of measures
for reducing phosphorus and nitrogen
losses from agriculture**



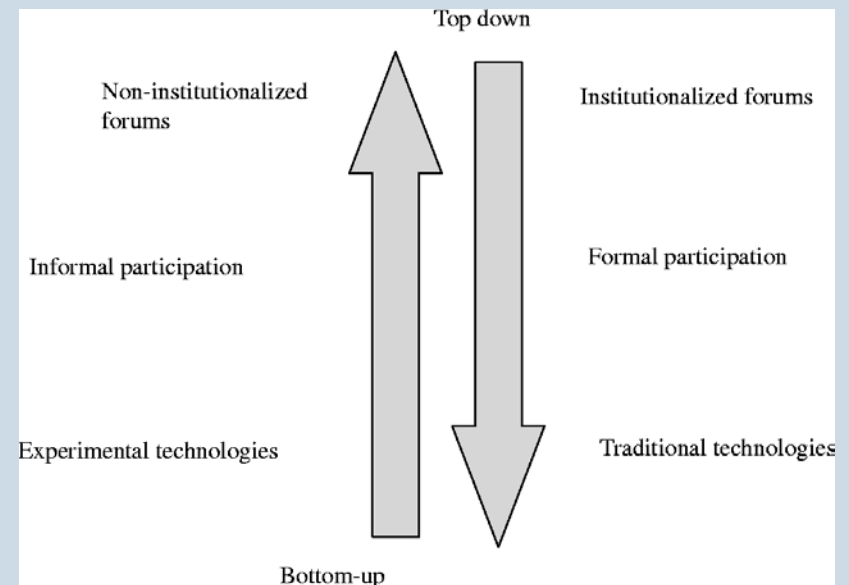
Potential players – formal vs. informal

Intergovernmental / international

- ✓ *Baltic Marine Environment Protection Commission*
- ✓ *Council of the Baltic Sea States: Baltic 21*
- ✓ *Baltic Sea Parliamentary Conference*
- ✓ *EU Strategy for the Baltic Sea Region*

Non-governmental / regional

- ✓ *Baltic Development Forum*
- ✓ *Baltic Farmers for Environment*
- ✓ *WWF: Baltic Farmers Award*
- ✓ *Coalition Clean Baltic*
- ✓ *Projects' network*



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Variety of stakeholder interests

- **Ministries**
 - International experience, policy instruments and cost-efficiency
- **National agencies /administrative authorities**
 - Formulation of guidelines and interpretation of EU law, permits and limits
- **Local authorities**
 - Adaptation to specific local conditions
- **NGOs (environment)**
 - Sustainability, global trends
- **Farmer organizations**
 - Costs of environmental improvements
- **Academia/research**
 - Methodologies, research funding opportunities
- **Farmers**
 - Technologies, competitiveness, incentives





Stereotype thinking: environment vs. agriculture

- Who to trust, e.g. agricultural advisors are not equally trusted in all countries.
- Who to listen to, e.g. HELCOM is seen as an actor mainly taking the environmental perspective,
- High targets in the BSAP – are they realistic? Can we reach them? Will the work we do result in the effect we want? What possibilities do we have to influence the development?
- Relation between cause and effect: Which role does retention in the natural system play?
- Farmers motivation could be improved with proper communication about commitments taken in other sectors e.g. wastewater treatment, transport.



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Needs for a dialogue on:

- **Strategic topics**

- E.g. How to prioritize when the administrative resources are scarce, what to monitor and not, how to formulate guidelines or regulations, how to ensure future funding for farmers for Agri-Environmental Measures (AEMs), new research topics, system critics, surveying and analysis of the surrounding world, norms, how to reach targets and goals, and;

- **Practical topics**

- E.g. How to obtain the best effect of a certain measure, e.g. placing and design of buffer zones and wetlands



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Needs for a joint platform for:

- **Discussing and addressing needs** of *different stakeholder groups* (e.g. for projects/programs/research initiatives and needs for allocating resources for these)
- **Streamlining *information flow*** between relevant stakeholders and countries (including non-EU MS)
- **Providing a *decision-making support***
- **Providing a platform for discussion:**
 - On practical and technical topics
 - on policy-related and strategic issues;
 - on high-level and high impact meetings,
 - on specific topics and specialised workshops
 - involving broader stakeholders dialogue
- ***Coordination* between initiatives and projects**, and streamlining the coming out information.



Baltic Sea Action Summit

CBSS, Council of the Baltic Sea States

BSPC, Baltic Sea Parliaments

Important strategic messages passed on e.g. through BSAG (who are in this group)

Proposals on political guidance through the ambassadors for the Marine environment (2 exist, FIN, SE)

Suggestions for topics or actions that need specifically treated or increased weight (e.g. at EU level)

BSR agri/env coordination group /platform

Results and proposals from expert workshops, stakeholder event, flagship projects...

Discussion group on policy matters

Expert workshops, Technical working groups etc (ad hoc)

Decision making support e.g. results from simulations, cost-efficiency studies, efficacy studies...

Yearly /biannual stakeholder event to reach out broadly (e.g. Greener Agriculture for a Bluer Baltic Sea conference)

Topic 3

Topic 2

Topic 1



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Baltic Agri-Env: Tiered approach suggested

- **Strategy: environmental and agricultural policy interaction;**
 - Forum of representatives of agriculture and environment authorities of the Baltic Sea countries,
 - E.g. to facilitate implementation of part II Annex III of the Helsinki Convention, to discuss progress in BSAP process
- **Action: thematic level; bridging science and policy;**
 - thematic workshops acting according to specific ToRs,
 - convened on a regular basis, based upon request from Strategy level
 - to discuss topical matters on implementation of agri-environmental measures and propose recommendations for policy level
- **Communication: stakeholder level;**
 - annual stakeholder conference e.g. built upon GABBS Conference;
 - supported by projects, initiatives and stakeholders in agri-environment field, providing networks of experts for thematic level, to exchange experiences, knowledge and information, providing ideas to be discussed at thematic and strategy levels



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