

# Workshop: Towards Ecosystem Based Fisheries Management in the Baltic Sea

16-17 June 2016

Stockholm, Sweden



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All presentations are available as low-resolution recordings on YouTube:  
[https://www.youtube.com/playlist?list=PLjBr9cfayt4QzSYPlvHrCvDD\\_xvHI4ir](https://www.youtube.com/playlist?list=PLjBr9cfayt4QzSYPlvHrCvDD_xvHI4ir)

## Executive Summary

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The focus of this workshop was to foster implementation of EBFM now that the conceptual understanding is well defined in the scientific community and supported in EU legislation. The workshop was organized into three themes, comprising presentations and discussions, to highlight the evolution of existing knowledge of EBFM, governance needs, and the translation of this knowledge into functional policy.

- Ecosystem based fisheries management in the unique Baltic Sea context
- Development of advice towards ecosystem based fisheries management
- Bridging the gap between advice and decision makers in fisheries policy

Moderator-led discussion groups followed presentations on the first day. A panel discussion with representatives from science, policy and industry followed the final theme of the workshop on day two. Key to identifying challenges and opportunities for solutions was the inclusion of the diverse experience of participants in these discussion groups, which will be emphasized in future workshops.

Participants acknowledged the already-appreciable scientific knowledge of Baltic fisheries ecology, however there are conflicting interpretations of science, unavoidable uncertainty in the science itself, and complex stakeholder objectives which politicize the use and value of science. This is clearly evident in the communication of scientific knowledge as advice for EU policy making. Thus, EU policies and related decisions regularly lag behind current scientific and stakeholder knowledge.

Management tradeoffs were raised as a central issue when it comes to implementing EBFM. It was clear that both science and the policy structures must improve to identify and acknowledge tradeoffs in decision making. These tradeoffs include various forms of access among stakeholders and tradeoffs within the EU community and ecosystem integrity. A broader perspective of who and what is impacted by fisheries management decisions is needed, and this would come through an integrated governance structure, still in its infancy in the Baltic.

Workshop participants concluded that the Baltic Sea is a unique region, affected by many anthropogenic stressors. Since different stressors affect different regions, sub-regional approaches may be necessary. As a well-studied sea that has regional governance structures in place, the Baltic Sea is ripe for EBFM to be implemented.

An important issue echoed throughout the workshop was fair inclusion of all interest groups in the policy process. There was discussion if EBFM is itself still a relevant concept for future management, but the underlying interpretation to appreciate and understand various human uses in the environment was well received regardless of the terminology used.

We need to take advantage of the structures, tools and ambitions that already exist in the region. The implementation of EBFM is a step-by-step process why everything cannot be done at once. The organizers will use the discussions and outcomes of the workshop to inform future recommendations for implementing EBFM, improving governance, and developing regionalization within the Baltic Sea community.

## 1. Introduction

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Over fifty policy makers, scientists, academics, industry members, and other Baltic stakeholders met in Stockholm, Sweden, on June 16-17 2016 for the workshop “Towards Implementation of Ecosystem Based Fisheries Management (EBFM) in the Baltic Sea.” Initiated by Stockholm University’s Baltic Sea Centre and the Fisheries Secretariat, and hosted with the International Council for the Exploration of the Seas (ICES), the focus of this workshop was to foster implementation of EBFM now that the conceptual understanding is well defined in the scientific community and supported in EU legislation. The January 2016 AORAC-SA workshop in Copenhagen “Making the ecosystem approach operational” was particularly informative in the design of this workshop.

### 1.1. Format of the workshop

The workshop was organized into three themes, comprising presentations and discussions, to highlight the evolution of existing knowledge of EBFM, governance needs, and the translation of this knowledge into functional policy. Each theme included several presentations followed by moderator-led discussion groups on the first day, and a panel discussion with representatives from science, policy and industry on the second day. Invited participants represented a variety of backgrounds across disciplines and Baltic Member States. The discussion groups were key to identifying challenges and opportunities for solutions. This style of group discussion will be emphasized in future workshops.

### 1.2. Structure of the report

Following this introductory chapter, the report presents the workshop’s three themed sessions in additional chapters. Each chapter includes short summaries of the presentations and results of the discussion groups or panel discussion. The final chapter includes reflections made after the workshop by the organizing team and suggests a plan for future workshops. Annex 1 includes the workshop agenda with a full list of speakers and panelists. For a full list of participants please see Annex 2.

Interviews and presentation files are available online through Baltic Eye here:

<http://balticeye.org/english/ebfm-workshop-june-2016/>

Low-resolution recordings of the live presentations are available on YouTube here:

[https://www.youtube.com/playlist?list=PLjBr9cfayt4QzSYPlvHrCvDD\\_xvHI4ir](https://www.youtube.com/playlist?list=PLjBr9cfayt4QzSYPlvHrCvDD_xvHI4ir)

### 1.3. Funding of the workshop

The workshop was partly funded by Baltic Eye at the Stockholm University Baltic Sea Centre, which is a strategic partnership between Stockholm University and BalticSea2020, and partly by the Fisheries Secretariat.

## 2. Ecosystem based fisheries management in the unique Baltic Sea context

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The first session of the workshop outlined the current scientific understanding of EBFM and highlighted workshop-relevant research, knowledge, and existing fisheries governance structures.

Talks were given by Jeremy Collie from the University of Rhode Island, Valerio Bartolino with MareFrame and SLU Aqua, Thorsten Blenckner from the Stockholm Resilience Centre, Stockholm University, and Marcin Ruciński from the Polish Ministry of Maritime Economy and Inland Waterways, Fisheries Department.

### 2.1. Is the Baltic Sea ready for ecosystem-based fisheries management?

*Jeremy S. Collie, University of Rhode Island*

Jeremy Collie introduced EBFM to the workshop participants and described the current scientific understanding, some of the myths hindering wider application of EBFM, and opportunities and constraints within the Baltic context. Collie's talk was framed around these myths, such as the myth of EBFM's poor design and excessive complexity, or the myth that EBFM lacks policy mandates and appropriate governance structures. Other myths include issues to data requirements, overly conservative advice, panacea solutions for complex social-ecological systems, and high costs of implementation.

Collie discussed that while not excessively complex, EBFM will need to integrate new variables into management, necessitating a need for models of intermediate complexity. As the models supporting EBFM develop, Collie highlighted that the risks associated with model inaccuracies increases must be acknowledged.

The Baltic Sea is a well-studied system, heavily impacted by human activities. There are regional differences and tradeoffs which Baltic managers must reconcile in the current iteration of multispecies models. Taking account for species interactions means in practice that you have to weigh priorities, or tradeoffs, among fisheries.

EBFM is well defined although it is a 'road less travelled'. Contrary to another common myth EBFM does not always result in more conservative advice for fishing opportunities. Collie concluded by opening discussion whether existing ecosystem data and scientific understanding provides sufficient basis for the implementation of EBFM, and whether the regional management system is ready for EBFM.

Responding to a question regarding if certain modelled outcomes used in the presentation are compatible with the goals of the Common Fisheries Policy (CFP), Collie stated that he did not think we would need to achieve a Maximum Sustainable Yield (MSY) in the traditional sense for every single species. Some simplifications are going to be needed, which is why managers need to think 'outside the box' to implement EBFM successfully.

### 2.2. The challenge of moving from MSY to ecosystem based fisheries management

*Valerio Bartolino, MareFrame and SLU Aqua*

Bartolino introduced the challenge of moving from MSY to EBFM. MSY is generally viewed as a simple and intuitive concept. The core definition is to achieve the largest fishery yield on a continuous basis from a stock under normal conditions. However, as the single species models which support MSY have been widely criticized as too simple, more holistic approaches have begun to emerge. Parallel to this development, scientists articulated the precautionary principle. This generated a lot of critique towards the MSY concept and new interpretations of MSY as well as a more consistent view of EBFM.

EBFM is a response to this well-developed MSY critique. EBFM has come a long way with a shift from “what is it” to “how we implement it”. One critical challenge is acknowledgement of different values and perceptions of the assessed system. There are many tradeoffs to reconcile, so management needs a framework that clearly shows these tradeoffs. This framework could support the decision making process in EBFM.

To operationalize EBFM, Integrated Ecosystem Assessments (IEA) have been suggested as a way forward. An IEA is a structured process that identifies objectives, drivers and pressures in a management context. It identifies goals and develops indicators and targets for reaching those goals. The IEA process involves stakeholders co-creating the objectives in the process. An IEA does not include socio-economic indicators, which is an obstacle to be resolved.

### **2.3. Challenges to Baltic fisheries management: Managing multiple stressors in a dynamic environment**

*Thorsten Blenckner, Stockholm Resilience Centre, Stockholm University*

Blenckner introduced the challenge of multiple drivers influencing the Baltic ecosystem, stressing the need to integrate these into decision making, especially drivers from outside the Baltic Sea region. Management is challenged by these drivers in addition to the anthropogenic changes as a result. By acknowledging various uncertain impacts on the ecosystem, ICES can make an IEA on multiple drivers and their effects in the respective basins of the Baltic Sea.

He then developed the work done by ICES and studied the effects of multiple drivers on the entire food web. Depending on the combination of stressors the respective fish species react differently, which might lead to high economic losses if not the effects of stressors are taken into consideration in management plans.

Blenckner concluded by highlighting that not many models integrate multiple drivers, stressors, impacts and effects. The simple relationships used in former models and management measures are not good enough anymore. Here, Baltic Sea research is in the forefront and could be used as an example for other management systems.

### **2.4. The Baltic Sea policy perspective**

*Marcin Ruciński, Polish Ministry of Maritime Economy and Inland Waterways, Fisheries Department*

To provide a policy perspective on the Baltic region, Ruciński discussed the legal and institutional settings present in the Baltic Sea, focusing on the CFP, the MSFD and Good Environmental Status (GES) obligation, and HELCOM via its FISH group. After identifying that EBFM is still being articulated in developing regulation, Ruciński posed that the links among regulations, plans, and organizations involved in management are entangled, and that the current management system is not fit to implement the EBFM in the Baltic Sea. He raised the question of how to move from this entangled situation to one of synergies among the actors within the Baltic’s institutional frameworks.

To accomplish this we need to rethink the management system and move away from sectoral silos at the European, regional, and national levels. We need to look for mutual advantages and seek good solutions together instead of lingering in the fisheries vs. environment divide. If you focus on the synergies and on cooperation, concluded Ruciński, you can gradually move towards EBFM, being patient and gentle on the way.

A couple of questions and comments were raised concerning the policy process, its speed and future steps. A first question related to how adaptive policy can be towards nonlinearities in the ecosystem? Ruciński brought up the first steps towards a more adaptive approach that is being made with the EU Multispecies Management Plan that caters for abrupt changes.

A question regarding the difficulty of knowledge transfer from science to policy was made. Ruciński stressed again that we need to be patient, but also that we need a bottom-up approach for implementing EBFM, one which more readily includes stakeholders in the policy making process.

## **2.5. Break-out groups**

The participants of the workshop were divided into six groups, mixed to ensure several backgrounds and fields were represented in each group. All groups were asked the same question: *What is currently being done toward implementing EBFM in the Baltic Sea, and what are the top five next steps toward implementation?* The groups discussed these questions and were asked to make a bullet point list which was reported back in the plenary session.

The groups identified some obstacles to implementing EBFM: First of all the implementation of EBFM needs to be case and context specific. It was also clear to the groups that we need to go beyond the CFP to implement EBFM, better integrating other EU laws as well as continuing to improve current fisheries legislation. Participants acknowledged that ICES advice is improving, however decision makers still focus on single species approaches rather than having a multispecies or ecosystem wide focus. Participants were fragmented concerning who should lead on EBFM implementation. This led the plenary to discuss leadership, or the lack thereof. There was also recognition that some of the legislative structure for implementing EBFM is there but it is unclear how these structures can be developed and improved. One participant highlighted the ‘silo’ structure of management in the region which hampers the implementation process.

Keywords from the break-out group sessions are listed in Annex 3.

### **3. Development of advice towards ecosystem based fisheries management**

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The second session described the process of knowledge transfer from science to policy, including existing gaps and a discussion on new ways to conceptualize the development of advice from compromise to integrated solutions.

During the second session, talks were given by Eskild Kirkegaard from ICES, Rüdiger Voss from Kiel University, Bengt Larsson from FiskOnline, and Dorothy Dankel from the University of Bergen.

#### **3.1. ICES advice and ecosystem based fisheries management**

*Eskild Kirkegaard, ICES*

Kirkegaard introduced the objectives of the CFP: to ensure environmental sustainability, to apply the precautionary approach to fisheries management, and to implement the ecosystem-based approach to management. Kirkegaard also referred to the definition of EBFM made in the CFP. This definition has a strong focus on the biological elements of the ecosystem, but it also links to the social and environmental components.

Kirkegaard then discussed the National Oceanic and Atmospheric Administration's (NOAA) definition of EBFM which goes beyond the CFP definition, and has recently been implemented as a cornerstone of fisheries management in the USA. Here, human action is balanced with environmental stewardship in a multiple use context. In this setting there are many tradeoffs between fisheries, commercial species, and other ecosystem components, as well as tradeoffs in processes that affect or are affected by fisheries.

Kirkegaard also explained how EBFM is integrated within the ICES advice process. ICES produces three different products: Stock advice, Fisheries overviews, and Ecosystem overviews. The Stock advice reports on the status of stocks and provides recommendations to decision-makers on quotas and fishing opportunities to come. Stocks are evaluated in terms of the dynamics of growth, stock recruitment and predation mortality, which Kirkegaard argues is based on the ecosystem approach. Reference points for stocks are however, based on single stock considerations and do not include species interactions.

Fisheries overviews are not recommendations, but rather they describe how, by whom, where, and when fishing takes place and their impact on the ecosystem. In the Fisheries overviews, multispecies interactions are taken into account but the integrated advice ICES gives through the Fisheries overviews should not be confused with the Stock advice. The Fisheries overviews represent a step towards EBFM.

The Ecosystem overviews describe human activities, pressures and the state of the ecosystem. Kirkegaard informed the session that ICES aims to have a Baltic Sea Ecosystem overview completed by December 2016, and that there is already a report published that covers the North Sea. Kirkegaard explained that Fisheries overviews are based on EBFM and Ecosystem overviews express the complexity in wider ecosystem based management (EBM), which aims to account for all human activity within an ecosystem.

Kirkegaard concluded with some self-reflection; ICES advice describes the biological system. Thus far, ICES has not been so good at describing the tradeoffs between the environmental, social and economic systems. However, this is a top priority for ICES.

A few questions were raised after the presentation. The first concerned the risk that short term management objectives sometimes counteract medium and long term objectives. Kirkegaard both agreed and disagreed with this. ICES has to provide advice in line with the management



objectives. If there is a mismatch between objectives, it is of course troublesome and needs to be taken care of by the management system.

Another question that was brought up was on issues regarding technical measures and how scientific recommendations on such measures are made? Kirkegaard discussed different projects where, for example, the added value of conservation could not be proved. As a technical measure, it is theoretically possible that closed areas can have a negative impact on catchability, meaning a higher effort is needed to catch the same amount of fish.

Lastly, a question was raised if the advice concerning the cod fishery was made using EBM and whether the effort management system was still in place? Kirkegaard explained that it was not and that the effort system had been introduced to compensate for the low compliance and poor controls in the total allowable catch (TAC) quota system. Kirkegaard further said that TAC is not fished anymore, so there is no effort restriction of any sort, but that fishing effort has gone down on the eastern cod stock.

### **3.2. Integrated approach to include environmental forcing and economics in scientific advice**

*Rüdiger Voss, Kiel University*

During his presentation, Voss described that ecological-economic models based on single species optimization provide different results than if you use multi-species ecosystem model. In the former, single species' are not affected by higher temperatures (climate change). However, when you use an ecosystem model and compare the two regimes – a cod dominated Baltic Sea system and a sprat dominated state - climate affects the cod stock. Climate change in these models only affects long-term objectives. Moreover, the ecosystem state determines the expected levels of harvest and profit but not necessarily the target fishing mortality (F).

Voss stated that there are a lot of indicators and information available with which to make short term forecasts. Indicator time-series have already been compiled. Voss then discussed how this information could be included in standard stock advice and whether it would make a difference? To add this type of environmental information is an ongoing project and Voss aims to come back with results soon.

Voss also presented a third model for providing advice, one which makes use of ecological economics, thereby adding an economic perspective to MSY. This type of modelling approach offers a different option for how advice is made today. His model is run for ten years, a relatively short time. The condition for the model is that it always should reach MSY at the end of the time series. This was then compared to the stock's maximum economic yield (MEY). When he run the model on the eastern Baltic cod stock he found that MEY was more stable for the whole period. Except for periods when stock size was low, MEY was found to be below both the ICES advices and politically agreed TACs.

After the presentation, a question was raised concerning the regime shift from a cod to a sprat dominated state, whether it could be reversed and also how EBFM could contribute to reversing the change. Voss explained that it is impossible to say if or when the Baltic Sea will flip back to the earlier regime. However, it makes sense to include EBFM since it brings more factors with a role to play to the table, for example age structure dynamics in the fish stocks are not yet included in fisheries advice.

Another point that was brought up was on the subject of maximum economic yield and whether the model complied with the existing CFP legislation. Voss clarified that the model, as it is now, does not fulfil the MSY targets laid out in the CFP, but what is still there is a constraint that the fish stock must be able to rebuild to a certain size within ten years.

### **3.3. From quantity to quality – a fisherman’s journey**

*Bengt Larsson, FiskOnline*

Larsson introduced the plenary session to his life as a fisherman. Larsson has been a fisher for 25 years and his family has been fishers for at least six generations. He fishes in Blekinge, the southeastern part of Sweden, primarily for cod but also flatfish and other species depending on the season with gillnets and bottom longlines.

Larsson asked what it is we want to achieve, from a fisher’s perspective, and posed a couple of questions regarding the objective of fish stocks in balance – Who decides this? And what is balance?

From Larsson’s point of view, passive gears should have precedence. As it is now, small scale fisheries in the Baltic fish primarily for cod and flatfish, since both salmon and eel are banned while the pelagic fisheries are dominated by larger vessels. Season variability is a significant part of a small-scale fisherman’s professional life. Therefore, small scale fisheries must be involved in several types of fisheries. Further, a fisher must take into account local conditions, and also problems with competitors such as grey seals and cormorants.

Larsson continued his presentation, saying that up until now there have been one size fits all policies and general solutions that have sought to cover the entire region, such as the summer ban on cod fishing. In response to these regulations, fishers try to be innovative and entrepreneurial. However, there are many actors influencing the system and the price of fish. What Larsson then decided to do was to sell the catch directly to the consumers via FiskOnline, his company which started as a project. The project won a prize for innovation that made it possible to develop FiskOnline. FiskOnline works as a web based tool where the fishers report their catch and customers then buy the fish that day and collect it at the harbor in the afternoon. Check out [www.fiskonline.se](http://www.fiskonline.se)

After Larsson’s presentation a couple of questions were raised; the first question was if Larsson thought that EBFM made any sense for fishermen? Larsson responded that he has seen the stock variability and the lack of prey for predatory fishes, and because of this EBFM comes very naturally and makes total sense.

Another comment was made regarding how time consuming but still important it is that fishers come to events like this. With this in mind, a question was raised regarding how could more fishers become involved in the EBFM processes? Larsson agreed that it often takes too much time to get involved. He pointed out that to be a fisher is a fulltime job and to get involved in policy processes and attending seminars is almost another fulltime job. Therefore you need to somehow compensate fishers for their income losses from not fishing.

### **3.4. Integrating social and community aspects in EBFM: tradeoffs, harvest control rules, metrics**

*Dorothy Dankel, University of Bergen*

Dankel introduced the plenary session to the problem of creating rules that are robust towards uncertainties. Within fisheries management harvest control rules have built in such uncertainties. Building on these uncertainties, managers are then forced to choose an uncertain fish quota. In this perspective, what is EBFM?

Dankel argued that EBFM is outdated because this perspective considers only a partial picture. Dankel made an analogy with a cupcake to explain EBFM, saying that the cake symbolizes the fisheries, the frosting is the ecosystem and the sprinkles on top of the cupcake is the social system. As a cupcake, the different parts of EBFM are not integrated. But integration can happen. Like smashing up a cupcake – the process is messy but it can be done. Comparing

EBFM with the sustainable development goals, an integrated understanding requires that all of the goals are included.

Dankel then introduced NOAA's next generation tool for EBM, which clearly states that social and community aspects cannot be reduced to a single variable or an algorithm. It must be included throughout the management system. The IEAs, that are a basis for EBM, are now being conducted across the coasts of the USA.

Dankel compared the American approach to ICES' IEAs and Ecosystem overviews. To create EBM we need to surpass disciplines and create something new. So, when doing IEAs in the future, researchers need to ask themselves: What is the problem you want to solve? What resources are available? Who are the actors and what are their roles? What is actually an IEA in the context of the problem you want to solve?

In the case of the Baltic Sea you can understand the system from many different perspectives and all these are relevant for marine sciences. To accomplish this Dankel asks for so called T-shaped researchers, meaning specialists that are anchored in one field but still are aware that there is other research out there that can contribute to your field, and therefore are willing and able to seek ideas and concepts beyond their niche. The way forward is therefore to make IEAs for the Baltic in a T-shaped spirit.

Dankel ended her presentation by introducing Mary Parker Folett, "the mother of management", stating that there needs to be time and space for reflection. To create better IEAs integrated solutions are more sustainable than compromises, and also focus on human processes not solely on model output.

A couple of questions were raised after Dankel's presentation; first, a question was asked as to whether the IEAs that have been done in the USA have led to better management? Dankel answered that she was not sure about the results but that EBM is a process and that it is getting better. Dankel emphasized that we cannot copy the Americans but we must develop EBM here, since EBM is place and context specific.

Second, a question was asked regarding how EBFM would benefit from gender equality? Dankel pointed out that what we are actually talking about is the need for gender diversity and diversity of thought. Everyone thinks differently and this is valuable for the EBFM process.

Lastly, a question was raised about ICES and their need to provide scenarios, but who are these scenarios for and who will use them? Dankel stressed that in stage zero, long before making the scenarios, we need to integrate different ways of thinking. If all actors that should be involved are involved we would not have to ask this question.

### **3.5. Break-out groups**

The second session at the workshop aimed to further explore the bullet-point list written earlier on the next steps for implementing the EBFM. The participants were asked:

*What can you do within your field of work to implement EBFM in the Baltic Sea?*

The groups then reported back to the plenary session with key focal areas and tasks individuals believe they could pursue to implement EBFM. These focal areas and tasks are listed in Annex 3.

#### **4. Bridging the gap between advice and decision makers in fisheries policy**

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The final session presented examples of current policies and their political evolution, concluding with one example of how to more explicitly structure a governance process to appreciate stakeholder input, risks and tradeoffs to circumvent much of the existing difficulty in policy development.

Talks were given during this final session by Jarosław Wałęsa, representing the European People's Party Group in the European Parliament, Michael Earle, Fisheries Advisor to the Greens in the European Parliament, and Roland Cormier from Helmholtz-Zentrum Geesthacht.

##### **4.1. Development and content of the Baltic Multiannual Plan**

*Jarosław Wałęsa, European People's Party Group, European Parliament*

Wałęsa introduced participants the development and content of the Baltic Multiannual Plan. The plan has been debated, negotiated and under construction for a long time. It is the first plan of its kind to be developed under the CFP, and is intended to account for the interactions among several commercially important species, notably cod, herring and sprat. However, the plan does not consider flatfishes other than plaice, even though several flatfish species are commercially important and captured regularly in the cod fisheries. Despite this, Wałęsa states, the plan is a step in the right direction. It aims for the sustainable exploitation of the cod, herring and sprat stocks, and stable fishing opportunities and to improve the livelihood of fishers. The plan also guarantees that management is based on the latest available science.

Wałęsa stressed that the plan cannot serve as a blue print for other EU sea basins. Other plans can only use the Baltic Multiannual Plan in terms of structure not when it comes to its content. It is important that the content is place specific.

The Baltic Multiannual Plan was proposed for regulation by the European Commission 6<sup>th</sup> of October 2014. (It has since passed plenary in the European Parliament on the 23<sup>rd</sup> of June 2016.)

After Wałęsa's presentation a couple of comments and questions were raised. The first one concerned the critical state of the western Baltic cod stock and whether the plan can effectively address the state of the stock, and if the plan can achieve the political goal of MSY for all stocks by 2020. Wałęsa stated that the plan is designed to be able to respond to critical situations such as the one with the western cod stock, using safety measures such as closing the fishery.

A last question concerned the space the plan might give for EBFM. Wałęsa pointed out that the concept is included in the objectives of the plan. When it comes to EBFM the EU does not have a good track record, and Wałęsa hopes that this plan can further a public dialogue to address EBFM related issues around the Baltic. At this point however, Wałęsa was not sure if the plan will be successful. We have to wait and see.

##### **4.2. MSY in the EU: A Political History**

*Michael Earle, Fisheries Adviser, The Greens, European Parliament*

Earle presented how EBFM could be included in legislation and implemented. Due to political forces, Earle said that this process can be twisted and result in something different than intended.

Earle introduced the foundations of the CFP, based on the 1957 Treaty of Rome, and walked participants through the basic regulatory system. Using the Baltic Multiannual Plan as an example, Earle highlighted common conflicts between Parliament and Council. Conflicts surround the evolving political interpretation of MSY, a core concept of the CFP translated into

the Baltic Multiannual plan as ranges of MSY. Earle found that the wording ICES has used when it comes to mortality ranges has changed, so that the interpretation of the ranges now can be made very different from that intended by ICES. The conflict in interpretation has resulted in a protracted debate between Parliament and the Commission, including two cases before the European Court of Justice.

Earle emphasizes that the CFP and the Baltic Multiannual Plan have nothing to do with achieving rational fishing, but represent a power struggle. Recognizing this struggle, over the rational challenges the legislation hopes to solve, is critical to understand to influence and develop new policies.

#### **4.3. Adequate science is not the problem, but integration. How do we prepare to ask the right questions?**

*Roland Cormier, Helmholtz-Zentrum Geesthacht*

Cormier opens his presentation by asking how do we get a question to science and how do we actually use that science within a policy context. He then asks “What is risk?” and explains some of the variations in how we might define this term, which is itself much of the goal in policy, to manage risk. To resolve conflicts in interpretation, he refers plenary to the ISO definition of risk and continues to explain a systematic approach to understand the complexities of valuing risk, risk assessment, and risk management.

Cormier then discusses how to identify risks, which is a part of risk assessment. An important step here is to identify the consequences of a risk. Cormier points out that it is at this step in the risk management process where science comes in, often in the shape of science advice.

To be able to evaluate management measures, Cormier highlights ‘effectiveness’. Cormier discusses management options “what do we have now and what can we have?” These questions lead to a new set of options, and the decisions to be made are policy decisions accompanied with negotiations.

Cormier emphasizes that there are barriers to implementing management frameworks such as the examples he presented. Key barriers include costs, adapting old structures, and implementation authority. To make the implementation phase easier and mitigate these barriers it is important to understand the consultation process. It is imperative that managers involve all parties from the beginning. Concerning monitoring these systems, the results, measures, and control systems must all be regularly examined. Cormier concludes that the risk management process is not easy, but it is a structured process “a process is good, but a structured process with steps...with involvement of stakeholders throughout, and science and technical experts throughout...” is better.

After Cormier’s presentation a couple of comments and questions were asked. The first question asked when does ICES ‘talk science’ and when does ICES ‘talk politics’. Cormier said that the distinction might not be that black and white, that to slide between science and politics is easy, without even knowing one is doing it.

A question was raised concerning the problem if and when scientists identify objectives. Cormier agreed with the questioner and said that scientist should make advice and other parties in the process takes decisions. A follow up question was then raised concerning the definition of objectives – is not objectives and identifying these exactly what science is doing? Cormier agrees that science should be involved in identifying objectives, but science should not be alone in deciding and ranking objectives. As long as the decisions are made transparently there is no problem.

## 5. Panel discussion

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The panelists were selected to represent broad perspectives on EBFM. They were asked the question *What do we need to do now to improve the implementation of EBFM prior to the next CFP reform?* The panel discussion was moderated by Yvonne Walther, Chair of ICES Science Committee.

The panelists included:

- Jaroslav Wałęsa, member of the European Parliament
- Mart Undrest, Chair of the Estonian Fishermen's Association
- Marcin Ruciński, Polish Ministry of Maritime Economy and Inland Waterways
- Sonja Feldthaus, Centre for Fisheries in the Danish AgriFish Agency
- Michael Earle, Advisor to the Greens in the European Parliament
- Gustaf Almqvist, Scientist, Baltic Eye, Stockholm University Baltic Sea Centre

Walther began by saying that even though we are faced with severe problems, we have to find solutions. With that in mind, Walther asked the panelists if they thought that we are going in the right direction.

Feldthaus told the plenary that she had been involved in drafting the EU landing obligation, and that she sees this as a step in the right direction. Feldthaus also stressed that there is a need to develop EBFM, since if and when you only consider a single matter – such as the landing obligation – you only do what is needed. There is a focus on what you do there and then you avoid seeing other things that are needed.

Almqvist responded by saying that the legal framework is evolving and we have the decision making bodies in place, but we need to collaborate more to integrate EBFM. Almqvist was also worried that we do not have the means to implement EBFM yet. Almqvist pointed out that there are, for example, tradeoffs between agriculture and fisheries and that these are not yet explored or managed effectively.

Earle pointed out that what needs to be included in EBFM is different to different people, therefore the objectives need to be clear. One thing that has yet to be discussed is the tradeoff between cod, herring and sprat in the Baltic Multiannual Plan. The reason this was not discussed was that it was too complex and conflictual; therefore we are not even close to having clear, shared objectives.

Ruciński stressed that EBFM is still in its infancy. It is an important task, but it needs to move forward slowly. Ruciński further explained that EBFM should be understood as a two-way street rather than a one-way street. A strategy for this to implement EBFM is through the Baltic Multiannual Plan. This Plan is also still developing, therefore we have to be patient and see how it will be implemented. Ruciński emphasized that stakeholders should be involved more. Ruciński also thinks that there is good science but we need to structure the knowledge before we can set objectives.

Undrest felt that we need EBFM in order to get healthier fish stocks. At the same time Undrest pointed out that for a fisher, EBFM does not make a big difference to their daily professional life. Therefore, it would be positive if the differences, objectives, and implications which EBFM would bring could be explained in laymen terms for fishermen. From the fisherman's point of view the tradeoffs are complicated but still important. It is important to understand who will benefit the most and who won't.

Wałęsa emphasized that EBFM is the right way to go, but at the same time he acknowledged that the implications of EBFM are different for different people, which is why he stressed the

importance of taking one step at a time. Wałęsa also pointed out that we are moving in the right direction considering that there is an established cooperation between stakeholders and that both socioeconomic and environmental considerations are taken into account within EBFM. Wałęsa also thought it positive to keep on discussing EBFM to create consensus. Wałęsa thought that the next steps are to fill in the gaps – we really have to decide where we want to go with EBFM. What are we aiming for?

After the initial round from the panel, Walther made the point that the existing structures are taking us in the right direction. At the same time, can we move forward toward EBM?

Ruciński explained that BALTFISH, the Baltic Sea fisheries forum attended by Member State representatives, is occupied with implementing the CFP, but at the same time many other groups in the Baltic Region are working with similar issues. Ruciński asked for a clear division of tasks between different forums. Ruciński suggested that ICES could help in structuring this. He also pointed out that the HELCOM Fish Group could also be structurally improved. Ruciński thought that the structure could be divided between the preparatory phase and the policy phase, and that HELCOM then should be placed in the preparatory phase. The policy phase should be left to the EU institutions.

Walther then asked in what way ICES could better communicate and facilitate its products?

Wałęsa stressed that communication is very important, and that politicians are very well informed. Wałęsa stated that as long as we always improve communication and information flows we are on the right track. Earle pointed out that it's a two-way communication. ICES can inform the Parliament but we can also inform ICES. It is this two-way communication that we need to find structures for, especially as the Parliament needs a lot of information in good time to allow for informed discussions. Almqvist thought that there will be challenges in how to interpret the ranges of fishing mortality that are included in the Baltic Multiannual Plan, and it is important that ICES provides information to decision makers about how the exploitation of one stock has consequences on the exploitation of other stocks. It is important to have good, adaptive and flexible information from ICES. He also pointed out the need for more long-term scenarios to improve decision-making.

Walther continued by asking how ICES could attract more scientists to participate in their work? Almqvist thought that scientists are very interested in taking part in ICES' work, however scientists need to be compensated for the work they do within ICES.

Walther then asked how stakeholders could get involved, and if the Baltic Sea Advisory Council (BSAC) would be a good arena for this?

Feldthaus thought that BSAC could be a good alternative for including more stakeholders. Feldthaus also pointed out that it is important that different perspectives are included and put forward to the Commission, for example, BALTFISH is an informal structure where Member State involvement depends on their will and interest, but also on who is chairing BALTFISH at that moment. This structure therefore limits what can be done. Undrest stressed that fishers have to be engaged and that the BSAC has thus far done a good job with including representatives from the fishing industry.

Walther continued with a point about the limitations of science and asked how tradeoffs could be better addressed?

Almqvist said that implementing EBFM is a continuous process but a suggestion is that we should meet once a year to discuss these and make clear tasks on what needs to be done.

Earle suggested that everyone should go out on a fishing boat to see what reality looks like. This puts tradeoffs into perspective and helps translate theory into practice.

Ruciński said that a good way to get people involved and to discuss these things is to have back-to-back meetings. Then people are more likely to be there anyway to participate.

Wałęsa also emphasized the importance of engaging fishers. This may be difficult and it can take time and energy to build a relationship. He said that fishermen initially did not like him, but it is rewarding if you can get them on board.

After the panel discussion a couple of comments and questions were asked from the plenary. Undrest was asked how the Estonian Fishermen's Association worked. Undrest explained that the organization has the same problems we heard during Larsson's presentation – getting fishers involved is hard since it is time consuming and income is lost. Right now the Estonian Fishermen's Association is discussing whether uniform solutions are the right way to go or if we need regionalization by creating a Baltic-wide Fishermen's Association?

Another point made was that ICES gives clear advice but politicians still do something different. Could EBFM help and steer the interpretation of advice in any way? Further, how can stakeholder involvement help this process?

Wałęsa stressed that the basis of what the Parliament does is scientific information and that is very important. In the Baltic Multiannual Plan he pushed for scientifically based fishing limits to be included in the legislation. Almqvist followed up by asking if the long time scale that science is using is helpful in any ways? How do you think politicians will receive the future scenarios that science is producing?

Wałęsa answered that we will see the results in three years' time, when the Baltic Multiannual Plan is revised. Maybe there will be radical changes, but we do not yet know this. It is important that we base our decisions on science and are clear with how we interpret the advice. Earle on the other hand pointed out that EU decisions are often based on short term perspectives and that the meetings are held behind closed doors. As of now, Earle continued, the EU does not lend itself well toward long-term fisheries scenarios.

Finally, Walther asked Wałęsa if he had any suggestions on how to promote EBFM? Wałęsa said that this was a good question to ask him, but at the same time he highlighted that it is easier for him since he has a well-known last name, his father was the President of Poland, doors have opened up for him. Wałęsa continued by saying that Parliament can advocate these issues, which is why it is important for us to talk to each other. As long as we talk, try to understand each other and stay committed we can solve anything!

## **6. Post-workshop reflections**

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Management tradeoffs when it comes to goals, objectives, implementation and compliance were raised as perhaps the most central issue when it comes to implementing EBFM, and it was clear that both science and the policy structures must improve to handle this. There is a symbiotic relationship between fish stock development and the ecosystem, thus a broader perspective in the fisheries management is needed. Tradeoffs must also be understood and clearly defined to avoid different interpretations in policy development.

All interest groups need to be included and represented in the entire policy process.

The discussions held at the workshop of course concerned how to implement EBFM, recognizing the iterative process expressed at the January 2016 AORAC-SA workshop leading to EBFM and eventually EBM, making sure that the whole ecosystem and everything that influence it is taken into consideration, not only matters related to fisheries. In conclusion, we need to build on the structures, tools and ambitions that already exist in the region.



## **6.1. Next steps**

It is a strong ambition of the Baltic Sea Centre and the Fisheries Secretariat to continue with more inclusive and focused workshops on the topic. Preferably these workshops would be scheduled back-to-back with other meetings on Baltic management to attract a wide range of participants. The organizers are preparing to compile recommendation papers about the implementation of EBFM in the Baltic Sea region, as well as scientific publications on the topic, based on the discussions and outcomes of this workshop.

## **Towards Ecosystem Based Fisheries Management in the Baltic Sea**

**Location:** Bullkyrkan at Stadsmission, Stortorget 3, 103 17 Stockholm, Sweden

**Rapporteur:** *Matilda Valman, Stockholm Resilience Centre*

### **Thursday 16 June**

08:30 Coffee & Sandwiches

09:00 Welcome by Convener *Jan Isakson, The Fisheries Secretariat*

#### **09:15 Ecosystem based fisheries management in the unique Baltic Sea context**

- Is the Baltic Sea ready for ecosystem-based fisheries management?  
*Jeremy S. Collie, University of Rhode Island*
- The challenge of moving from MSY to ecosystem based fisheries management  
*Valerio Bartolino, Mareframe*
- Challenges to Baltic fisheries management, managing multiple stressors in a dynamic environment  
*Thorsten Blenckner, Stockholm University, Stockholm Resilience Centre*

10:20 Coffee (15 minutes)

- The Baltic Sea policy perspective  
*Marcin Rucinski, Polish Ministry of Agriculture and Fisheries*

11:15 Discussion groups (45 minutes, max 10 per group)

- What is currently being done toward implementing EBFM in the Baltic Sea, and what are the top five next steps toward implementation?  
*Moderators: TBD. Led by Henrik Hamrén, Baltic Eye*

12:30 Lunch

#### **13:30 Development of advice towards ecosystem based fisheries management**

- ICES advice and ecosystem based fisheries management  
*Eskild Kirkegård, ICES*
- Integrated approach to include environmental forcing and economics (?) in scientific advice  
*Rudy Voss, Kiel University*
- From quantity to quality – a fisherman’s journey  
*Bengt Larsson, FiskOnline*

14:30 Coffee (15 minutes)

- Integrating social and community aspects in EBFM: tradeoffs, harvest control rules, metrics  
*Dorothy Dankel, University of Bergen*

15:30 Discussion groups (45 minutes, max 10 per group)

- What can you do within your field of work to implement EBFM in the Baltic Sea?  
*Moderators: TBD. Led by Henrik Hamrén*

18:00 Archipelago cruise and dinner

### **Friday 17 June**

08:30 Coffee & Sandwiches

09:00 Day 1 summary

09:10 **Bridging the gap between advice and decision makers in fisheries policy**

- Development and content of the Baltic Multiannual Plan  
*Jarosław Wałęsa, European Parliament*
- MSY in the EU: A Political History  
*Michael Earle, Greens in the European Parliament*
- Adequate science is not the problem, but integration. How do we prepare to ask the right questions?  
*Roland Cormier, Helmholtz-Zentrum*

10:40 Coffee (5 minutes, and available throughout)

10:45 **Panel Discussion** *Moderator Yvonne Walther, ICES*

- What do we need to do now to improve the implementation of EBFM prior to the next CFP reform?

#### **Panellists**

*Jarosław Wałęsa, Member of European Parliament*

*Mart Undrest, Chair, Estonian Fishermen's Association*

*Marcin Rucinski, Polish Ministry of Agriculture and Fisheries*

*Sonja Feldthaus, Head of Section, Centre for Fisheries in the Danish AgriFish Agency*

*Michael Earle, Advisor, Greens in the European Parliament*

*Gustaf Almqvist, Scientist, Baltic Eye*

12:00 **Summary and Closing**

## Annex 2: Workshop Participants

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### Annex 3: Theme 1 Break-out Group discussion, bulleted outcomes

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What is currently being done toward implementing EBFM in the Baltic Sea, and what are the top five next steps toward implementation?

#### *What is currently being done*

- The Baltic Sea Multiannual Plan
- Integrated Ecosystem Assessments
- ICES integrating CFP and MSFD
- Management structures

#### *Next implementation steps*

- Better questions need to come from the Commission
- Include coherent social community aspects
- Study and improve decision making
- Keep developing Integrated Ecosystem Assessments
- MSFD in advice - include the whole ecosystem
- Consider uncertainties
- Broaden the EBFM to include social, economic and legal perspectives
- More effective scoping process
- Ensure that current advice keeps up with current environmental conditions
- Involve fishers
- Improve the multispecies focus
- ICES should provide scenarios for several different environmental conditions
- Articulate for managers the management options
- Improve communication
- Bring in different types of knowledge systems
- Clarity and transparency in the decision making process
- State the trade-offs that are at play when decisions are being made
- Connection, monitoring, knowledge systems, different working groups
- Improve the clarity in the discussions - what are we actually talking about?
- Regionalization
- Synchronize the current available knowledge
- Utilization principles
- Move towards result based management
- Objectives – scenarios - consequences. Use good examples.

#### Annex 4: Theme 2, Break-out group focal areas and tasks

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What can you do within your field of work to implement EBFM in the Baltic Sea?

- Stakeholder involvement
- Facilitation
- Dialogue
- Transparency / no closed groups
- Leadership
- New tools and gears
- Expanding the scope
- Include socio-economic effects and tools
- Ecosystem assessments
- Planning process
- Fund stakeholder participation
- New forms of collaboration
- Provide knowledge
- New events
- ICES could have a coordinating role
- Bring in new perspectives and knowledge (NGOs)
- Better communication (NGOs)
- Science communication
- Assign somebody to be responsible for implementing EBFM (managers)
- Support knowledge exchange (NGOs)
- Holding managers accountable
- Provide a fora and network to promote EBFM
- Better data collection
- Take fishers knowledge into account
- Engage more between science and managers
- Synthesize information for policy
- Public engagement
- Integration between existing organizations
- Better access to existing data
- Increase community - consumer connections