

BONUS SOILS2SEA: Future governance approaches for reducing excess nutrients at regional scale – Upscaling Workshop

11 October 2017 | Havs-och vattenmiljöenheten, Gullbergs strandgata 15, 411 04 Göteborg

Wednesday, 11 October 2017	
10:30 – 11:00	Arrival - welcome coffee
11:00 – 12:00	<p>Opening: Views and experiences from the SwAM <i>Ann-Karin Thorén (Swedish Agency for Marine and Water Management)</i></p> <p>Introduction to the project and first results from the case study in Tullstorpsån <i>Anders Wörmann (KTH)</i></p> <p>Looking back and ahead: The socio-cultural dimension of the project <i>Grit Martinez (Ecologic Institute)</i></p> <p>New governance concepts and monitoring aspects – Introduction to the workshop <i>Nico Stelljes (Ecologic Institute)</i></p>
12:00 – 13:00	Lunch
13:00 – 14:30	<p>The Co-Governance Concept <i>Discussion with all participants</i></p> <ul style="list-style-type: none"> • In which scenario could co-governance work? • What are the design-principles for successful co-governance? • What is the up-scaling potential of this approach working in Sweden?
14:30 – 15:00	Coffee-Break & Screening of BONUS SOILS2SEA Movie
15:00 – 15:30	<p>Wrap-up and closing of the workshop <i>Ann-Karin Thorén (Swedish Agency for Marine and Water Management) and Grit Martinez (Ecologic Institute)</i></p>

Summary of the workshop

1. Introduction

The second up-scaling BONUS SOILS2SEA Workshop was held at the Swedish Agency for Marine and Water Management (SwAM) on 11 October 2017. Altogether eight Persons participated in the workshop. Ann-Karin Thorén from SwAM hosted and introduced the workshop and Anders Wörman (Royal Institute of Technology, Stockholm) and Nico Stelljes (Ecologic Institute) introduced the project. Markus Hoffman and Christer Jansson represented the Federation of Swedish Farmers and Fredrik Fredriksson represented the County Administrative Board of Västra Götaland. Ylva Engwall and Philip Axe from the SwAM complemented the workshop.

In the first part of the workshop, the project BONUS SOILS2SEA was introduced by Anders Wörman with focus on project results from the work package under the lead of KTH: Streams2Sea. He presented research activities on remediation actions in streams targeted for nutrient removal. One research activity focuses on the design methodology with focus on reduction of nitrogen export. Results from these activities will soon be available at the project website.

Due to illness, Grit Martinez could not participate in the workshop, but provided her input on the socio-cultural dimension of agricultural practices in Sweden in a short article, which was handed out at the workshop. Nico Stelljes introduced the governance aspects of the projects and led to the interactive part of the workshop. He introduced three different governance scenarios with a focus on a co-governance scenario (see box below). This scenario describes a low level of State involvement in the management, monitoring and control of N loading. Farmers in a given catchment self-organize, (e.g. forming a water council) to decide on measures to reach government-set targets. This and the other two scenarios were discussed in previous workshops and details can be found in the project Deliverable 6.2 “Proposals for new governance concepts and policy options”.

Scenario C

The ‘**co-governance**’ approach describes a low level of State involvement in the management, monitoring and control of N loading. This scenario places a focus on the co-governance of farmers within one catchment. Farmers in the catchment co-organize, (e.g. forming a water council) to decide on measures to reach government-set targets. Detailed retention maps - at 1 ha resolution - have higher uncertainty, but can be used by farmers as a tool for spatially differentiated management of the catchment. A system of self-monitoring is established to check and modify the retention maps and ensure that the target goals are reached (e.g. monitoring at a field or sub-catchment level). Authorities support the process of self-monitoring by providing financial and technical support and information (e.g. establishing a water council with a technical support, detailed retention maps, monitoring process support). The authorities will monitor only the entire catchment at the outlet. The allocation of EU CAP subsidies is based on reaching the target loads for the entire catchment and their distribution is negotiated between the farmers. If farmers/water council cannot agree on a plan for implementation, the State will impose a central regulation based on Scenario A.

For the workshop in Gothenburg, the focus was on the co-governance scenario and a round-table discussion was used to discuss four main aspects: monitoring, role of institutions, design-principles, and up-scaling. The results of the discussion are presented in the following chapters.

2. Monitoring

One of the most discussed aspects of the co-governance approach was monitoring. While the scenario implies a monitoring undertaken by authorities only at the outlet of the catchment, it was argued, that this single monitoring station might not account for the reduction results reached by single farmers. Natural process (like changing weather conditions or natural leakage) might overshadow the reduction effects of some remediation actions. Therefore it was suggested to monitor the effects of the measures directly on farm level. In this way the performance of each farmer can be monitored and if the results of each farmer are not ending up in the foreseen reduction targets, there might be other factors hindering the reduction. Also, measures should only be carried out, where they actually contribute to reducing loads. With precise monitoring activities, the effectiveness of measures like created wetlands or buffer zones can be documented and subsidies can be spent more effectively. Additionally the aspect of time-lag comes into play. If certain remediation measures show not the initial success, this might also be because of occurring time-lags in the soil. This is the case if the results of certain measures can only be seen in a certain amount of time (for example in the Case Study site in Poland, where the time-lag can last up several years). This has to be considered, so that a co-governance could only be implemented in a time frame of at least 10 years. For the actual monitoring processes, it was stated that new technologies could be able to improve monitoring techniques. Especially for self-monitoring, new techniques with Apps, simple tool-kits or other technique can simplify the monitoring process and also improve the data basis.

3. Role of institutions

One part of the discussion was addressed at the question, which role the represented institutions at the workshop would have in such a co-governance scenario. For the Farmers Union, their representatives saw the Union as an integrating institution. From their perspective, the involvement of farmers in the WFD process is not satisfactory and they aim at integrating the different actors in a dialogue. This process is currently taking place and would very much in the communicative aspect of the co-governance approach.

For the SwAM, it was said that their role could be seen as setting the overall frame for the co-governance approach with the provision of funding and the definition of rules and regulation. Within different projects, the SwAM could already test and try new approaches and therefore expand current boundaries. It could be problematic, if a co-governance approach is connected with a shift of responsibility from the national/EU level towards catchment level. Responsibilities that are with the state today are difficult to transfer to regional levels. This would need a change in EU and national laws. But on the other hand, a working co-governance approach would need certain legal autonomy, only a symbolic or informal responsibility would not be sufficient.

The county administration is an interdisciplinary authority, dealing with topics, like water quality, climate change adaptation, or rural development. They are embedded between the national and the regional/local level. Based on these circumstances, the county administration could contribute in a co-governance approach with a supporting role. They could provide information for single catch-

ments and establish communication channels among different catchment and also between local, regional and national level.

From all participants, so-called catchment-officers were seen as an important link between farmers and authorities. There are already existing examples of these officers in the UK, Ireland, recently also in Denmark, and there are also some example from Sweden as well. These officers should work as coordinators and help the farmers to apply for subsidies for the implementation for measures. They should also know the catchment very well, meet with the farmers on a regular basis and also should have a close link to regional or even national authorities. Therefore, they need to have a wide variety of competences, ranging from limnology, agro-economy, to socio- and psychology. They should be actively involved in goal setting, carrying out measures and establishing trust among all involved stakeholders. It was also discussed, where these officers should be located. It was seen as important that they are located in one place, but that could be at the municipality or the county level. A coordinating unit could be established, for example at the SwAM. It was mentioned, that in the course of the WFD-process, around 100 water councils have been established which in theory could take the role of the discussed catchment-councils. However, some of these water councils are not as successful as they could be for different reasons. The role of these councils is not very well defined and with their legal setting, most of them can not apply for funding and responsibilities are not clarified. So, if a catchment-council is going to be set up, it was suggested to have a close look at the water-councils beforehand and analyze their strength and weaknesses.

4. Design-principles

Due to the limited amount of time at the workshop, only a few of the design-principle could be discussed (for more information on these principles see Ostrom 2015, 2005, and Poteete et al. 2010). The first principle addressed was the principle of **‘collective choice arrangements’** which states that who is affected by operational rules can also modify them. Especially the aspect of collectively finding solutions was discussed. It was stated, that not all farmers in a catchment would need to be involved in the co-governance approach from a water quality point of view. If the majority of farmers, given that they farm also the majority of the land, support the co-governance, the problem of nutrient leakage could be managed. Also for the implementation of certain remediation measures, not all farmers need to agree. Single measures on farms, like small constructed wetlands or buffer zones, should be chosen by the farmer, so not all measures have collaboration as precondition.

For the design principle of **‘clearly defined boundaries’** the example of Tullstorp Brook and a second example also from Skåne were discussed, where clearly defined boundaries both in the terms of area and subject can be examined. In the second example, a small catchment with 900ha and ca. 30 farmers together with a very active scientist reduced the residues of pesticides in the local stream by 90% only with voluntary measures. This is an example where not only the area was clearly defined, but also the goals were very clear from the beginning and results of measure could be seen almost immediately.

For the principle **‘congruence between appropriation and provision rules’** the discussion focused on the aspect if the burden of a co-governance setting would be proportional to the benefits. The aspect, that a co-governance approach would include a very intensive collaboration between the

farmers was seen in general very positive. Not knowing the possible outcome of such collaboration was seen as exiting. But on the other hand, if no results can be seen over a longer period of time, participants might get less motivated. This is a potential risk, because as mentioned in the discussion part about monitoring (see chapter 5), time-lags between the implementation of a measure and the visible results can take some time. From an authority point of view, the intensive collaboration can be problematic so it was suggested to keep the number of meetings at a reasonable number.

The '**sanctioning and conflict-resolution mechanisms**' were only discussed briefly. From the SwAM it was suggested that inspections from authorities should at first be made in a collaborative and advisory atmosphere. It should rather be an informative meeting between authorities and farmers and only if continuous rule violations appear, a stricter enforcement should be applied.

5. Up-scaling

The last part of the discussion was addressed at the up-scaling potential of the co-governance approach. It was briefly discussed, if the approach could work for other catchments and if it would be possible to apply this approach for whole regions or even on a national basis.

The general idea of farmer working together can very well be up-scaled and is already on the agenda of the Farmers Union. The actual remediation measures have then to be adapted to the local conditions. The Tullstorp Brook example can serve as an inspiration for other areas. Especially the aspect of farmers working together, employing a catchment officer and applying successfully for funds are seen very positive and could very well work in other areas. Although, with a more strategic approach and financially secured it could be more effective. Therefore a better governance setting would be required and this could be steered from national authorities. An additional important success factor is the built up trustful environment of the Tullstorp Brook example. The farmers know each other for a long time and driving actors came from the area and also the catchment officer lives within the catchment area.

One suggestion from an authority perspective was to install the co-governance approach in areas, where leakage problems are rather low and are therefore not so problematic. In this way, authorities could allocate their limited resources in more problematic areas and therefore spent resources more effectively. It was also stated, that today many measures undertaken to reach the good ecological status are undertaken in projects (e.g. on a single farm, on a municipality level or on a small catchment level). From the projects, many good experiences can be examined, and it should be striven for applying these experiences for whole Sweden.

6. Conclusion

The former BONUS SOILS2SEA workshops at the case study level with mostly local farmers and other local stakeholder showed that the co-governance approach at least for Denmark and partly for Sweden was seen as a promising approach. Aim of the up-scaling workshops was to discuss this

view from a regional/national authority viewpoint. For this particular up-scaling workshop, participants discussed the approach from a Swedish perspective. While at the local workshop mostly the autonomy aspect of the farmers was stressed, the approach was positively received in this workshop because of its communicative and adaptive approach. To implement a successful co-governance regime, an important part is communication. This includes communication among the farmers in one catchment but also communication between farmers and different levels of authorities. This can help to built up trust and result in a working environment that is characterized by partnership and trust, where authorities are rather seen as trustworthy advisor and not as opponent enforcing too strict regulations. From an authority viewpoint, this can result in a more effective way of using limited resources. At the same time it requires being very adaptive and it may result in a differentiated governance approach. However, this was seen as a very interesting approach, but very difficult to implement.

7. Literature

Ostrom, E. (2015): Governing the commons. Cambridge university press.

Ostrom, E. (2005): Understanding institutional diversity. Princeton Univ Pr, New Jersey.

Poteete, A.R.; Janssen, M.A.; Ostrom, E. (2010): Working together: collective action, the commons, and multiple methods in practice. Princeton University Press.

Participants list

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First Name	Last Name	Country	INSTITUTION
Markus	Hoffman	Sweden	Federation of Swedish Farmers
Christer	Jansson	Sweden	Federation of Swedish Farmers
Fredrik	Fredriksson	Sweden	County Administrative Board of Västra Götaland
Ylva	Engwall	Sweden	Swedish Agency for Marine and Water Management
Philip	Axe	Sweden	Swedish Agency for Marine and Water Management (not during the discussion)
Ann-Karin	Thorén	Sweden	Swedish Agency for Marine and Water Management
Anders	Wörman	Sweden	KTH
Nico	Stelljes	Germany	Ecologic Institute