

Review of the importance of peatlands in the countries within the Nordic Baltic Wetland Initiative for mitigation climate change and potentials for restoration with a reference to designate peatland Ramsar sites in the region

Introduction

Peatlands provide important ecosystem services and their role in carbon sequestration and storage has not received the attention it deserves. At the same time peatlands (e.g. arctic wetlands) support biodiversity through e.g. providing vital nesting and resting sites for migratory waterbirds and they contain unique biological communities. The main reason for their important role in climate regulation is that the amount of carbon in peatlands is large and that large carbon emissions take place when these peatland are converted to other land uses even within a small land area. Moreover, these emissions will continue long after the conversion of a peatland has taken place. In order to have a picture of the potential of this carbon stock in the Nordic Baltic region and the importance for climate regulation and to promote their management a review of the size of this terrestrial sinks for carbon will be undertaken. Focus will be on both the importance as climate change regulators and also be targetting the potential in restoration of those peatlands which have been degraded. In order to secure the potential of peatlands to continue to contribute to mitigate climate change generally three actions need to be taken (FAO 2012): Avoid new emissions from land use change and conversion of peatland to other land use; Improve management practices to reduce emissions from existing production systems and sequester carbon through improved land use management.

Background

On a global scale peatlands and organic soils cover only 3 % of the land area globally but contain 30 % of the soil carbon. As the other major sinks for carbon storage namely the atmosphere and the oceans cause increasing temperatures (The Green House Effect) or are subject to acidification respectively, the organic soils on land hence becomes more and more important for storage of carbon. The obvious first choice is to conserve peatlands in their undrained state because this is the most cost effective ways to halt increasing emissions. However, natural peatlands have already to a large degree been converted to other land uses. Restoration of peatlands have started in the Nordic Baltic countries, however, the quality and speed of this probably depends on the recognised importance for climate and biodiversity and elsewhere degradation is continuing because of continued drainage. Continued drainage leads to continued emissions and loss of biodiversity and inevitable loss of natural resources and rich soil as well.

Climate change is high on the agenda in the Ramsar convention and is dealt with in the technical review panel (STRP) of the convention and at the Conferences of the Parties. Hence the importance of wetlands including peatlands and coastal areas towards carbon sequestration and storage functions as well as the need of awareness is internationally recognised. The technical review panel of Ramsar has addressed wetlands and climate change issues during the 2009-2012 triennium, including:

- i) methods for assessing the vulnerability of different wetland types to climate change;
- ii) opportunities for adaptation to climate change;
- iii) wetland restoration as a tool for climate responses;
- iv) the role and importance of different wetland types in the global carbon cycle.

Moreover, the convention has as an obligation for parties to designate Ramsar sites and worldwide more than 2000 sites have been designated. In total this Ramsar land comprises more than 2 million square km worldwide. Peatlands are duly underrepresented on the list of Ramsar sites. At the time being Denmark is in the process of exploring a sub-criteria on designation of Ramsar sites based on their ability to influence the regional climate and this submission may provide the necessary platform to designate peatlands (and coastal wetlands) referring to their function in avoiding exacerbating climate change

implying that the ecological status of such wetlands are maintained and/or restored.

The NorBalWet Initiative under the framework of the Ramsar convention is based on the convention resolution 8.30 providing guidelines for regional initiatives for further implementation of the Ramsar Convention. The initiative was endorsed in 2009 and given a mandate and operational guidance, and another NorBalWet symposium on climate change is held in Ilulissat in Greenland in September 2013.

Aim

The objective of this project is to analyse and review information on the importance of peatland for mitigation of climate change in the participating countries and to prepare a report to disseminate such information more widely. Moreover, the project will identify peatland hot spots for their continued conservation, rehabilitation and management using the wise use principle as developed under the convention.

Scope

The project will comprise a review of the potential peatlands in countries within the initiative for mitigation climate change to be undertaken by consultants and to be presented at a final workshop with the participation of the relevant authorities and stakeholders. To achieve this an understanding of the importance of the peatlands in climate regulation is crucial. Moreover the project will aim at identifying, where the potential for conserving and reducing emissions will be most effective identifying hotspot areas for such actions.

Output

A final report presenting the importance of the Nordic Baltic peatlands in climate change regulation. A final draft version of the report will be presented at a workshop and the final report disseminated and made public available. For the 3 main issues covered by the report see under tasks for the consultant.

Tasks for the Consultant

The project will comprise a review of peatlands in relation to climate change to be carried out by the consultants and supported by the working group. The contribution of peatlands towards climate regulation will be mapped as detailed as possible based on the available information of size and location of peatlands nationally as well as preliminary calculations of carbon sequestration by peatlands (ha/year) and of their existing carbon stock. Carbon hot spots and selected peatland areas for restoration will be identified and their potential contribution estimated. All calculations on carbon stocks and sequestration are expected to be rough based on the type of peatland and existing knowledge giving an indication on the order of magnitude of sequestration only. More detailed information at the site level will require more detailed site specific studies not intended to be covered by this study. Three main tasks are to be covered by the report:

- 1) Provide an overview of the contribution of the peatlands in the Nordic Baltic countries including their carbon stocks to mitigate climate change.
- 2) Assist to identify at least one peatland in each of the participating countries where restoration would be possible of former peat bog swamp, which could have an regulation effect on climate change.
- 3) Assist to identify at least one peatland in each of the participating countries which contributes to regulate climate based on criteria for climate regulation (1 iv) in the Ramsar Information Sheet. See Ramsar handbook 17.

Working Group

Assistance to the consultants and the review will be provided by the relevant Ramsar authorities of the participating countries in the project and will further be supported by a working group with a representative from each of the participating countries in the project anchored in the Nordic Baltic Wetland Ramsar Initiative NorBalWet. The working group comprises:

Norway - Jan-Petter Hubert Hansen

Finland – Jari Ilmonen

Estonia – Agu Leivits

Sweden - Jenny Lonnstad
 Greenland - Inge Thaulow
 Iceland – Hildur Vésteinsdóttir
 Denmark – Lars Dinesen

Moreover, the working group will be responsible for hiring the consultant, the workshop and for the dissemination of the project results and will also be responsible for reporting back to the NorBalWet coordination group. The project will be anchored in Denmark and coordinated by the Danish focal point who will be responsible for the work of the consultant.

Support Group of experts

Drafts are foreseen to be circulated as well to a wider support group comprising of experts in the field of climate change and wetlands. These individuals will be selected based on their personal capacities in the participating countries and within the Scientific and Technical Review Panel of the Ramsar Convention.

Activities and timelines

Activity	Indicator	Time
1) The task of doing the review will be offered 2-4 consultants asking for CVs and approach to tackle the tasks.	Consultant to undertake the review selected.	June - August 2013
2) Brainstorm meeting between the working group and the consultant to be held to outline and discuss the requested tasks and share expectations. Expected to be at the Ilulissat meeting in Greenland.	Minutes from meetings.	September 2013
3) Mapping of the more exact information needed by the consultant and submission of requests to the working group on assistance to relevant information	Requests from consultant	September - December 2013
4) First draft of the review to be scrutinized by the working group and written feedback to consultant	Draft report	January 2014
5) Second draft of the review to be submitted to the working group and participants of a workshop in advance of the meeting	Draft report	March 2014
6) Results presented at workshop in Copenhagen by the consultants and feedback by working group	Minutes of workshop	Spring 2014
7) Final report submitted taking into account inputs from workshop	Final report	May 2014
8) Report disseminated and made public available.	Available at relevant websites	June 2014

Budget

The consultant will be paid a total fee of 375 000 DKK for the timely delivery of quality products. The fee will cover all costs of the consultant in conjunction with the project.

Delivery	Time	Amount DKK
First review draft report	January 2014	200 000
Results presented to the working group at a workshop	Spring 2014	
Final report submitted	May 2014	175 000
Total fee		375 000