

Reporting progress under IUCN Resolution 43 Securing the future for global peatlands

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Introduction

At the IUCN World Conservation Congress in Hawaii (September 2016), delegates passed a motion calling for better protection and restoration of the world's peatlands. This motion became adopted as an IUCN Resolution: [043- Securing a future for global peatlands](#) (see Appendix 1). The motion highlights the potential for catastrophic loss of carbon, biodiversity and harm to water systems unless urgent action was taken to protect, restore and sustainably manage peatlands, which are present in more than 175 countries.

Since the adoption of the Resolution by IUCN there have been two further significant global resolutions on peatlands which underscore the importance IUCN Resolution 043:

- United Nations Environment Programme resolution (2019) on the '[Conservation and sustainable management of peatlands](#)' which calls for;
- Ramsar Resolution XIII.13 (2018) '[Restoration of degraded peatlands to mitigate and adapt to climate change and enhance biodiversity and disaster risk reduction](#)' (which builds on two former Ramsar resolutions on peatlands, Resolutions VIII.17 and XII.11)

Progress monitoring for IUCN Resolution 43 may also be used to monitor progress on the UNEP and Ramsar resolutions due to significant overlap between the three resolutions. All three call for country-focused programmes, including legislation where relevant, to: i) restore and rewet degraded peatlands; ii) conserve and sustainably manage existing peatlands; and iii) share knowledge and experience of restoration, conservation and sustainable management. The IUCN and Ramsar resolutions go further, to urge the cessation of unsustainable uses (the IUCN resolution focuses on a moratorium on peat extraction Ramsar focuses on land uses that require drainage such as forestry, and development/construction).

The currently known extent of peatland cover is 3% of the land surface of the Earth, yet they contain twice as much carbon as the world's forests. Damaged peatlands are responsible for at least 10% of the world's carbon dioxide emissions. Restoring peatlands is an effective and cost efficient way of reversing the carbon loss from damaged bogs whilst protecting and enhancing other peatland services such as provision of clean drinking water and hosting important biodiversity and amenity value.

Actions to protect peatland habitats and reverse the wide scale damage is needed including practical approaches to measuring, reporting and accounting for peatland activities and associated greenhouse gas emissions changes. The Food and Agriculture Organization of the United Nations has presented [10 elements of strategic actions](#) that can ensure peatlands contribute their full potential to international sustainable development goals including climate change, water and biodiversity objectives. These include:

- Assessing the distribution and state of peatlands;
- Measuring and reporting emissions from peatlands;
- Protecting and restoring peatlands with targeted financial support;
- Stimulating market based mechanisms to support peatlands;
- Engaging and supporting local communities; and
- Sharing experience and expertise on peatland conservation, restoration and improved management.

IUCN Resolution 43 calls for strategic action to support the delivery of peatland restoration and sustainable management. In this context, the objective of this review seeks to identify the strategies, policies and plans in place that can achieve the 'protect, restore and sustainably manage' goals of Resolution 43.

Methods

There are at least 175 peatland nations (Paris et al., 2008¹). Of these many have been ranked based upon their extent, coverage within country boundaries and greenhouse gas emissions within the '[Global Peatland CO₂ Picture](#)' report. Peatlands which are considered to be of the highest 'Global priority' were identified from this report as countries that met at least one of the following criteria within the '[Global Peatland CO₂ Picture](#)' report (Joosten, 2009):

- Peat-dominated (% of country area);
- Having large areas of continuous peatland;
- Large CO₂ emissions from peat; and/or
- Large peat carbon stocks.

This approach highlighted 54 countries (see Table 1) which met at least one of the above criteria: countries meeting three or four criteria were assigned a high priority for assessment and countries possessing only one or two of these criteria were assigned a lower priority for assessment. Data from priority countries was pro-actively sought via online research and a targeted global questionnaire. Questionnaire responses were also invited from lower priority countries, and circulated more widely to other countries with more restricted peatland extent or emissions. Given the national scope of many policies affecting peatlands, countries containing regions meeting three or four of the criteria outlined above were prioritised for assessment and are treated nationally in the analysis that follows.

Table 1: Countries highlighted as being priorities for assessment of peatland strategies and policies. Countries are assigned to categories based upon their assessment within the Global CO₂ picture report (as described above)

Countries belonging to 4 categories	Countries belonging to 3 categories	Countries belonging to 2 categories	Countries belonging to 1 categories
Belarus Finland	Brazil Canada	Chile Congo	Angola Amsterdam & St Paul Islands Antipodes
Indonesia	China	Dem. Republic of Congo	Auckland Islands
Ireland	Falkland Islands	Estonia	Brunei
Malaysia	Germany	Latvia	Campbell Islands
Norway	Iceland	Mongolia	Chatham Islands
Papua New Guinea	Uganda	Netherlands	Colombia
Russia (Asian part-of)	United Kingdom	Peru	Japan
Sweden	Russia (European part-of)	Poland	
USA (Alaska)		St Helena (UK)	Lithuania
		Sudan	Macquarie Island
		USA (southern)	Mexico
		Zambia	New Zealand
			Russia
			Singapore
			Tasmania
			Trinidad Island (Brazil)
			Ukraine
			Venezuela
			Vietnam

¹ Parish F., Sirin A., Charman D., Joosten H., Minayeva T. & M. Silvius (eds.) 2008. Assessment on Peatlands, Biodiversity and Climate Change: Main Report. Global Environment Centre, Kuala Lumpur and Wetlands International, Wageningen. p. 179

The desk and questionnaire based study was conducted in two phases:

1. An initial desktop review (English language only) of available information from all 175+ peatland countries including all IUCN member states to identify which countries have visible peatland strategies in place or in preparation.
2. Distribution of a questionnaire (English, French and Spanish versions, see Appendix 2) to the 54 countries highlighted in Table 1. The questionnaire was also circulated through global networks e.g. the IUCN Secretariat and IUCN National Committee chairs, the Global Peatlands Initiative, UNEP in addition to dissemination through partner newsletters² and social media.

² E.g. http://www.imcg.net/modules/download_gallery/dlc.php?file=293&id=1552072956

Results

Table 2 Responses received: **Green**= response received and has a strategy OR is known to have a strategy from online review/prior knowledge. **Amber**= strategy is known to be in development. White= no response received and/online and expert information yields no results. Where known, dates of publication of the strategy is included

Countries belonging to 4 categories	Countries belonging to 3 categories	Countries belonging to 2 categories	Countries belonging to 1 categories	Additional countries*
Belarus	Brazil	Chile	Angola	Andorra
Finland (2012)	Canada ²	Republic of Congo	Amsterdam & St Paul Islands	Bangladesh
Indonesia (2017) ¹	China	Democratic Republic of Congo	Antipodes	Brunei ¹
Ireland (2015)	Falkland Islands	Estonia	Auckland Islands	Dominican Republic
Malaysia (2013) ¹	Germany ³	Latvia	Brunei	France ⁴
Norway	Iceland ⁶	Mongolia (2017)	Campbell Islands	Iraq
Papua New Guinea	Uganda	Netherlands	Chatham Islands	Jamaica
Russia (Asian part-of)	United Kingdom	Peru	Colombia	Lao PDR
Sweden	Russia (European part-of)	Poland	Japan	Lesotho
USA (Alaska)		St Helena (UK)	Lithuania	Liechtenstein
		Sudan	Macquarie Island	Myanmar ¹
		USA (southern)	Mexico	Philippines ¹
		Zambia	New Zealand	Slovakia
			Russia	South Africa
			Singapore ¹	Spain (Grenada)
			Tasmania	Thailand ¹
			Trinidad Island (Brazil)	Vanuatu ⁵
			Ukraine	
			Venezuela	
			Vietnam ¹	

* Responded to the monitoring questionnaire

¹ Included within the ASEAN strategy

²Canada has a regional peatland strategies for Manitoba, Nova Scotia, Ontario and British Columbia.

³ German national strategy is in development (due 2020)

⁴ France has a number of regional strategies and is developing a national strategy (in progress)

⁵ Although not included in (Joosten,2009) online research revealed Vanuatu to have a National Biodiversity Strategy encompassing peat wetlands and a Directory of Wetlands citing discovery of peat soils within proposed Ramsar sites (e.g. Emaotfer Swamp)

⁶ Development of an action plan for 'restoration will be made and funded in Iceland (Outlined in the [2018 Climate Change Plan](#)).

The combined approach of desk based study and analysis of questionnaire responses highlighted the existence of at least 27 existing national strategies for peatland conservation, restoration and sustainable management (Table 2). A further five strategies are known to be in development: Germany, Spain, Iceland, Democratic Republic of Congo and South Africa. A reference collection of the strategic documents found can be accessed online at <https://www.iucn-uk-peatlandprogramme.org/about-us/commission-ecosystem-management>.

There were 31 responses to the questionnaire from 26 countries. For detailed analysis of questionnaire responses, please see Appendix 3. Awareness of the IUCN Resolution 043 was poor with only 9 respondents being aware that the resolution existed.

Discussion

The combination of online, desk based research and the circulated questionnaire revealed that there are multiple examples of strategic action for peatlands globally. In general, of the 31 questionnaire responses, **most** countries had:

- + a wetland/peatland strategy in place to co-ordinate actions on peatlands
- + a strategy/policy in place to assess the distribution and state of peatlands combined with policies to engage and support local communities.
- + A strategy that focussed on the protection of peatlands

On the other hand, **most** respondents highlighted that these strategies do not tend to cover:

- measures to sustainably manage peatlands
- mechanisms to monitor and report peatland emissions,
- stimulate market based mechanisms to fund peatland conservation
- or include actions to share experience and expertise on peatland conservation and management.
- a moratorium on peat exploitation

Resource has not been available to conduct further detailed analysis of the 27 strategy documents catalogued and to assess whether the strategies;

- a) Meet global guidelines. The UN FAO and Wetlands International have guidelines for supporting strategic action to deliver climate change mitigation through conservation, restoration and sustainable use of peatlands (Joosten et al., 2012);
- b) Fully address specific aspects of IUCN Resolution 43;
- c) Are being implemented effectively e.g. via an associated co-ordination body delivering action on the ground; or
- d) Make recommendations for policy and legislation needed or tackle conflicting policies and incentives.

Recommendations and future activity

The process of monitoring the reach and impact of IUCN Resolution 43 has highlighted a number of countries (see white categories in Table 2) which either have no peatland strategy in place or are of unknown status.

The IUCN CEM Peatland Specialist Group, led by the IUCN UK National Committee Peatland Programme, propose to engage with these countries, in addition to continuing to support those with strategic plans in place, through:

- Showcasing existing examples of strategic action. The 'Demonstrating Success' series of publications³ will be built upon with the addition of 'Demonstrating Success: Strategic action for global peatlands' produced during 2020.
- Activities to support the Global Peatlands Initiative (GPI), specifically engaging in the GPI's 'Global Peatlands Assessment'.
- Highlighting the importance of ongoing monitoring, reporting and review processes for new and existing peatland strategies.

³ <https://www.iucn-uk-peatlandprogramme.org/resources/restoration-practice/demonstrating-success>

Appendix 1: Resolution 043 Securing a future for global peatlands

WCC-2016-Res-043-EN Securing the future for global peatlands

NOTING that peatlands occur in every continent of the world;

RECOGNISING that peatlands occupy 3% of the Earth's land surface area yet store more carbon than all the world's vegetation, including all forests, and that damaged peatlands release two gigatonnes of carbon to the atmosphere each year, equivalent to the carbon emissions of all air travel;

RECOGNISING that peatlands are among the most valuable ecosystems on Earth (also providing clean water and playing a key role in flood management), and support a wide range of rare, specialist and threatened biodiversity, and are valuable as a palaeontological archive;

RECOGNISING that peatlands are areas of geological interest on our planet and that they are of great scientific interest in recording climate evolution, the composition of the atmosphere, geological processes and agents, as well as biodiversity during the Quaternary Period;

WELCOMING the recognition by international environmental agreements and initiatives, including the Convention on Biological Diversity (CBD) and the Ramsar Convention, of the importance of peatlands for climate change, biodiversity conservation, and a wide range of ecosystem services, and RECALLING that the restoration and sustainable use of peatlands has long been recognised as a priority under such activities but that implementation of these has been largely ineffective;

RECOGNISING that a workshop held during the IUCN World Conservation Congress at its session in Jeju, Republic of Korea (2012) called for IUCN to provide a focus for peatland action, for work with the business and private sector to secure funding, and for support to international efforts to share good practice and science relating to peatlands;

ACKNOWLEDGING the commitment to action for peatlands in the draft IUCN Programme 2017- 2020, the work of National Committees, such as the IUCN National Committee for the United Kingdom Peatland Programme, and the work of Members such as Wetlands International;

GRATEFUL that the IUCN National Committee for the United Kingdom has pioneered procedures to re-wet peat, to restore biodiversity, reduce emissions and sequester greenhouse gases;

TROUBLED that peat is being lost rapidly through peat forest fires, conversion of peatlands for agricultural uses, mining for fuel, mining to sell in horticulture, and to enable construction;

ALARMED at the potential for catastrophic loss of carbon, biodiversity and harm to water systems if action is not taken to halt the loss of peatlands and to restore damaged peatlands;

ALSO ALARMED that in Borneo and Sumatra and the Malay Peninsula peat forests are being increasingly drained, sometimes unlawfully burned, and converted to oil palm plantations, causing severe fires, harm to water systems, and catastrophic loss of carbon and biodiversity, and that this peat destruction has released such vast amounts of CO₂ that this region now contributes greenhouse gas emissions comparable to those of China or the USA, a sign it is time for action to be taken to halt the loss of peatlands and to restore damaged peatlands; and

CONCERNED that globally, there exists no legal provision for the stewardship of peat and peatlands, unless coincidentally peatland is located in a designated protected area or is subject to wetland preservation laws;

The World Conservation Congress, at its session in Hawai'i, United States of America, 1-10 September 2016:

1. RECOMMENDS that the Commission on Ecosystem Management should develop or endorse an existing scientific definition of peatland to be applied by the United Nations Food and Agricultural Organization (FAO) in its Soils Charter, by the Ramsar Convention in its classification of wetland type, and by IUCN;
2. REQUESTS the World Commission on Environmental Law to prepare draft legislation for nations to use as a guideline recommending how to preserve and restore peatlands and how to include them alongside forests in all relevant intergovernmental agreements relating to climate change, geodiversity and biodiversity;
3. CALLS ON National Committees to cooperate with the Secretariat, Commissions and Members in developing or contributing to country-focused programmes to protect, restore and sustainably manage peatlands taking cognisance of the strategic actions of the FAO 'guidance for climate change mitigation by conservation, rehabilitation and sustainable use of peatlands' and the ongoing work of the Ramsar Convention particularly under Ramsar Resolution XII.11 on peatlands, climate change and wise use (2015);
4. URGES states to place a moratorium on peat exploitation until their legislation is strengthened to ensure peatlands are protected or managed through wise use principles; and
5. RECOMMENDS states to give appropriate consideration to the importance of the preservation of peatlands when implementing activities to reduce deforestation and forest degradation. State and agency Members of the United States abstained during the vote on this motion for reasons given in the U.S. General Statement on the IUCN Motions Process.

Appendix 2: Questionnaire design

Reporting progress under IUCN Resolution 43

IUCN UK Peatland Programme in collaboration with the IUCN CEM Peatlands Specialist Group and Newcastle University is monitoring progress under Resolution 43, securing the future of global peatlands, agreed in 2016 at the World Conservation Congress.

This survey will take between 20 to 40 minutes to complete depending on the detail you are able to provide. There are 26 questions, 14 of which ask for additional information if it is available. Questions 20 to 26 provided us with additional information.

Notes on completing this form:

- 1. where text boxes are provided, they will expand to accommodate your answer up to a maximum of 100 words.*
 - 2. If a question asks for additional text and you can provide this from an existing document please either include a secure (https) link to the document or return it with your completed questionnaire. Please let us know the relevant page in your document.*
-

Background to this survey

The Food and Agriculture Organisation of the United Nations has presented 10 elements of strategic actions that can ensure peatlands contribute their full potential to international sustainable development goals including climate change, water and biodiversity objectives. These include:

1. Assessing the distribution and state of peatlands
2. Measuring and reporting emissions from peatlands
3. Protecting and restoring peatlands with targeted financial support
4. Stimulating market-based mechanisms to support peatlands
5. Engaging and supporting local communities
6. Sharing experience and expertise on peatland conservation, restoration and improved management

Resolution 43 supports these strategic elements and encourages their adoption within country-focused peatland programmes. There are at least 175 peatland nations. Of these many have been ranked based upon their extent, coverage within country boundaries and emissions (see [Global Peatland CO2 Picture report](#)).

Consent

Participation in this research study is voluntary. By giving your consent in the first question of this survey, you give permission for IUCN UK Peatland Programme, IUCN CEM Peatland Ecosystems and Newcastle University permission to store and use the data you provide for

the purposes of monitoring the implementation of Resolution 43 and publishing this via IUCN, the Global Assessment of Peatlands (2018) which is being led by the Global Peatlands Initiative and peer-reviewed journal articles. Responses are anonymous but the identity of countries will be reported. If you have any questions about participation in this survey, please contact Mercy Ojo at Newcastle University (mercy.ojo@newcastle.ac.uk).

1. Do you give consent for the information you provide to be used in the ways described under "consent" in the introduction to this survey?

☐ Yes

☐ No

2. What is the name of the country, region or other jurisdiction you are reporting on behalf of?

3. Before answering this survey, were you or your colleagues aware of IUCN Resolution 43 "Securing the future of global peatlands" ([WCC-2016-Res-043](#))?

☐ Yes

☐ No

☐ Not sure

4. In your country, is a wetland/peatland strategy in place to co-ordinate action on peatlands?

☐ Yes

☐ No

☐ Not sure

5. Please provide a link to your strategy or email it to: mark.reed@ncl.ac.uk

6. We have a strategy/policy to assess the distribution and state of peatlands

☐ Yes

☐ No

Please explain how and what is working

7. We have a strategy/policy to measure and report emissions from peatlands

☐ Yes

☐ No

Please explain how and what is working

8. We have a strategy/policy to protect and restore peatlands with targeted financial support

☐ Yes

☐ No

Please explain how and what is working

9. We have a strategy/policy to stimulate market-based mechanisms to support peatlands

☐ Yes

☐ No

Please explain how and what is working

10. We have a strategy/policy to engage and support local communities

☐ Yes

☐ No

Please explain how and what is working

11. We have a strategy/policy to share experience and expertise on peatland conservation, restoration and improved management

☐ Yes

☐ No

Please explain how and what is working

12. Are there measures in place to protect peatlands (e.g. designated sites and prohibited activities)?

☐ Yes

☐ No

☐ Not sure

If yes, please describe

13. Are there measures in place to restore degraded peatlands (e.g. re-wetting through drain blocking)?

☐ Yes

☐ No

☐ Not sure

If yes, please describe

14. Are there measures in place to sustainably manage peatlands (e.g. sustainable agriculture)?

☐ Yes

☐ No

☐ Not sure

If yes, please describe

15. Does the strategy have actions and targets?

☐ Yes

☐ No

☐ Not sure

If yes, please describe

16. What is the timeline for implementation/delivery of the strategy? Please describe or provide link with page reference to relevant documentation

17. Is the strategy being used/actively implemented? Please describe or provide link with page reference to relevant documentation and tell us who is responsible for the implementation and delivery of the strategy.

18. Does the strategy have a stakeholder group and who administers it? Please describe or provide link with page reference to relevant documentation

19. Is the strategy supported by Government funding specifically for peatlands? Please describe or provide link with page reference to relevant documentation

What are you doing for peatlands?

The next section (Questions 20 to 26) address policy measures which are in support of/additional to the peatland strategy discussed. Please answer these questions to inform us about the range of other mechanisms which are working and being successfully implemented. Alternatively, please feel free to skip these questions.

20. Is there a moratorium on peat exploitation (peat extraction) in place in the country?

☐ Yes

☐ No

☐ Not sure

If yes, please give details

21. What policies are in place to address elements of the recommended strategic action by the UN FAO (See these 6-point list)? 1) Assessing the distribution and state of peatlands 2) Measuring and reporting emissions from peatlands 3) Protecting and restoring peatlands with targeted financial support 4) Stimulating market-based mechanisms to support peatlands 5) Engaging and supporting local communities 6) Sharing experience and expertise on peatland conservation, restoration and improved management

22. Are there strategic measures in place to protect peatlands (e.g. designated sites and prohibited activities)?

☐ Yes

☐ No

☐ Not sure

If yes, please give details

23. Are there strategic measures in place to sustainably manage peatlands (e.g. sustainable agriculture)?

☐ Yes

☐ No

☐ Not sure

If yes, please give details

24. What quantifiable progress is being made towards implementing these strategic measures?

25. What challenges are being encountered at the policy level (is there support for including peatlands in policy?) and the delivery level (what barriers are there to delivering action on new or existing peatland policies e.g. funding as a barrier)?

Appendix 3: Detailed questionnaire responses

For description of the open-ended questions, see Appendix 2 above.

Assessing the distribution and state of peatlands (Q6 and Q6a)

Thirteen respondents reported that their countries had a strategy or policy to assess the distribution and state of peatlands. Of these thirteen, nine mentioned that the implementation of the peatland strategy is monitored through their respective ministry of agriculture and forestry, ministry of environment and forestry etc while some mentioned that they are currently developing a peatland strategy. Below are some of the specific highlights of the countries who responded positively:

- **Finland:** EU regulates monitoring, e.g. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. The implementation of the peatland strategy is monitored (document in Finnish). The monitoring was done by the ministry of agriculture and forestry. They interview the officials under the ministry governance and send questionnaires to other related organizations.
- **Lao PDR:** Collaborating with IUCN Mekong Regional Peat program & local government authorities under the umbrella of national & RAMSAR wetland management.
- **Indonesia:** The vastness of Indonesia's peatlands poses its own complexity. These landscapes are important for biomass production, water supply, carbon storage and biodiversity conservation. At the same time, their massive range means there are no authoritative maps clearly delineating peatlands from other areas, which has allowed them to be included in concessions for commercial exploitation, including plantations, logging and mining. The Ministry of Environment and Forestry published a peat hydrological area map in 2017, which divides peat zones into two categories: protection or production. The map uses data from various official maps, including that of the Ministry of Agriculture and one from the Ministry of Public Works. But at a scale of 1:250,000, the Ministry of Environment and Forestry's map is not detailed for use in effective spatial planning and policymaking tasks, which require maps with a finer resolution of 1:50,000. This lack of an authoritative map and poor data has made it difficult for the government to identify peat areas that needed to be conserved — the necessary first step toward rehabilitating peatlands that have been degraded and rendered susceptible to fires.
- **Nova Scotia Canada:** Support provided through the wetland policy and inventory: <https://novascotia.ca/natr/wildlife/habitats/wetlands.asp>
- **Manitoba:** Manitoba is currently developing a wetland (peatland) inventory of the province. The Manitoba Heritage Habitat Corporation has an ongoing project to map wetlands (peatlands) in southern and central Manitoba. These datasets are available on the Manitoba Lands Initiative portal: <https://mli2.gov.mb.ca/>. Peatlands characteristics (peat depth, carbon content, etc.) data collection is also continuously ongoing.
- **Sweden:** Has a national monitoring program using satellite searching for spectral differences between years with similar weather conditions, approximately every 10 years. It works for open wetlands, except for the ones in the alpine region. There is

also a programme to monitor rich fens in parts of the country, and another for monitoring palsas. There is also an on-going work for improving the delimitation of wetland in our maps in general, we use satellite and machine learning on how to make the delimitation better. The results will be used among others in our new national land cover data.

- **Ontario:** The wetland strategy identifies improving wetland mapping and inventory as a priority and includes actions to develop a framework for the assessment of trends in the quality and function of wetlands.
- **Chile:** There is a National Biodiversity Strategy (2017-2030) that incorporates a Plan for the conservation and rational use of wetlands, however, to date there is no specific instrument for Turberas. Likewise, the Climate Change Adaptation Plan in Biodiversity establishes in its fact sheet No. 31 measures associated with the conservation of peatland wetlands, as a mechanism for adaptation to climate change and the maintenance of water resources.
- **British Columbia:** The government ministry are working on wetland mapping and classification initiatives.
- **Canada:** In 2016, Environment and Climate Change Canada developed a new indicator "Extent of Canada's Wetlands" under the Canadian Environmental Sustainability Indicators program (<https://www.ec.gc.ca/indicateursindicators/default.asp?lang=En&n=B253CF38-1&offset=2&toc=show>). The indicator is a measure of the extent of Canadian wetlands and provides a baseline (circa 2000) from which change can be measured. This indicator is derived from several data sources including provincial/territorial governments and the Canadian Wetland Inventory. Information from each contributing dataset was classified based on the Canadian Wetland Classification System which contains five main wetland classes (bog, fen, marsh, swamp, and shallow water) that represent the types of wetlands encountered in Canada. Bogs and fens are the dominant peatland classes.
- **Congo Kinshasha:** Both countries have made statements to demonstrate their commitment to protecting peatland, recently discovered on their territory, recent developments on the ground show that industrial activities are already under way, and which constitute an alarming threat to these peatland areas"

Measure and reporting of GHG emissions from peatlands (Q7 and Q7a)

Four respondents said that their country had a system in place to measure and report GHG emissions. Below are some of the reports from these specific countries:

- **Finland:** Reporting under UNFCCC + research
- **Indonesia:** The Indonesian NDC has targeted to restore 2 million ha of degraded peatland by 2030 with about 90% success rate. The strategy to restore 2 million ha of degraded peatland can be implemented by restoring 150,000 ha of peatland every year from 2018 until 2030. This strategy may reduce emissions for about 1 GtCO₂e within 13 years from now. The restoration of degraded peatland has been conducted through: Application of peat restoration techniques that include water management on site level (operational scale); Construction, operation and maintenance works, including the arrangement of canal blocking installation (rewetting infrastructure); Application of cultivation according to local wisdom; and/or Research and development, taking into account and adhering to the

development of science and lessons learnt from international perspectives. As the NDC requests for 90% success rate, peatland restoration needs to comply with indicators of success.

- **Sweden:** We have a programme on what data to collect for making the National Inventory Report for the UNFCCC.
- **Republic of Congo:** For Arlette SOUDAN-NONAUT, Minister of Tourism and Environment of the Republic of Congo, the peatlands of the central bowl deserve to be fully known in order to better guarantee their management.

Although Chile reported that they do not have a system in place to measure and report GHG emission, they mentioned that greater importance is being given to conservation, trying to protect wetlands. But they reported that the progress is slow especially in the central zone of the country.

Financial support for the restoration of peatlands (Q8 and Q8a; Q9 and Q9a)

Ireland, Lao PDR, Sweden, Republic of Congo Kinshasa mentioned that they do have financial support targeted at peatlands. Canada as a country did not provide this specific information but the provinces such as Manitoba, Nova Scotia and Ontario highlighted that they have specific funding targeted for peatland restoration at the provincial level. Respondent from Sweden also mentioned that they have a project trying to achieve incentives for Paludiculture.

Most of the respondents do not provide this specific information as some of them were not sure of the financial supports that are in existence in their countries.

Local community involvements and sharing experience of peatland conservation restoration (Q10, Q10a, Q11, Q11a)

Ireland, Lao PDR, Indonesia, Republic du Congo Brazzaville, Chile and the 4 provinces from the respondents from Canada all reported that they have a strategy/policy to support local community involvements. Five respondents expanded on this statement as indicated below:

- **Lao PDA:** All habitat and site protection work is conducted with a community participatory planning element & strong focus on CCA livelihood raising efforts to take pressures off the peatlands / wetlands.
- **Indonesia:** The strategy to engage and support local community is conducted through a program called Peat Care Village. This Peat Care Village is harmonizing framework for development programs that exist in rural peatlands, especially within and around the peat restoration area. The approach used is to strengthen inter-village cooperation in a landscape of the peat hydrological unit. The establishment of peat rural zone is the entry point for developing further sustainable peat management by these villages. The Peat Care Village program includes facilitating activities for the formation of peat rural zones, village and rural spatial planning, conflict identification and resolution, recognition and legalization of rights and access, institutions for hydrological and land management, inter-village cooperation, economic empowerment, strengthening local knowledge and village community preparedness in the face of peat fire disasters.

- **Manitoba, Canada:** It is part of the duty of the Crown to consult with First Nations communities or organizations (such as the Manitoba Metis Federation) on development projects (such as peat harvest operations) that may affect Treaty or Aboriginal Rights. Engagement, separate from consultation, is promoted for both the peat industry and government. Increasing engagement efforts is a goal; this will help solve problems or concerns before consultation is necessary, and create good relations with communities
- **Ontario, Canada:** The Far North Act, which came into effect January 31, 2011, provided for community-based land use planning in Ontario's Far North (where the majority of Ontario's peatlands occur). It set out joint planning process between First Nations and the province. The Act is currently under review by the provincial government.
- **Chile:** Within the framework of the National Biodiversity Strategy (2017-2030) objectives associated with the involvement and strengthening of local communities are incorporated. In addition, there is the Law on Associations and Citizen Participation in Public Management, which incorporated in our legislation the assertion that "the State recognizes people the right to participate in its policies, plans, programs and actions.

Ireland, Lao PDR, Indonesia, Ontario, Republic of Congo Kinshasha, France and Quebec all reported that they do have a strategy/policy to share experience and expertise on peatland conservation, restoration and improved management but five of them was able to provide additional information. Lao PDR reported that policies that supports sharing experience and expertise on peatland conservation is still under development. Below are some of the extracts from the four respondents who expanded on their comments relating to the policy they use in sharing expertise on peatland conservation, restoration and improved management.

- **Indonesia:** PRIMS, Peatlands Restoration Information and Monitoring System, is an online platform that provides data, information and most recent progress of restoration in priority provinces of Peatland Restoration Agency (BRG). The platform also enables users (national and sub-national government, subnational peatland restoration team, restoration implementation actors, local CSOs, private sector, and other interested parties) to access restoration planning and implementation, monitor restoration activities, monitor hotspots in peatlands, detect land clearing in restoration targeted areas, and report their restoration activities. Indonesia intends to share these experiences with other countries with peatlands in the tropical world through south-south and triangular collaboration. Indonesia deems it important to share and to assist other tropical countries as parts of its contribution to wider efforts towards achieving sustainable development for the betterment of the planet. The GPI and the UN Environment support the establishment of international research centre on tropical peatlands in Indonesia.
- **Ontario:** A Wetland Conservation Strategy for Ontario includes goals, intended outcomes, and actions related to increasing knowledge about Ontario's wetlands (including their wise use and restoration) to improve their conservation
- **Congo Kinshasha:** several conferences and training on the protection of the peat bog, are set up.
- **France:** Within the 5 wetland resource centres, known as "wetland relay poles", France has a relay centre dedicated specifically to peatlands, and carried by the Federation of Conservatories of Natural Spaces: <http://www.pole-tourbieres.org/>

3.3.5. Protection, restoration, and management of peatlands (Q12- Q20a)

All the respondents except republic du Congo and British Columbia signified that **there are measures put in place to protect peatland**. Indonesia reported that Governing a vast peatland across several islands in Indonesia is a huge task. The government of Indonesia has prioritized the protection and sustainable management of peatlands, including the restoration of heavily degraded peatlands. In addition, Sweden reported that drainage is forbidden in part of the country and restricted in the rest of the country. Lots of Natura 2000 sites and nature reserves and Ramsar sites contain peatlands. There is a protection plan for continuing the work with protected areas.

Lastly Canada also reported that peatlands are partially protected by the Federal Policy on Wetland Conservation (1991), but the responsibility for the management of natural resources is under the authority of the provincial and territorial governments. Provincially, Alberta, Manitoba, Quebec and New Brunswick all have policies relating to peatland extraction and conservation of wetlands. For example, in Manitoba the Peatlands Stewardship Act (2014) promotes the protection and conservation of peatlands and is one of the first of its kind in Canada. There are no specific protected area designations specific to peatlands; however, peatlands may be protected through designation of protected areas, such as National Wildlife Areas, Migratory Bird Sanctuaries, National Parks, Provincial Parks, etc. In addition, 14 of Canada's 37 Ramsar sites identify peatlands within their boundaries.

Regarding the restoration of degraded peatlands, nine respondents mentioned that there are measures in place to restore degraded peatlands in their countries. 6 out of these respondents provided more information regarding these measures as seen below:

- **Finland:** Rewetting has been done mainly in state-owned forests
- **Ireland:** Mixed approaches by different stakeholders
- **Lao PDR:** Plans to engage in artificial canal blocking (small weirs) and weir repair to re-wet wetlands & extend lakebed flood periods
- **Sweden:** Yes, we have had a Life-Project restoring mires, and the programme for restoring wetlands (for keeping water in the landscape) that also includes peatlands
- **Canada:** The Canadian Sphagnum Peat Moss Association has been a partner of research on peatland restoration for 25 years. As of 2015, 7,500 hectares of peatlands used for horticultural peat harvesting had been restored and most of these sites are part of a long-term monitoring program.

Between 1997 and 2017, the Canadian Sphagnum Peat Moss Association and its members invested over \$7 million in peatland restoration research. The Association continues to work with others to quantify potential climate mitigation impacts of peatland management and restoration.

- **France:** Yes, there are important coordinated programs. But there are also on a smaller scale multiple intervention that are in place, at the initiative of associations, managers of protected spaces, conservatories of natural spaces, communities, or other ... for the restoration (or rehabilitation) of peatlands.

Only Finland, Lao PDR, Manitoba, and Quebec in Canada mentioned that there are **measures in place to sustainably manage peatlands**. On the other hand, 2 of the three respondents from Chile highlighted the limitation to move to a sustainable peatland management. The extra information provided by these countries can be found below:

- **Finland:** Rural development programme: support for controlled drainage on cultivated peat soils (investment + maintenance), support for extensive grass cultivation Forests: forest law has been updated so that poorly growing peatland forests do not need to be reforested (encourages rewetting).
- **Lao PDR:** Measures under development to encourage farmers to avoid intensive use of deeply flooding flood plains, lakes, wetlands and peatland - in effort to reduce flood/disaster losses & reduce landscape pressure to allow natural landscape restoration, management & sustainable use

- **Manitoba:** The Peatlands Stewardship Act was written so that peatlands are responsibly managed for sustainable use in Manitoba
- **Quebec:** The State Sustainable Forest Management Regulations (RADF), which govern spur management activities carried out by forestry industry, vacationers, outfitters and educational and educational institutions research, provides for numerous measures prohibiting, limiting or framing the conduct of forest management activities on Quebec's public forests. Some wooded peatlands are protected specifically by a legal designation (including as an exceptional forest ecosystem or biological refuge). Others are targeted for restraining of integrated forest management plans to provide administrative protection as a "wetland of interest," "wildlife site of interest" or "protected habitat of an endangered species or vulnerable."
- **Chile:** There is Decree 25 of the Ministry of Agriculture 2018, which indicates limitations to move towards the sustainable harvest of *Sphagnum magellanicum*. Not designed for peatland conservation

PDR, Indonesia, Sweden and Ontario, Canada all mentioned that they have action plans and targets as part of their peatland strategies. For example, a wetland Conservation Strategy for Ontario includes targets, goals, intended outcomes, and actions to improve wetland conservation by 2030.

Indonesia provided a link to those plans. The implementation timescales for these plans ranges from 2018 to 2022. Four respondents (Finland, Manitoba, Ontario and Quebec) mentioned that their strategies/plans were being actively implemented and they provided some links to these plans.

Five respondents (Finland, Ireland, Lao PDR, France and British Columbia) all reported that stakeholders have on-going responsibilities for their peatland strategies. Ministry of Agric and Forestry for Finland and NGOs for British Columbia and others provided a link to their stakeholder groups and two mentioned that there is government funding for peatlands. Indonesia, Congo Kinshasha and Chile mentioned that there was moratorium on peat extraction.

Local Strategic measures to protect peatlands (Q21-Q25)

Two countries (Ireland and Indonesia) mentioned that they have policies in place that addressed elements of the UN FAO six-point list for strategic action.

Thirteen respondents stated that there were strategic measures in place to sustainably manage peatlands. Three respondents reported that progress was being made towards their objectives (management plans, peatlands recovery plans, engagement plans, training and summits were given as examples).

Fifteen respondents provided information about the challenges to delivering peatland policies. These challenges include:

- Very low visibility of wetlands and invisibility of peat lands at the national policy development level.
- Coordination; Funding; Reallocation of production areas that have been licensed before the policy and regulation were enacted.
- No opposition of including peatlands in strategies and policies, but several stakeholders have conditions about that measure should be voluntary or accepted by land owners.
- Lack of funding for measures is a big problem.
- Not just funding; but also the CO2 emission rate (0.4 to 2%) may be the cause of the lack of interest in issuing actions in relation to existing or new policies.
- The main challenges are related, as in the protection of other types of wetlands, to the "needs" of land use and urbanization policies, and to agricultural policies, which

do not sufficiently integrate value and the usefulness of wetlands, including peatlands. It should be noted that policies implemented for adaptation to climate change are also struggling to integrate the value of nature-based solutions.

- Restoration costs are a real limit to action and require the priority of preservation and the absence of destruction.
- Raising awareness of wetland and water issues, including the relevant authorities.
- Linking the various policies affecting different sectors of the economy impacting wetlands and water, taking regional realities into account.
- Establishing a fair compensation system to adequately fund measures to restore and create wetlands and water.
- There is a draft law still in the design stage, which hopes to support its preservation. But it has had no priority or political interest.
- In BC, work on wetlands (generically - we don't talk about peatlands specifically) has been piecemeal. It probably occurs via federal or provincial Environmental Impact Assessment processes for some projects (but not others - see this recent story about a newly-approved project in the neighbouring province of Alberta <https://thenarwhal.ca/10-things-you-need-to-know-about-the-massive-new-oilsands-mine-that-just-got-a-green-light/>, and there are some tools available for local governments. Bringing in a provincial wetlands policy has been discussed for a few years but has never made it to the top of the priority list.

General comments

In Canada, peatlands are partially protected by the Federal Policy on Wetland Conservation (1991), but the responsibility for the management of natural resources is under the authority of the provincial and territorial governments; there is no single strategy or policy applicable to the country as a whole. Therefore, most of the questions in the survey couldn't be responded at a national level.