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INTERNATIONAL CONVENTIONS, AGENCIES, AGREEMENTS AND PROGRAMMES

Implications for peat and peatland management

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Publisher:
International Peat Society
Kauppakatu 19 D 31
40100 Jyväskylä, Finland
Email: ips@peatsociety.org
Web: www.peatsociety.org

Prepared by:
Jack Rieley, Chair of the IPS Scientific Advisory Board, United Kingdom

Assisted by:

Sandra Lubinaite

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Peatland in Central Finland. Photo: Susann Warnecke

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Contents

Foreword

Which international conventions, organizations and initiatives have the greatest impact on the management of peatlands? This question, relevant to all who care about responsible land use, is addressed in this document.

Future life for the Earth's human population - ca. 7 billion and growing fast - unconditionally suggests a sustainable use of natural resources. New knowledge and an increasing concern about the environment, in particular loss of biodiversity, carbon emissions and climate change, contribute to broader views. The most important is perhaps that individuals, you and I, not only view ourselves as local people, but also as Global citizens. Although restricted to acting locally, we can think globally and feel responsibility for the common resources. One of the most critical is *land*, and proper land use is fundamental.

Peatlands represent a greater carbon store than any other land type. They are used in agriculture, forestry and horticulture, and as a source for fuel to produce energy. Responsible management of peatlands, in which conservation is a key element, is a priority for the Global citizen, including caring stakeholders.

This publication, prepared by the International Peat Society (IPS), is in response to a request by peat and peatland stakeholders to provide information and guidance on the most important international conventions, agencies and programmes in influencing decision-making processes on peatland management and peat use. The rationale behind the selection of these institutions is given in the introduction and can serve as reading advice.

Björn Hånell

IPS President

Introduction

The rationale behind this Report is to identify the international conventions, agencies, agreements, programmes and actions that have implications for peatland management and uses of peat. Information is provided on 20 international bodies most of which were established by or at the instigation of the United Nations or an Agency of the UN, while a few arose independently of the UN. Some have general remits that cover important global issues of which peatlands form part, for example UNDP focuses on sustainable development and relief of poverty while UNEP has a mandate for global environmental issues and manages the Global Environment Fund (GEF).

As the title of this report suggests, the terminology of these international organisations is confusing. Some, perhaps the most important, are international conventions to which nation states, and in some cases regional groupings of states (e.g. EU) or customs unions, have signed up because they agree with the aims and objectives and decisions taken at Conferences of the Parties (COP). This group includes CBD, UNFCCC, IPPC, WMO, Ramsar and CITES. A few, such as Ramsar and IUCN were formed in response to specific environmental conservation needs and pressures, independently of the UN but linked to it and committed to by large numbers of nation states and other bodies, including environmental NGOs.

Others are Agencies of the UN, established for specific purposes, for example, FAO and IMO, the former to reduce poverty and defeat hunger, especially in developing countries while the latter sets standards for transporting commodities between countries by sea. UNDP, UNEP, MICCA and UN-REDD are programmes under the UN directly or of the UN agency FAO. UNDP and UNEP were established more than 40 years ago with wide mandates; they are complex organisations employing large numbers of staff worldwide. Both UNDP and UNEP have been responsible for establishing some of the other international organisations in this report (see Figures 1 and 2). Both UN-REDD and MICCA programmes were established much more recently with very specific mandates, the former for reducing GHG emissions through preventing deforestation in developing countries and the latter by mitigating GHG emissions in agriculture and other land uses.

IUCN, which was formed as a result of an initiative of the first director of UNESCO, is a non-UN international organisation dedicated to conserving the integrity and diversity of nature. It is a network of NGOs, governments, scientists, businesses and local communities and others that provides a neutral forum to find practical solutions to conservation and development challenges. IUCN established CITES that is another non-UN international convention regulating the trade in endangered animal and plant species highlighted in the IUCN 'Red Data Books'.

Finally there is a small group of international organisations that may appear to have little relationship to peatlands, peat or peat industry, namely CGIAR, CIFOR and WTO, but occasionally these undertake projects or influence policies that involve peatland management and uses of peat. They also work with and advise some of the other international organisations. CGIAR has close relationships with FAO, UNDP and World Bank while CIFOR provides information to UN-REDD, UNFCCC and CBD. WTO stands out as different in its origin and status from all other international organisations. It acts similarly to an international convention in that a large number of countries belong to it. However, it is an informal organisation, without legal status, that arose out of the former 'General Agreement on Tariffs and Trade' (GATT) that originated in 1948 and ended in 1994 at the 'Uruguay Round' when WTO was created to replace it. WTO deals with the rules of trade between nations at a global scale, formulates regulations for the international trading of commodities such as peat and administers the Sanitary and Phytosanitary (SPS) regulations on animal and plant health

that are prepared by the International Convention on Plant Protection (IPPC) and other similar organisations.

The origins of all of these international organisations can be traced back to immediately after World War II when the United Nations was established in 1945. Soon afterwards UNESCO was formed in the belief that political and economic agreements are not enough to build a lasting peace. UNESCO promotes education, intercultural understanding, protection of heritage, scientific co-operation and freedom of expression, aspects of which were consolidated in later international conventions and agreements. UNESCO, for example, acted as sponsor of the Ramsar Convention and received its documents of agreement and incorporation in 1971.

Three phases of development of these international bodies can be identified: (1) 1945 – 1975, beginning with UNESCO and IUCN and ending with FAO, Ramsar and CITES; (2) 1988 – 1995, from IPCC to WTO and SPS; and finally (3) UN-REDD in 2008 and MICCA in 2010. This chronology reflects the change in emphasis internationally from concern for individual humans, animals and plants, linking conservation to the needs of sustainable development, to a more recent focus on ecosystem management and the services ecosystems provide to humankind.

Over this time period International priorities have also changed. In the late 1980s and early 1990s, for example, the realization that biodiversity was reducing and many species of animals and plants were under threat of extinction because of land use and climate changes. In response to the latter IPCC was established in 1988 to provide governments with the science based evidence of climate change and explain the implications of what was happening to this planet. This led to increasing awareness of and concern about human activities linked to climate change and most of the international bodies described in this Report now have a remit to consider the implications of their objectives and policies for this serious global problem. The objectives of some of these bodies focuses strongly on aspects of the environment, especially biodiversity (CBD), wildlife conservation (IUCN) and climate change (UNFCCC). The first of these has implications for peatland management whether for nature conservation or peat extraction and also for conserving and enhancing the diversity of living things that peatlands provide habitats for. The last has responsibilities for reducing greenhouse gas emissions because peat is one of the largest terrestrial carbon stores on the planet and its disturbance leads to loss of carbon dioxide to the atmosphere where it contributes to climate change processes.

It is hoped that this document will help to unravel the often complex workings and interrelationships of these international conventions, agreements and regulations and highlight the implications they have for management of peatland, peat uses and peat transportation for the better understanding and wise use of this important and valuable local, regional and global resource. The reader is invited to contribute to the Report that should be considered as 'evolving' and, especially, to provide additional information for the 'implications' sections that are at the end of each account.

Jack Rieley

IPS Vice President 2
Chair Scientific Advisory Board

United Nations Educational, Scientific and Cultural Organization (UNESCO)

The United Nations Educational, Scientific and Cultural Organization (UNESCO) was created in 1945, in order to respond to the firm belief of nations, forged by two world wars in less than a generation that political and economic agreements are not enough to build a lasting peace. UNESCO has 195 member states and nine associate members.

Its purpose is to contribute to peace and security by promoting international collaboration through education, science, and culture in order to further universal respect for justice, the rule of law, and human rights along with fundamental freedom proclaimed in the UN Charter. UNESCO exists to bring this creative intelligence to life; for it is in the minds of men and women that the defenses of peace and the conditions for sustainable development must be built.

UNESCO is the lead agency for the UN Decade of Education for Sustainable Development (DESD, 2005-2014). ESD is practiced in order to preserve biodiversity and test options for reconciling preservation with the growth of human activities. It is important to refocus education programmes so that they enable educators and learners to protect biodiversity. Through its Climate Change Education for Sustainable Development programme, UNESCO aims to make climate change education a more central and visible part of the international response to climate change. Promoting sound water governance is another key role of UNESCO education programmes especially in developing and poor countries.

UNESCO pursues its objectives through five major programs: education, natural sciences, social and human sciences, culture, and communication and information. UNESCO strives to build networks among nations that enable this kind of solidarity, by.

- Mobilizing for education: so that every child, boy or girl, has access to quality education as a fundamental human right and as a prerequisite for human development.
- Building intercultural understanding: through protection of heritage and support for cultural diversity. UNESCO created the idea of World Heritage to protect sites of outstanding universal value.
- Pursuing scientific cooperation: such as early warning systems for tsunamis or trans-boundary water management agreements, to strengthen ties between nations and societies.
- Protecting freedom of expression: an essential condition for democracy, development and human dignity.

Further information can be obtained from: **https://en.unesco.org/**

Implications of UNESCO for peatlands and peat

There is no direct implication of UNESCO for peatland management and peat use except perhaps through the educational programmes on biodiversity and climate change. The main importance of UNESCO is its involvement in the formation and operation of several key international organisations concerned with the environment and sustainable development.

Convention on Biological Diversity (CBD)

The Convention on Biological Diversity (CBD) is a comprehensive, binding agreement between governments covering the conservation and use of biodiversity. It was signed at the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro and came into force on 29 December 1993. It requires countries to develop and implement strategies for sustainable use and protection of biodiversity, and provides a forum for continuing international dialogue on biodiversity-related issues. CBD consists of 193 countries of which 168 are signatories.

The CBD Secretariat is based in Montreal and operates under the United Nations Environment Programme (UNEP). Its main functions are to organize meetings, draft documents, assist member governments in the implementation of the programme of work, coordinate with other international organizations, and collect and disseminate information. The convention's governing body is the Conference of the Parties (COP), consisting of all governments (and regional economic integration organizations) that have ratified the treaty.

The CBD has three main objectives:

1. The conservation of biological diversity
2. The sustainable use of the components of biological diversity
3. The fair and equitable sharing of the benefits arising out of the utilization of genetic resources

The overall aim of the Convention is to develop national strategies for the conservation and sustainable use of biological diversity. The Convention on Biological Diversity (CBD) has an important task to make clear statements in the direction of UN-FCCC and of donors of programmes to Reduce Emissions from Deforestation in Developing Countries (UN-REDD).

The Subsidiary body for Scientific, Technical and Technological Advice (SBSTTA) was established under Article 25 of the Convention as an open-ended, multidisciplinary, intergovernmental scientific advisory body to provide the Conference of the Parties (COP) and its other subsidiary bodies, with advice relating to the implementation of the Convention.

In 2002, Parties to the Convention on Biological Diversity adopted the Strategic Plan for the Convention (2002-2010), committing themselves to more effective and coherent implementation of the objectives of the Convention to achieve, by 2010, a significant reduction in the current rate of biodiversity loss. The Strategic Plan was revised and updated at COP10 for the period 2011-2020 and includes the Aichi Biodiversity Targets.

Protocols are supplementary agreements to the Convention on specific issues relevant to global biodiversity and include The Nagoya Protocol on Access and Benefit-sharing and The Cartagena Protocol on Biosafety.

National and Regional Biodiversity Strategies and Action Plans (NBSAP and RBSAP) are the principal instruments for implementing the Convention at national and regional level while local governments are encouraged to prepared Local Biodiversity Action Plans (LBAP) taking the concepts and actions down to the level of local communities. The Convention requires countries to prepare NBSAPs (or equivalent instrument) and ensure that these are mainstreamed into the planning process and activities of all sectors whose activities can have an impact (positive and negative) on biodiversity.

More information can be obtained from: **http://www.cbd.int/convention/**

Implications of the CBD for peatlands and peat

The Convention on Biological Diversity is one of the most important conventions affecting the management of peatlands and use of peat through far reaching international agreements for the conservation of key ecosystems and the protection and enhancement of endangered habitats and species. Wetlands, of which more than 50% by area are peatlands, are prominent on the CBD target list and activities on these that lead to a reduction in biodiversity are discouraged.

While the CBD through its SBSTTA and COP sets out the overall strategies and actions to protect and enhance global biodiversity, implementation is by countries and regional groupings of countries (e.g. EU). Therefore it is essential to consult National Biodiversity Action Plans in order to obtain details of national peatland habitat and species priorities within the scope of the Convention. The EU Habitats Directive (1992), for example, identified the following peatlands as priorities for conservation (i.e. protection of their habitats and biodiversity): active raised bog; degraded raised bog (still capable of natural regeneration); blanket bog (active only); transition mire and quaking bog; depressions on peat substrates (Rhynchosporion).

The Habitats Directive established Natura 2000, an EU-wide network of nature protection areas, which is the centrepiece of EU nature and biodiversity policy. The aim of the network is to assure the long-term survival of Europe's most valuable and threatened habitats and species. It is comprised of Special Areas of Conservation (SAC) designated by Member States under the Habitats Directive, and Special Protection Areas (SPAs) designated under the 1979 Birds Directive. Peatlands can be designated because they are priority habitats in their own right or for their importance as bird habitats or both. Although Natura 2000 is not a system of strict nature reserves where all human activities are excluded, and the network certainly includes nature reserves, most of the land is likely to continue to be privately owned with the emphasis on ensuring that future management is sustainable, both ecologically and economically. The establishment of this network of protected areas fulfils an EU obligation under the UN Convention on Biological Diversity.

The CBD and national, regional and local biodiversity strategies and action plans have major implications for the management of peatlands and the use of peat but what these are may not be obvious and may be interpreted differently in different countries. It is clear that lowland raised bogs, even if they are degraded but capable of regeneration within a 30 year timescale can be designated Nature Reserves and/or Natura 2000 sites (in EU) on the basis of habitat or species rarity or both and therefore should not be considered for peat extraction. In the UK, there has been a tendency of the country (England, Northern Ireland, Scotland and Wales) nature conservation agencies to put forward virtually all lowland raised bogs, including those that are degraded, as candidate SACs and then proceed to try to stop peat extraction where it still takes place. Elsewhere in the EU and in other countries where raised bogs are still abundant, and degraded ones are viewed as less important, the situation may be different.

Under pressure from ENGOs, both international and national, using their interpretation of the strategies and actions of the CBD and other conventions, regional (e.g. EU) and national governments are being lobbied to implement stricter policies and actions to stop certain economic activities. These include peat extraction under the guise of preventing habitat and biodiversity loss and reducing GHG emissions (see under UNFCCC and IPCC)

United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC is a “Rio Convention”, one of three adopted at the “Earth Summit” in 1992. It entered into force on 21 March 1994. Today, it has near-universal membership having been ratified by 195 countries (Parties). The ultimate objective of the Convention is to stabilize greenhouse gas concentrations "at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner." The UNFCCC secretariat, that is located in Bonn, Germany, supports all institutions involved in the international climate change negotiations, particularly the Conference of the Parties (COP), the advisory subsidiary bodies and the Convention Bureau (which deals mainly with procedural and organizational issues but also has technical functions).

The UNFCCC does not set binding limits on greenhouse gas emissions for individual countries and does not contain enforcement mechanisms and is legally non-binding. Instead, it provides a framework for negotiating specific international treaties (called "protocols") that may set binding limits on greenhouse gases.

Industrialised countries, which are the source of most past and current greenhouse gas emissions, are expected to do the most to cut emissions and they have to report regularly on their climate change policies and measures, including issues governed by the Kyoto Protocol. They must also submit an annual inventory of their greenhouse gas emissions, including data for their base year (1990) and all the years since. Industrialized nations agree under the Convention to support climate change activities in developing countries by providing financial support for action on climate change - above and beyond any financial assistance they already provide to these countries.

The Convention established two permanent subsidiary bodies: the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI). These give advice to the COP and each has a specific mandate. They are both open to participation by any Party and governments can send representatives who are experts in the fields of the bodies.

In 1995, countries launched negotiations to strengthen the global response to climate change, which two years later (1997) resulted in the **Kyoto Protocol**. The Protocol only binds developed countries because it recognizes that they are largely responsible for the current high levels of GHG emissions in the atmosphere. The United States of America is a signatory but has not ratified the Kyoto Protocol; Canada withdrew from the Kyoto Protocol in December 2013.

The Kyoto Protocol contains important mechanisms. International Emissions Trading implies that Parties with commitments under the Kyoto Protocol (Annex B Parties) have accepted targets for limiting or reducing emissions. The Clean Development Mechanism (CDM) allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (Annex B Party) to implement an emission-reduction project in developing countries. The mechanism known as “Joint Implementation”, allows a country with an emission reduction or limitation commitment under the Kyoto Protocol (Annex B Party) to earn emission reduction units (ERUs) from an emission-reduction or emission removal project in another Annex B Party, each equivalent to one tonne of CO2, which can be counted towards meeting its Kyoto target.

Under the Protocol, countries' actual emissions have to be monitored and precise records have to be kept of the trades carried out. Annex I Parties that have ratified the Kyoto Protocol must include supplementary information in their national communications and their annual inventories of emissions and removals of GHGs to demonstrate compliance with the Protocol's commitments. Adaptation refers to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damage or to benefit from opportunities associated with climate change. Mitigation is essential to meet the UNFCCC's objective of stabilizing GHG concentrations in the atmosphere. With current climate change mitigation policies and related sustainable development practices, these emissions will continue to grow over the next few decades. Societies can respond to climate change by reducing GHG emissions and enhancing sinks and reservoirs. To this end, a wide variety of policies and instruments are available to governments to create the incentives for mitigation action.

Contracting Parties can respond to climate change by reducing GHG emissions and enhancing sinks and reservoirs. The capacity to do so depends on socio-economic and environmental circumstances and the availability of information and technology. To this end, a wide variety of policies and instruments are available to governments to create the incentives for mitigation action. Mitigation is essential to meet the UNFCCC's objective of stabilizing GHG concentrations in the atmosphere. Among others, the Convention:

- Requires all Parties, taking into account their responsibilities and capabilities, to formulate and implement programmes containing measures to mitigate climate change
- Also requires all Parties to develop and periodically update national inventories of GHG emissions and removals
- Commits all Parties to promote, and cooperate in, the development, application and diffusion of climate friendly technologies
- Requires developed countries to adopt national policies and measures to limit GHG emissions and protect and enhance sinks and reservoirs

More information: **http://www.unfccc.int/**

Implications of the UNFCCC for peatlands and peat

The UNFCCC has important implications for industries utilizing peat and peatlands because GHG emissions associated with peat extraction, processing and use, as well as emissions due to peatland forestry and agriculture, have to be accounted for in national GHG inventories. Some studies show that, in the short to medium term, peatland forestry can be a net carbon sink. Peat is regarded as a solid fossil fuel when used for energy. Drained peatland may emit non-CO2 GHGs (e.g. N2O) and this has to be accounted for.

In general, if pristine bogs are drained their CO2 emissions are expected to increase significantly. Furthermore, in the case of peat extraction, the CO2e loss in the peat extracted, processed and used can be considerable. It is important for industries that the emission factors (EF) used to calculate agriculture, forestry and peat extraction related GHG emissions are representative of local conditions whether they are Tier 1 EFs derived from the IPCC 2013 Wetlands Supplement or country specific Tier 2 EFs.

Following agreement at Durban, the rewetting of peatlands can now be included on a voluntary basis in national greenhouse gas accounting. Individual Countries will have to officially choose to adopt this activity before the next commitment period starts.

Food and Agriculture Organization of the United Nations (FAO)

The Food and Agriculture Organization of the United Nations (FAO) is a specialised agency that leads international efforts to defeat hunger. FAO acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy. FAO is also a source of knowledge and information, and helps developing countries and countries in transition modernise and improve agriculture, forestry and fisheries practices, ensuring good nutrition and food security for all.

As of 8 August 2013, FAO has 194 member states, along with the European Union, and the Faroe Islands and Tokelau, which are associate members. FAO headquarters are in Rome, Italy. The agency is directed by the Conference of Member Nations, which meets every two years to review the work of the organisation and to approve a Programme of Work and Budget for the next two-year period. Through the FAO Conference, the member countries of FAO have agreed on a set of core functions that provide the means of action to underpin the work of FAO at global, regional and national levels. The Conference elects a council of 49 member states that acts as an interim governing body, and the Director-General that heads the agency. FAO is a major partner in the implementation of the Convention on Biological Diversity.

FAO work in Agriculture

FAO works in partnership with governments and private sector, with national and international organisations and financial institutions to increase the volume and effectiveness of investments in agriculture and rural development. FAO created the International Plant Protection Convention or IPPC in 1952. This international treaty organization works to prevent the international spread of pests and plant diseases. (See the IPPC pages.)

FAO work in Forestry

The FAO Forestry Department helps nations manage their forests in a sustainable way in order to balance social, economic and environmental objectives. FAO is the main organization behind the World Forestry Congress (WFC) which is the largest and most significant gathering of the world's forestry sector. FAO efforts and actions in forestry are reflected in the expectations of the member countries. In recent years FAO has been encouraged to work more effectively to respond to a rapidly changing environment, reach outside the traditional forest sector, engage in partnerships with new stakeholders, and serve as a global leader in international forest affairs. In 2008, together with the Swedish University of Agricultural Sciences (SLU) and the International Union of Forest Research Organizations (IUFRO), FAO organized the international conference ”Adaptation of forests and forest management to changing climate with emphasis on forest health: a review of science, policies and practices”.

FAO monitoring land use change and greenhouse gas emissions

A new domain on greenhouse gas (GHG) emissions has just been released on both FAOSTAT and its new pilot version FAOSTAT3. This is intended as the first in a range of services aimed at agri-environmental indicators. The newly added GHG database offers a complete time-series of emission statistics for all countries over the period 1990-2010 (http://faostat.fao.org/) (http://faostat3.fao.org/home/index.html).

More information: **http://www.fao.org/about/en/**

Implications of the FAO for peatlands and peat

Since it was formed the emphasis of FAO has changed from providing advice on wetland and peatland drainage for their conversion to agriculture to promoting strategies for reducing greenhouse gas emissions through measures such as rewetting, re-wilding and alternative forms of production. In 2010 FAO launched the MICCA Programme with the aim to make agriculture more climate-smart, improve the livelihoods of smallholder farmers in developing countries and enable them to contribute to global efforts to mitigate climate change. [See the MICCA pages in this document.]

Mitigation of Climate Change in Agriculture (MICCA) Programme by the Food and Agriculture Organization (FAO) of the United Nations

MICCA is a multidisciplinary programme launched in 2010 to build on FAO's long-standing work carried out by its different technical departments and collaborate with international and national organizations to address climate change. The primary goal of MICCA is to make agriculture more climate-smart. The technical information generated by the Programme supports negotiation processes undertaken through the UN Framework Convention on Climate Change (UNFCCC) (http://unfccc.int/2860.php); MICCA also collaborates with the UN-REDD Programme (http://www.fao.org/climatechange/unredd/en/). MICCA is funded by Finland, Germany and Norway and works in a variety of different areas:

Putting climate-smart agriculture into practice

The MICCA Programme is working to build the knowledge base about what it will take to put climate-smart agriculture into practice.

- ***Pilot projects:*** The Programme is partnering with other organizations to carry out pilot projects to provide quantifiable evidence that climate-smart agricultural practices can mitigate climate change, improve farmers' lives and make local communities better able to adapt to climate change.
- ***Global review:*** MICCA has carried out a global review of opportunities and obstacles at the farm level to examine the synergies between climate change and food security and measure the yield effect of sustainable land management practices that have the potential to mitigate climate change.
- ***Mitigation projects database:*** The Programme has developed a database on mitigation activities currently ongoing within the category: agriculture, forestry and other land use (AFOLU) (including peat extraction).

Supporting policy and decision making

The MICCA Programme is generating information and tools to identify technical, financial and institutional options for climate change mitigation in agriculture. At the international level, the United Nations Framework Convention on Climate Change (UNFCCC) negotiation process is working towards an agreement for confronting climate change. Parties to the UNFCCC are recognizing the importance of agriculture and land based sectors in mitigation. Part of MICCA's mission is to inform the UNFCCC parties of the options for including agriculture in international institutional climate change arrangements. The MICCA Programme is involved in the preparation of submissions, information briefs and side events for the UNFCCC meetings.

Life Cycle Analysis

Life cycle analyses (LCAs) quantify greenhouse gas emissions arising from the entire agricultural production chain. There are often large data gaps about the amount of greenhouse gas (GHG) emissions produced from the agricultural sector. MICCA team members have developed a methodology to quantify greenhouse gas emissions arising from animal food chains. Plans are being developed to expand the analysis to include major feed crops and the wider environmental impacts of livestock production. The MICCA Programme will also work to develop LCA guidelines and provide examples of how these can be used not only for estimating greenhouse gases, but also for identifying mitigation 'hotspots', giving decision-makers the information they need to formulate policies and carry out effective actions for reducing emissions.

Land tenure

Climate change mitigation policies that concern the forestry and agriculture sectors will have to address land tenure issues in order to foresee, plan and distribute risks and benefits of their incentive schemes.

Gender and climate change

FAO and the CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS) have jointly developed a Training Guide for Gender and Climate Change Research in Agriculture and Food Security for Rural Development.

Community for Climate Change Mitigation in Agriculture, launched by the MICCA Programme, provides a network for practitioners, civil society organizations, national policy decision-makers and private sector working on reducing greenhouse gas emissions in agriculture. The Community facilitates the development and adoption of sustainable mitigation practices currently being used in agricultural production systems in different parts of the world. The Community organizes online webinars and learning events on a variety of climate-smart practices and climate change mitigation opportunities.

The MICCA Programme Monitoring and Assessment of Greenhouse Gas Emissions and Mitigation Potential in Agriculture

Greenhouse gas emissions from agriculture grew 1.6 percent per year during the decade after the year 2000. Many developing countries have neither the data nor the capacity to carry out greenhouse gas inventories, especially in the category Agriculture, Forestry and Other Land Use (AFOLU). To assist countries in this area, FAO's MICCA Programme has begun a three-year project to establish a greenhouse gas emission and mitigation potential database. The database will provide the data and analysis needed to formulate policies and strategies that may be eligible for financing through the Green Climate Fund via their Nationally Appropriate Mitigations Actions (NAMAs). The database will expand relevant environmental domains and accounting systems within FAOSTAT and directly contribute the Intergovernmental Panel on Climate Change (IPCC) 5th assessment report.

More information: **http://www.fao.org/climatechange/micca/peat/en/**

MICCA Activities Involving Peatland and Peat

- FAO, the MICCA Programme and *Wetlands International* launched the global 'Organic soils and peatlands climate change mitigation initiative'. This is an informal network of organizations and people committed to reducing emissions from peatlands and safeguarding the other vital ecosystem services peatlands provide. The Initiative was launched at a side event at the UNFCCC SBSTA meeting held in Bonn, Germany in 2012. As part of this initiative FAO and Wetlands International published a book "Peatlands – guidance for climate change mitigation through conservation, rehabilitation and sustainable use", aimed at policy-makers, technical audiences and others interested in peatlands.
- An international workshop on peatlands management was held at FAO headquarters in Rome –in May 2013. The aims of the workshop "Towards sustainable land management practices for peatlands – special focus on drained areas" were to gather information on advances in the quantification of greenhouse gas emissions from drained peatlands, identify the location of peatlands and their uses, and assess the potential for changing towards more responsible management practices, especially

peatlands used for agriculture and forestry or abandoned after drainage and use. Initially peat extraction was also included.

- MICCA's work on peatlands and climate change mitigation was presented at a UNFCCC SBSTA side event in Bonn, Germany in June 2013 proposing nationally appropriate mitigation actions (NAMA) for peatland as an option for developing countries. The event informed negotiations on addressing land use in the post-2020 framework, especially concentrating on the emissions from peat soils, as drained peatlands cover 0.3 percent of global land, but produce 6 percent of the global anthropogenic CO2 emissions.
- In October 2013, MICCA's Community of Practice on Climate Change Mitigation in Agriculture (http://www.fao.org/climatechange/micca/75150/en/) hosted an online webinar for practitioners, policy makers, entrepreneurs, researchers and civil society organizations interested in responsible management of peatlands and climate change mitigation.

Implications of MICCA for peatlands and peat

MICCA is focused primarily on agriculture but has implications for all uses of drained peatlands due to its actions for gathering and disseminating new knowledge, especially about GHG emissions and climate change mitigation options. This information will be the basis for publishing guidelines for 'climate-responsible peatland management' (recognizing conservation, restoration, and utilization).

MICCA places a strong emphasis on reducing GHG emissions from small farmer/stakeholder activities in developing countries but its data bases include information from different land practices and land uses (agriculture, forestry and peat extraction) globally. It networks this information to governments and stakeholders but the reliability and sources of the data have not been verified independently. Much of it comes from a joint FAO/Wetlands International publication (supplemented by data provided by Greifswald University, Germany)[1].

[1] Hans Joosten, Marja-Liisa Tapio-Biström & Susanna Tol (eds.) (2012) Peatlands - guidance for climate change mitigation through conservation, rehabilitation and sustainable use Second edition. FAO, Rome.

International Plant Protection Convention (IPPC)

The International Plant Protection Convention (IPPC) is an international multilateral treaty relating to plant health that was established at the Sixth Conference of FAO in 1951. A major revision of the IPPC approved by the Conference of FAO in 1997 updated and strengthened the Convention. The IPPC Secretariat, provided by the FAO in its Rome headquarters, is responsible for the coordination of core activities under the IPPC work programme.

As of December 2013, the Convention has 181 parties, which includes 178 United Nations member states, the Cook Islands, Niue, and the European Union. The Convention has a governing body consisting of each party, known as the Commission on Phytosanitary Measures (CPM), which oversees the implementation of the Convention. The seven-member executive body of the CPM provides guidance to the IPPC Secretariat and CPM on strategic direction, cooperation, financial and operational management.

The IPPC provides a framework and forum for international cooperation, harmonization and technical exchange between contracting parties. Its implementation involves the collaboration of National Plant Protection Organisations (NPPO) and Regional Plant Protection Organisations (RPPO). The Convention aims to secure coordinated, effective action to prevent and control the introduction and spread of pests of plants and plant products. The Convention extends beyond the protection of cultivated plants to the protection of natural flora and plant products. It also takes into consideration both direct and indirect damage by pests, so it includes weeds. Its functions include maintenance of lists of plant pests, tracking of pest outbreaks, and coordination of technical assistance between member nations.

The IPPC places emphasis on three core areas: international standard setting, information exchange and capacity development for the implementation of the IPPC and associated international phytosanitary standards. The IPPC liaises with relevant international organizations that help with regional and national capacity building, as well as participating in some meetings as observers. The IPPC maintains strong links with international organizations that share common interests, for example, World Trade Organization and the Convention on Biological Diversity.

While the IPPC's primary focus is on plants and plant products moving in international trade, the Convention also covers research materials, biological control organisms, germplasm banks, containment facilities, food aid, emergency aid and anything else that can act as a vector for the spread of plant pests – for example, containers, packaging materials, soil, vehicles, vessels and machinery.

Relationships with WTO

The Convention is recognized by the World Trade Organization's (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement) as the only international standard setting body for plant health. WTO members agree to base their phytosanitary measures on international standards (ISPMs) developed within the framework of the IPPC. Phytosanitary measures that conform to ISPMs are presumed to be consistent with the relevant provisions of the SPS Agreement. The IPPC includes dispute settlement provisions for use in instances where phytosanitary measures may be challenged as unjustified barriers to trade.

More information available at: **www.ippc.int**

Implications of the SPS Agreement for peatlands and peat

It may not be immediately obvious that there is any relationship between the IPPC and peatland and peat except for the agreement between IPPC and WTO. As part of the WTO regulations on trade it operates the Agreement on Sanitary and Phytosanitary Measures (SPS) that deals with plant health to prevent the transfer of plant pests from one country to another in traded commodities. Peat is a traded commodity and therefore subject to the SPS measures. The standards that are enforced by WTO are based on international standards developed by IPPC and other international standard setting bodies. Inappropriate interpretation of the SPS Measures and the IPPC standards (ISPMs) could be used as a barrier to trade and used to prevent the import of certain commodities. Periodically the IPPC prepares new International Standards for Phytosanitary Measures (ISPMs), that may change the treatment of peat or peat products. These drafts are member country reviewed prior to adoption.

For further information see WTO and SPS sections of this document.

World Meteorological Organization (WMO)

The World Meteorological Organization (WMO), established in 1950 (formerly the International Meteorological Organization (IMO), is a specialized agency of the United Nations based in Geneva, Switzerland. It is the UN system's authoritative voice on the state and behaviour of the Earth's atmosphere, weather and climate, its interaction with the oceans, the climate it produces and the resulting distribution of water resources. WMO has a membership of 191 Member States and Territories (on 1 January 2013).

Since its establishment, WMO has played a unique and powerful role in contributing to the safety and welfare of humanity. Under WMO leadership and within the framework of WMO programmes, National Meteorological and Hydrological Services contribute substantially to the protection of life and property against natural disasters, to safeguarding the environment and to enhancing the economic and social well-being of all sectors of society in areas such as food security, water resources and transport.

WMO promotes cooperation in the establishment of networks for making meteorological, climatological, hydrological and geophysical observations, as well as the exchange, processing and standardization of related data, and assists technology transfer, training and research. It also fosters collaboration between the National Meteorological and Hydrological Services of its Members and furthers the application of meteorology to public weather services, agriculture, aviation, shipping, the environment, water issues and the mitigation of the impacts of natural disasters.

WMO plays a leading role in international efforts to monitor and protect the environment through its programmes. Together with the United Nations Environment Programme (UNEP) WMO created the Intergovernmental Panel on Climate Change (IPCC) in 1988. In collaboration with other UN agencies and the National Meteorological and Hydrological Services, WMO supports the implementation of a number of environmental conventions. (http://www.wmo.int/pages/about/Environmentalconventions_en.html)

Further information can be obtained at: **http://www.wmo.int/**

Implications of the WMO for peatlands and peat

This convention may not have direct implications for peatlands and peat but it is important to know that together with UNEP in 1988 it was responsible for the creation of the IPCC that assesses all aspects of climate change and its impacts; it also determines the emissions factors for GHG emissions resulting from land use change, including peat extraction. WMO also provides basic data and advice to certain other environmental conventions, including CBD and UNFCCC.

Intergovernmental Panel on Climate Change (IPCC)

The Intergovernmental Panel on Climate Change (IPCC) is a scientific body under the auspices of the United Nations (UN). It was created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) to prepare, based on available scientific information, assessments on all aspects of climate change and its impacts, with a view of formulating realistic response strategies. Because of its scientific and intergovernmental nature, the IPCC embodies a unique opportunity to provide rigorous and balanced scientific information to decision makers. By endorsing the IPCC reports, governments acknowledge the authority of their scientific content. In 2007 the IPCC was awarded the Nobel Peace Prize.

Currently, the IPCC has 195 member countries. The Panel meets once a year in Plenary Session attended by officials and experts from relevant ministries, agencies and research institutions from member countries and observer organizations. A Secretariat hosted by the World Meteorological Organization (WMO) in Geneva, Switzerland supports the Panel, the IPCC Chair and other Members of the Executive Committee and the IPCC Bureaux both individually and corporately in the delivery of their mandate, coordinating the work programmes and liaising with Governments. The IPCC is currently organized into 3 Working Groups and a Task Force, assisted by Technical Support Units (TSUs), which are hosted and supported financially by the government of the developed country Co-Chair of that Working Group/Task Force. A TSU has also been established to support the IPCC Chair in preparing the Synthesis Reports.

The IPCC Bureau currently comprises the IPCC Chair, the IPCC Vice-Chairs, the Co-Chairs and Vice-Chairs of the Working Groups and the Co-Chairs of the Task Force and 31 members elected by the Panel for the duration of an assessment cycle, reflecting a balanced geographic representation with due consideration for scientific and technical requirements. The Task Force on National Greenhouse Gas Inventories (TFI) has its own Task Force Bureau (TFB) that oversees the National Greenhouse Gas Inventories Programme. The Task Force on National Greenhouse Gas Inventories (TFI) has developed additional national-level methodological guidance on wetlands, including default emission factor values, with the aim to fill gaps in the coverage of wetlands and organic soils in the *2006 IPCC Guidelines*. *The Wetlands Supplement Report* published in 2013 further develops methodological work on wetlands, with updated guidance related to emissions from drained peatland under various land-uses and rewetting of peatland".

Each IPCC Member country has a Focal Point which has been identified by the relevant authorities in the country to prepare and update the list of national experts to help implement the IPCC work programme. The Focal Points also arrange for the provision of integrated comments on the accuracy and completeness of the scientific and/or technical content and the overall scientific and/or technical balance of drafts of reports.

One of the main IPCC activities is the preparation of comprehensive Assessment Reports about the state of scientific, technical and socio-economic knowledge on climate change, its causes, potential impacts and response strategies. The IPCC also produces Special Reports, which are an assessment on a specific issue and Methodology Reports, which provide practical guidelines for the preparation of greenhouse gas inventories. Since its inception in 1988 the IPCC has prepared four multivolume assessment reports. The IPCC's Fifth Assessment Report (AR5) will be completed in October 2014. Reports can be found at http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml.

Hundreds of experts are involved on a voluntary basis in the preparation of IPCC reports. Coordinating Lead Authors and Lead Authors are selected by the relevant Working Group/Task Force Bureau, under general

guidance provided by the Session of the Working Group (or by the Panel in case of reports prepared by the Task Force on National Greenhouse Gas Inventories) from among experts listed by governments and participating organizations, and other experts known through their publications and works. The role of Review Editors in the IPCC assessment process is to assist the Working Group/Task Force Bureaux in identifying reviewers for the expert review process, ensure that all substantive expert and government review comments are afforded appropriate consideration by the author teams, advise Lead Authors on how to handle contentious/controversial issues and ensure genuine controversies are reflected adequately in the text of the report. Expert reviewers review an IPCC draft report either by invitation or at their own request. Their role is to comment on the accuracy and completeness of the scientific, technical or socio-economic contents and the overall scientific, technical or social economic balance of draft reports. IPCC reports undergo a multi-stage review process.

More information: **http://www.ipcc.ch/index.htm**

Implications of the IPCC for peatlands and peat

UNFCCC through the Kyoto Protocol sets out the requirement of Annex I countries (developed) for reporting their GHG emissions annually within several categories and agrees targets for GHG reductions according to UNFCCC agreements. The scientific background and justification for these requirements are provided by IPCC. One of the emissions categories is Land Use Change (LUC) and any net increase in GHG emissions as a result of LUC, measured against a baseline of land use (LU) before change have to be included in country annual reports. Land Use and Land Use Change (LULUC), for example, could include the change from natural forest to agriculture or natural peatland to forestry, palm oil plantation or peat extraction. IPCC determines, on the basis of scientific evidence, the emissions factors to be applied annually in order to calculate the CO2 equivalent of net GHGs from peatland while being used for other land uses. It also can make allowance for mitigation as a result of responsible management practices and restoration.

Peatlands are one of the largest carbon stores on the planet and anything that leads to loss from this store is a matter of concern. Active peatlands absorb CO2 from the atmosphere, release methane (CH4) and are net carbon sinks; degraded peatlands emit large amounts of CO2 and are carbon sources; while peatlands managed for agriculture and forestry, in addition to emitting increased amounts of CO2 also release N2O, an even more powerful greenhouse gas, to the atmosphere. Peat extraction takes place mainly for energy generation and growing media for use in horticulture. These activities lead to (a) loss of carbon from store and (b) GHG emissions from the surface of peat extraction sites. Emissions of CH4 can also be involved from drainage ditches and areas of rewetted peatland after peat extraction ceases. Drained, nutrient-rich peatland (fen) may also emit N2O.

GHG emissions as a result of peatland drainage and related use (extraction, forestry, agriculture have to be accounted for in national inventories for reporting to UNFCCC using emission factors and methodologies determined by IPCC. The Fifth IPCC Assessment Report (2014) will introduce scope for mitigation as a result of rewetting degraded peatlands that may provide a degree of compensation for GHG emissions resulting from land use change.

United Nations collaborative initiative on Reducing Emissions from Deforestation and Forest Degradation (UN-REDD)

The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation (REDD) was created in September 2008 with the objective to assist developing countries build capacity to reduce greenhouse gas emissions. The UN-REDD initiative also supports a wider mechanism REDD+ that goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks. The UN-REDD Programme builds on the convening power and expertise of its three participating UN organizations FAO, UNDP and UNEP. The UN-REDD Programme works in close partnership with other REDD+ initiatives, especially those operated by the World Bank, and supports the implementation of UNFCCC decisions. REDD+ is a climate change mitigation solution that many initiatives, including the UN-REDD Programme, are currently developing and supporting.

REDD is a cutting-edge forestry initiative that aims at tipping the economic balance in favour of sustainable management of forests so that their formidable economic, environmental and social goods and services benefit countries, communities, biodiversity and forest users while also contributing to important reductions in greenhouse gas emissions. REDD strategies aim to make forests more valuable standing than they would be cut down, by creating a financial value for the carbon stored in trees. Once this carbon is assessed and quantified, the final phase of REDD involves developed countries paying developing countries carbon offsets for their standing forests. Through its initial nine pilot country National Programmes in Africa, Asia-Pacific and Latin America and the Caribbean, and related global activities, the UN-REDD Programme is supporting governments to prepare national REDD+ strategies, build monitoring systems, engage stakeholders and assess multiple benefits.

The goal of significantly reducing emissions from deforestation and forest degradation can best be achieved through a strong global partnership to create a REDD+ mechanism under the United Nations Framework Convention on Climate Change (UNFCCC). The Programme currently has 50 partner countries spanning Africa, Asia-Pacific and Latin America and the Caribbean. Other multilateral REDD+ initiatives include the Forest Carbon Partnership Facility (more information: http://www.forestcarbonpartnership.org/) and Forest Investment Programme (more information: http://www.climatefundsupdate.org/listing/forest-investment-program), hosted by The World Bank.

In order to optimize the approach and effectiveness of the UN-REDD Programme, the three participating UN organizations embarked on the preparation of a Programme Strategy covering the period 2011-2015 that was endorsed by the UN-REDD Programme's Policy Board.

More information: **http://www.un-redd.org/AboutUN-REDDProgramme/tabid/102613/Default.aspx**

Implications of UN-REDD f or peatlands and peat

This programme is aimed at developing countries and at first sight appears to be of little interest to peat and peatland related industries in Europe and N. America. However, in SE Asia, for example, peat industry involves plantations of oil palm and paper pulp trees grown on peat to which REDD could be relevant.

United Nations Development Programme (UNDP)

The United Nations Development Programme (UNDP), with its headquarters in New York, USA, is the United Nations' global development network. UNDP advocates for change and connects countries to knowledge, experience and resources to help people build a better life. The UNDP was founded in 1966 with the merger of the Expanded Programme of Technical Assistance (EPTA) and the United Nations Special Fund. It provides expert advice, training, and grant support to developing countries, with increasing emphasis on assistance to the least developed countries.

The organization has offices in 177 countries, where it works with local governments to meet development challenges and develop local capacity. Additionally, the UNDP works internationally to help countries achieve the Millennium Development Goals (MDGs). Currently, the UNDP is one of the main UN agencies involved in the development of the Post-2015 Development Agenda. UNDP is funded entirely by voluntary contributions from member nations. To accomplish the MDGs and encourage global development, UNDP focuses on poverty reduction, HIV/AIDS, democratic governance, energy and environment, social development, and crisis prevention and recovery. UNDP also encourages the protection of human rights and the empowerment of women in all of its programmes. The UNDP Human Development Report Office publishes an annual Human Development Report to measure and analyse developmental progress.

UNDP helps countries develop strategies to combat poverty by expanding access to economic opportunities and resources, linking poverty programmes with countries' larger goals and policies, and ensuring a greater voice for the poor. UNDP also works at the macro level to reform trade, encourage debt relief and foreign investment and ensure the poorest benefit from globalisation. Another UNDP objective is to reduce the risk of armed conflicts or disasters, and promote early recovery after crises have occurred. UNDP operates through its country offices to support local government in needs assessment, capacity development, coordinated planning, and policy and standard setting. Examples of UNDP risk reduction programmes include: efforts to control small arms proliferation, strategies to reduce the impact of natural disasters and programmes to encourage use of diplomacy and prevent violence. The United Nations Development Group (UNDG) was created by the Secretary General in 1997 to improve the effectiveness of UN development at the country level.

UNDP's environmental strategy focuses on effective water governance including access to water supply and sanitation. It also includes access to sustainable energy services, sustainable land management to combat desertification and land degradation, conservation and sustainable use of biodiversity, as well as policies to control emissions of harmful pollutants and ozone-depleting substances.

Further information available from: **www.undp.org**

Implications of the UNDP for peatlands and peat

UNDP does not affect peatland and peat users directly but it is active in developing countries many of which have peatland and some have activities on peatland or use peat. It was a partner with UNEP and FAO in the establishment of the UN-REDD Programme.

United Nations Environment Programme (UNEP)

The United Nations Environment Programme, established in 1972, is the primary environmental agency within the United Nations System, with its priorities enshrined in Agenda 21 of the Earth Summit (UNCED, 1992). Its mission is to provide leadership and encourage partnerships to protect the environment by inspiring, informing, and enabling Member States and peoples to improve their quality of life without compromising that of future generations. UNEP focuses on: climate change, disasters and conflicts, ecosystem management, environmental governance, harmful substances, resource efficiency, and environmental law. UNEP acts as a catalyst, advocate, educator and facilitator to promote the wise use and sustainable development of the global environment.

UNEP headquarters are located in Nairobi, Kenya. UNEP works through its divisions, six regional offices, out-posted offices in various countries, liaison and a growing network of collaborating centres of excellence. The UNEP Governing Council reports to the UN General Assembly through the Economic and Social Council.

UNEP's activities cover a wide range of issues regarding the atmosphere, marine and terrestrial ecosystems, environmental governance and green economy. It has played a significant role in developing international environmental conventions, promoting environmental science and information and illustrating the way those can be implemented in conjunction with policy. It is working on the development and implementation of policy with national governments, regional institutions in conjunction with environmental non-governmental organizations (NGOs). UNEP has also been active in funding and implementing environment related development projects.

UNEP has aided in the formulation of guidelines and treaties on issues such as the international trade in potentially harmful chemicals, transboundary air pollution, and contamination of international waterways. The World Meteorological Organization (WMO) and UNEP established the Intergovernmental Panel on Climate Change (IPCC) in 1988. UNEP is one of several Implementing Agencies for the Global Environment Facility (GEF) and the Multilateral Fund for the Implementation of the Montreal Protocol; it is also a member of the United Nations Development Group (UNDG).

The Millennium Vision: 2000 and Beyond

The principal outcome of the United Nations Millennium Summit was the Millennium bound objectives and measurable targets collectively known as the Millennium Development Goals. Environmental sustainability is recognized as a major requirement underlying the attainability of all the other goals. In February 2005, UNEP's role was strengthened when the UNEP Governing Council approved the Bali Strategic Plan, capacity building and technology support. UNEP is currently preparing a series of discussion papers in consultation with diverse stakeholders, to contribute to ongoing efforts to strengthen integrated implementation of the three dimensions of sustainable development – economic, environmental and social.

Further information can be obtained at: **www.unep.org**

Implications of the UNEP for peatlands and peat

UNEP may not affect users of peatland and peat directly but it was a partner with UNDP and FAO in establishment of the UN-REDD Programme and with the WMO in formation of IPCC. UNEP is active in all UN countries and is a major funder of international environmental projects some of which have been on peatland. It has influence on other international conventions, agencies and programmes.

International Maritime Organization (IMO)

International Maritime Organization (IMO) is the United Nations specialized agency and global standard-setting authority with responsibility for the safety and security of international shipping and the prevention of marine pollution by ships. The IMO Convention entered into force in 1958 and met for the first time the following year. Its first task was to adopt a new version of the International Convention for the Safety of Life at Sea (SOLAS), the most important of all treaties dealing with maritime safety. Its main role is to create a regulatory framework for shipping that concerns safety, environmental issues, legal matters, technical co-operation, maritime security and the efficiency of shipping. Its goal is to ensure that the laws are fair and effective, universally adopted and universally implemented.

IMO currently has 170 Member States and three Associate Members. Non-governmental international organizations that have the capability to make a substantial contribution to the work of IMO may be granted consultative status by the Council with the approval of the Assembly. The IMO Secretariat is based in London.

IMO measures cover all aspects of international shipping – including ship design, construction, equipment, manning, operation and disposal – to ensure that this vital sector remains safe, environmentally sound, energy efficient and secure. The most important IMO Treaties concern maritime safety and security and ship/port interface, prevention of marine pollution, liability and compensation. IMO is the source of approximately 60 legal instruments, applicable to more than 98% of world merchant shipping tonnage, which guide the regulatory development of its member states to improve safety at sea, facilitate trade among seafaring states and protect the maritime environment. Currently IMO works on trying to ensure that these conventions and other treaties are properly implemented by the countries that have accepted them. .

IMO is heavily engaged in the fight to protect and preserve the environment - both marine and atmospheric - and is energetically pursuing the limitation and reduction of greenhouse gas emissions from shipping operations.

More information: **http://www.imo.org/Pages/home.aspx**

Implications of the IMO for peatlands and peat

This United Nations Agency sets out the rules that regulate the movement of international shipping and therefore affects the trans-shipment of peat.

Transportation of peat between countries is regulated by IMO Rule MSC\84\24-Add-3 (refer to Annex 4).

The Ramsar Convention on Wetlands

The Ramsar Convention is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands, including peatlands, and their resources. Unlike other global environmental conventions, Ramsar is not part of the United Nations system of Multilateral Environmental Agreements, but it works very closely with the MEAs and is a full partner in the "biodiversity-related cluster" of treaties and agreements. The Ramsar Convention is the only global environmental treaty that deals only with wetland ecosystems. The Treaty was adopted in the Iranian city of Ramsar in 1971 and entered into force in December 1975.

The Convention's mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world". Member countries of the treaty (Contracting Parties), currently 168, are obliged to maintain the ecological character of their wetlands of international importance and to plan for the sustainable use (”wise use“) of all of the wetlands in their territories. The Convention uses a broad definition of the types of wetlands covered in its mission, including lakes and rivers, swamps and marshes, wet grasslands and peatlands, oases, estuaries, deltas and tidal flats, near-shore marine areas, mangroves and coral reefs, and human-made sites such as fish ponds, rice paddies, reservoirs, and salt pans.

Upon joining the Ramsar Convention, each Contracting Party must designate at least one wetland site for inclusion in the List of Wetlands of International Importance (The Ramsar List), which is the keystone of the Ramsar Convention. In the Strategic Framework’s “Vision for the List”, its chief objective is to “develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and benefits/services”. Currently (August 2014), there are 2,187 sites on the Ramsar List of Sites of International Importance, covering an area of 208,608,257 hectares (about half the area of the Netherlands).

The Conference of the Contracting Parties (COP) is the policy-making organ of the Convention at which Government representatives from each of the Contracting Parties meet every three years to receive national reports on the preceding triennium, approve the work programme and budgetary arrangements for the next three years, and consider guidance for the Parties on a range of ongoing and emerging environmental issues. The Standing Committee of the Ramsar Convention is the inter-sessional executive body which represents the COP between its triennial meetings, within the framework of the decisions made by the COP.

The Convention works closely with four global non-governmental organizations (NGOs): BirdLife International (BLI), International Union for Conservation of Nature (IUCN), Wetlands International (WI) and World Wildlife Fund (WWF) that have been associated with the treaty since its beginnings and, which in 1999, were confirmed in the formal status of International Organization Partners (IOP) of the Convention. In 2005 the Parties endorsed the addition of the International Water Management Institute (IWMI) as the fifth official partner of the Convention.

The implementation of the Ramsar Convention is a continuing partnership between the Contracting Parties, the Standing Committee, and the Convention Secretariat, with the advice of the subsidiary expert body, the Scientific and Technical Review Panel (STRP), and the support of the International Organization Partners (IOPs).

Synergies with other environment-related conventions and organizations

The Ramsar Secretariat has devoted a great deal of effort to developing synergies with other environment-related instruments, and continues to do so. Similarly, the Secretariat has been taking vigorous steps to encourage Ramsar's "Administrative Authorities" to build close working relationships with their counterparts in other conventions at national level. These other conventions and organisations are:

- The Convention on Biological Diversity (CBD)
- The Convention on Conservation of Migratory Species of Wild Animals (CMS)
- UNESCO World Heritage Convention
- United Nations Convention to Combat Desertification (UNCCD)
- Regional conventions and river basin commissions

In addition, Ramsar works closely with the UNESCO Man and the Biosphere Programme under the terms of a joint programme of work first agreed in 2002, and has a new cooperative agreement, since February 2006, with the European Environment Agency. An agreement was signed with the Global Terrestrial Observing System (GTOS) in June 2006, and the Secretariat has been working very closely with the European Space Agency on its GlobWetland project, which is developing monitoring and management tools based on earth observation data in a pilot project involving fifty Ramsar sites around the world. A great deal of collaboration has taken place recently between Ramsar and the UN Food and Agriculture Organization (FAO), and cooperative agreements are under discussion with both FAO and UNITAR (United Nations Institute for Training and Research).

A decision by the UNFCCC's COP8 (2002) invited the Ramsar Convention to participate in the work of the Joint Liaison Group of the "Rio Conventions", namely, UNFCCC, CBD, and UNCCD. In addition, the five biodiversity-related conventions – the CBD, CITES, CMS, Ramsar, and World Heritage – have a Joint Web site hosted by the CBD secretariat.

More information: **http://www.ramsar.org/**

Implications of Ramsar for peatlands and peat

The Ramsar Convention is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands, including peatlands, and their resources. As such it has always been regarded by the IPS as the most important international convention for peatlands and peat and it was closely associated with the RC from 1999 until 2011 through observer status on the STRP. IPS was influential in raising the profile of peatlands within RC through the *'Guidelines for Global Action on Peatlands (GGAP)'* that was accepted at COP8 in Valencia in 2002. These guidelines focussed on procedures for *Wise Use of Peatlands* that were detailed in *Ramsar Toolkit Handbook 14: Peatlands*, that was published in May 2004. After COP9 in Uganda in 2005 the focus of Ramsar moved away from peatlands towards a more general 'wetland' approach and the GGAP were never implemented. This also meant that the emerging issue of peatlands and climate change was not given priority. Ramsar has now mainstreamed climate change in response to requests from CBD and UNFCC and the global importance of peatlands is being highlighted once more.

Scientific and Technical Review Panel of the Ramsar Convention on Wetlands

The STRP is the subsidiary body of the Ramsar Convention established by Resolution 5.5 (Kushiro, 1993) that provides scientific and technical guidance to the Conference of the Member Parties (COP), the Standing Committee and the Ramsar Bureau (Secretariat). Additionally, the Panel also provides support to Ramsar National Focal Points (NFPs) and wetland managers, through Ramsar Advisory Missions to threatened Wetlands of International Importance (Ramsar Sites) and capacity building training. Its individual members are appointed by the STRP Oversight Committee, and the Ramsar Standing Committee has the overall responsibility for the work of the STRP. The progress of the STRP's work is guided and supervised from within the Secretariat by the Deputy Secretary General and the Scientific and Technical Support Officer.

Membership of the STRP is comprised of 13 Appointed Members, a representative from each of the Convention's five International Organisation Partners (BLI, WI, WWF, IUCN, IWMI), representatives from 34 Invited Observer Organisations and invited experts, consultants and organisations on specific topics, as needed. Each organization invited by the COP as an observer to the STRP is required to confirm their intent to participate in STRP's work and to nominate its representative on the Panel, in order to ensure continuity of participation. Members of the Panel work on a voluntary basis and serve in their own capacity as experts in the scientific areas required by the STRP Work Plan and not as representatives of their countries or organisation.

The STRP's Work Plan for each triennium is built around the priority tasks determined by the Standing Committee, which are based upon requests from the Conference of the Parties by means of the Strategic Plan and COP Resolutions and Recommendations. The STRP members and observers are assisted in their work by a network of STRP National Focal Points who advise them directly on STRP matters and provide a liaison between the STRP, the Administrative Authorities and the networks of other relevant experts within each of their countries.

The work of the STRP is further assisted by the STRP Portal (http://strp.ramsar.org/), which is operated by Wetlands International under contract to the Convention. The purpose of the Portal is to provide the STRP Expert Working Groups and National Focal Points with additional contacts among the expert networks of the International Organization Partners and other groups.

More information can be found at: **http://strp.ramsar.org/**

Implications of the Ramsar STRP for peatlands and peat

STRP is the scientific support committee of Ramsar that provides information and advice to Standing Committee and the Bureau between COPs. Since STRP is where many policy decisions affecting wetlands, including peatlands, originate participation in its meetings is very important even more so now that other international conventions look to the Ramsar Convention as the main source of scientific information on climate change processes from wetlands and peatlands. IPS had observer status on STRP from 1999 until 2012 and contributed much to Ramsar's current policy on peatlands and it is important that IPS regains this status.

World Trade Organization (WTO)

The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations. The organization officially commenced on 1 January 1995 under the Marrakesh Agreement, replacing the General Agreement on Tariffs and Trade (GATT), which was formed in 1948. The organization deals with regulation of trade between participating countries; it provides a framework for negotiating and formalizing trade agreements, and a dispute resolution process aimed at enforcing participant's adherence to WTO agreements, which are signed by representatives of member governments and ratified by their parliaments.

The WTO has 159 members and 25 observer governments. In addition to states, the European Union is a member. A number of international intergovernmental organizations have been granted observer status to WTO bodies. WTO members do not have to be full sovereign nation-members but, they must be a customs territory with full autonomy in the conduct of their external commercial relations. 14 states and two territories so far have no official interaction with the WTO. As of 2007, The WTO oversees about 60 different agreements which have the status of international legal texts. Member countries must sign and ratify all WTO agreements on accession. WTO member states represented 96.4% of global trade and 96.7% of global GDP.

The most important functions of the WTO are to oversee the implementation, administration and operation of the covered agreements and provide a forum for negotiations and settling disputes. Additionally, it is the WTO's duty to review and propagate the national trade policies, and to ensure their coherence and transparency through surveillance in global economic policy-making. Another priority of the WTO is the assistance of developing, least-developed and low-income countries in transition to adjust to WTO rules and disciplines through technical cooperation and training.

The Agreement on the Application of Sanitary and Phytosanitary Measures - also known as the SPS Agreement - was negotiated during the Uruguay Round of GATT, and entered into force with the establishment of the WTO at the beginning of 1995. Under the SPS agreement, the WTO sets constraints on members' policies relating to food safety (bacterial contaminants, pesticides, inspection and labeling) as well as animal and plant health (imported pests and diseases). The latter are defined by standards developed by the IPPC (see IPPC section).

The WTO launched the current round of negotiations, the Doha Development Round, at the fourth ministerial conference in Doha, Qatar in November 2001. This was to be an ambitious effort to make globalization more inclusive and help the world's poor, particularly by slashing barriers and subsidies in farming. The initial agenda comprised both further trade liberalization and new rule-making, underpinned by commitments to strengthen substantial assistance to developing countries. The negotiations have been highly contentious. Disagreements still continue over several key areas including agriculture subsidies, which emerged as critical in July 2006. An impasse remains and, as of August 2013, agreement has not been reached on 21 subjects despite intense negotiations at several ministerial conferences and at other sessions.

For further information: **www.wto.org**

Implications of the WTO for peatlands and peat: See under SPS Agreement

World Trade Organization Agreement on Sanitary and Phytosanitary Measures (SPS Agreement)

The Agreement on the Application of Sanitary and Phytosanitary Measures, also known as the SPS Agreement, entered into force with the establishment of the WTO at the beginning of 1995. Under the SPS agreement, the WTO sets constraints on member-states' policies relating to food safety (bacterial contaminants, pesticides, inspection and labelling) as well as animal and plant health (phytosanitation) with respect to imported pests and diseases. There are three organizations that set standards on which WTO members should base their SPS methodologies. They are the Codex Alimentarius Commission (Codex), World Organization for Animal Health (OIE) and the Plant Protection Convention (IPPC).

The SPS agreement encourages governments to establish national SPS measures consistent with international standards, guidelines and recommendations. The WTO itself does not develop the standards. However, most of the WTO's member governments (159) participate in the development of standards in other international bodies by leading scientists in the field and governmental experts on health protection, subject to international scrutiny and review. Member countries are encouraged to use international standards, guidelines and recommendations where they exist but they may use measures which result in higher standards if there is scientific justification, based on appropriate assessment of risks and so long as the approach is consistent, not arbitrary. The agreement allows countries to use different standards and different methods of inspecting products.

Sanitary and phytosanitary measures, by their very nature, may result in restrictions on trade and all governments accept that some trade restrictions may be necessary to ensure food safety and animal and plant health protection. However, governments are sometimes pressured to go beyond what is needed for health protection and to use sanitary and phytosanitary restrictions to shield domestic producers from economic competition. The SPS Agreement, while permitting governments to maintain appropriate sanitary and phytosanitary protection, reduces arbitrariness of decisions, encourages consistent decision-making and increases the transparency of sanitary and phytosanitary measures. Sanitary and phytosanitary measures sometimes vary, depending on the country of origin of the food, animal or plant product concerned.

Governments are required to notify other countries of any new or changed sanitary and phytosanitary requirements which affect trade, and to set up offices (called "Enquiry Points") to respond to requests for more information on new or existing measures. They also must open to scrutiny how they apply their food safety and animal and plant health regulations.

Further information: **http://www.wto.org/english/tratop_e/sps_e/spsund_e.htm**

Implications of the SPS for peatlands and peat

There is evidence to suggest that WTO SPS measures could be used to prevent the transport of peat from one country to another. The contention is that there is a high potential of risk as soil (peat) is a pathway for harmful pests. There is no scientific basis to support this assertion and the ban is based primarily on a horticultural values concern for plants that would be grown in the imported peat. The consequences of the receiving countries actions are suspension of peat shipments until the embargo is lifted, replacement products have the opportunity to establish a market presence which may be difficult to reacquire once the embargo is lifted and a financial cost in terms of direct resources to address the challenge.

See also under IPPC and WTO sections of this document.

The International Union for Conservation of Nature (IUCN)

The IUCN is the oldest and largest professional global wildlife conservation network and a leading authority on the environment and sustainable development. IUCN began when the first Director General of UNESCO, Sir Julian Huxley, sponsored a congress held at Fontainebleau, France, in 1948 to establish a new environmental institution. At that first congress 18 governments, 7 international organizations and 107 national nature conservation organizations agreed to form an "International Union for the Protection of Nature" that later became "The International Union for Conservation of Nature".

From this beginning, the overriding strategy and policy of the IUCN has been to explore and promote mutually beneficial conservation arrangements that suit those promoting development as well as assisting people and nations to better preserve their flora and fauna. At all times, the institution has heavily emphasized as a key operating principle the strong need to cater to and address the needs of nations, communities and peoples, so that they can take ownership of future, long term conservation goals and objectives in their local areas. The IUCN provides a neutral forum for governments, NGOs, scientists, business and local communities to find practical solutions to conservation and development challenges.

IUCN has a membership of more than 1,000 government, NGO and private sector organisations, supported by more than 1,000 professional staff in 60 offices. IUCN's Global Programme is coordinated by IUCN's Secretariat and delivered in conjunction with IUCN member organizations, Commissions and IUCN's theme-based programmes. Almost 11,000 voluntary scientists and experts, grouped in six Commissions in some 160 countries contribute to its work. It is funded by governments, bilateral and multilateral agencies, foundations, member organizations and corporations. It also has official Observer Status at the United Nations General Assembly. IUCN headquarters are located in Gland, Switzerland. IUCN works closely with other international biodiversity, species protection and environmental conservation organisations including CITES, FAO, UNEP/GEF, UNDP, Ramsar and UNESCO.

With the pre-eminence of the concept of sustainable development, IUCN has expanded into many of the nations around the world, making available the services of a large pool of mainly voluntary specialists, providing local level advice and conservation services, and expanding its networks of Committees and regional advisory bodies.

IUCN publishes the Red List of Threatened Species, which assesses the conservation status of species. Other major works of IUCN include various authoritative publications, reports, guidelines and databases for conservation and sustainable development, databases and guidelines for protected area management, lists of threatened ecosystems and more. Red Lists of Threatened Species can be found at www.iucnredlist.org

More information: **https://www.iucn.org**

IUCN activities involving peatlands and peat

Peatland conservation and restoration is a prime example of nature providing valuable ecosystem services particularly for water and climate regulation. Following a call for action on peatlands at the IUCN 2012 World Conservation Congress there has been a strong desire to share experience on peatland management and to scale up delivery which could make significant contributions towards Biodiversity, Aichi targets, Ramsar Convention, climate change objectives and other international obligations.

The activities of the Peatland Ecosystems Thematic Group (PEG) of the IUCN Commission on Ecosystem Management (CEM) are of great interest and relevance to IPS and peat industry. PEG began as the Peatlands Programme of the IUCN UK Committee that received funding from various sources for five years. This peatland programme focused on peatland restoration and GHG mitigation by rewetting degraded blanket bogs in the uplands of Britain but it also considered raised bogs including some used for peat extraction. It held a number of international conferences and workshops exploring good practice in peatland management and restoration, published good practice guidance advice showcasing peatland restoration projects and private funding initiatives (e.g. carbon and water), provided a global analysis of progress in delivery of peatland biodiversity and climate change objectives, and established a web based information hub on peatland conservation and restoration.

The IUCN Peatland Thematic Group's work aims to highlight the benefits of peatland ecosystems and explore new funding opportunities for peatland restoration based on re-establishment of ecosystem services. The group encompasses an international network of experts to share good practice, build consensus on science and encourage national strategies for action to deliver peatland conservation and restoration. The group works closely with other international peatland organisations, for example, IMCG and FAO to ensure synergy and provide added value. The IUCN UK National Committee Peatland Programme provides the secretariat to support the group. For more information see: www.iucn-uk-peatlandprogramme.org

Overall purpose of the Peatland Thematic Group

1. To provide good practice advice and information aimed at peatland conservation/restoration action to support delivery of biodiversity, climate change and water objectives.
2. To support knowledge exchange with/between partners on peatland management and funding opportunities.
3. To assist the scientific community in recognizing, identifying and describing peatland ecosystems wherever they occur.
4. To support countries in adopting strategic policies for peatlands and to assess progress of peatland ecosystem management towards biodiversity and climate change targets.

Implications of the IUCN for peatlands and peat

It can be seen that there is considerable overlap between the programme of the IUCN Peatland Ecosystems Thematic Group and the objectives and activities of IPS. Since IUCN has observer status on several international conventions and programmes it would be sensible for IPS to engage with IUCN at several levels in order to participate in policy oriented discussions and help provide a balanced input to them. The ways in which this could be achieved are:

- IPS should apply to become a member organisation of IUCN internationally
- IPS National Committees should engage with the IUCN committees in their countries and where possible collaborate with them
- IPS members should be encourage to become associate members of the IUCN Commission on Ecosystem Management and in particular the Peatland Ecosystems Thematic Programme

More information: http://www.iucn.org/about/union/commissions/cem/cem_work/peatland_ecosystems/

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES is an international agreement between governments with the aim to ensure that international trade in specimens of wild animals and plants does not threaten their survival. CITES was established as a result of a resolution adopted in 1963 at a meeting of members of IUCN. The text of the Convention was finally agreed at a meeting of representatives of 80 countries in Washington, USA in 1973 and entered in force in 1975. Currently the Convention has more than 180 Parties and is regarded as one of the most important international conservation instruments.

Countries enter the international CITES agreement voluntarily but it is legally binding on the Parties. However, CITES does not take the place of national laws but provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

CITES aims to conserve biodiversity and contribute to its sustainable use by ensuring that no species of wild fauna or flora becomes or remains subject to unsustainable exploitation through international trade, thereby contributing to the significant reduction of the rate of biodiversity loss and making a significant contribution towards achieving the relevant Aichi Biodiversity Targets. Aichi biodiversity targets for 2020 (as a part of the Strategic Plan for Biodiversity by CBD) can be viewed at http://www.cbd.int/sp/targets/.

More information: **http://www.cites.org/eng/disc/what.php**

Implications of the CITES for peatlands and peat

This convention may only be of marginal interest to IPS and the peat and peatland related industries but it is important in terms of protecting biodiversity, especially if any species listed in the *'Red Data Books of Rare and Endangered Species'* has been recorded on a particular peatland.

Consultative Group on International Agricultural Research (CGIAR)

The Consultative Group on International Agricultural Research (CGIAR) funds and co-ordinates research into agricultural crop breeding with the goal of "reducing rural poverty, increasing food security, improving human health and nutrition, and ensuring more sustainable management of natural resources". It does this through a network of 15 research centres known as the CGIAR Consortium of International Agricultural Research Centres that are spread around the globe, with most located in the global south. CGIAR research centres are generally run in partnership with other organizations, including national and regional agricultural research institutes, civil society organizations, academia, and the private sector.

The CGIAR arose in response to widespread concern in the mid-20th century that rapid increases in human populations would soon lead to widespread famine. In 1970, the Rockefeller Foundation proposed a worldwide network of agricultural research centres under a permanent secretariat. This was further supported and developed by the World Bank, FAO and UNDP, and the CGIAR was established in 1971, to coordinate international agricultural research efforts aimed at reducing poverty and achieving food security in developing countries. The CGIAR originally supported four centres: CIMMYT, IRRI, the International Center for Tropical Agriculture (CIAT) and the International Institute of Tropical Agriculture (IITA).

CGIAR is unusual in that it is not part of an international political institution such as the United Nations or the World Bank; it is an ad-hoc organization which receives funds from its members. The membership of CGIAR includes country governments, institutions, and philanthropic foundations including the USA, Canada, the UK, Germany, Switzerland, and Japan, the Ford Foundation, the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Development Programme (UNDP), the World Bank, the European Commission, the Asian Development Bank, the African Development Bank, and the Fund of the Organization of the Petroleum Exporting Countries (OPEC Fund).

The CGIAR's vision is supported by four strategic objectives:

- Reducing rural poverty
- Improving food security
- Improving nutrition and health
- Sustainably managing natural resources

The CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS) addresses the increasing challenge of global warming and declining food security on agricultural practices, policies and measures through a strategic collaboration between CGIAR and Future Earth. CCAFS brings together the world's best researchers in agricultural science, climate science, environmental and social sciences to identify and address the most important interactions, synergies and trade-offs between climate change and agriculture.

Further information can be obtained at: **http://www.cgiar.org/**

Implications of the CGIAR for peatlands and peat

CGIAR is probably of minimal importance to the peat industry since it is a consortium of agriculture and forestry research centres in developing countries, except that through the CCAFS Programme it is engaged with climate change problems in agriculture and forestry. In addition, one of the CGIAR institutes, CIFOR, plays a major role in research and policy formulation on forested peatlands in developing countries, for example, Indonesia and Peru.

Center for International Forestry Research (CIFOR)

CIFOR was established by CGIAR in 1993 as a non-profit, global facility dedicated to advancing human wellbeing, environmental conservation by conducting research that enables more informed and equitable decision making about the use and management of forests in less-developed countries. CIFOR research and expert analysis help policy makers and practitioners shape effective policy, improve the management of tropical forests and address the needs and perspectives of people who depend on forests for their livelihoods. A significant portion of CIFOR's funding comes from CGIAR sources.

CIFOR's relationship with Indonesia as its host country is defined by the fact that it is an international research organisation with a mandate to generate global results, while supporting the host country's national forest policy research agenda. CIFOR works with Indonesia's Ministry of Forestry, particularly the Forestry Research and Development Agency (FORDA), to identify areas of collaboration in research and outreach.

CIFOR is the leading centre for the CGIAR Research Programme 'Forests, Trees and Agroforestry' that brings together four Centres— the World Agroforestry Centre (ICRAF), CIFOR, the International Center for Tropical Agriculture (CIAT) and Bioversity International. The programme convenes expertise across the CGIAR system, and partners with research and practitioner organisations around the world.

CIFOR is a member of the Collaborative Partnership on Forests (CPF), a voluntary arrangement among 14 international organisations and secretariats with substantial programmes on forests. The CPF's mission is to promote the management, conservation and sustainable development of all types of forest and strengthen long-term political commitment to this end.

In 2008 CIFOR devised a new strategy to guide its work until 2018: http://www.cifor.org/about-us/our-vision-and-aspirations/cifors-strategy-2008-2018.html

Global Comparative Study on REDD+

Over four years, CIFOR and its partner organisations are undertaking a major global comparative study on the implementation of pilot REDD+ projects (Reducing Emissions from Deforestation and forest Degradation, including the role of conservation, sustainable management of forests and enhancement of forest carbon stocks). The aim is to compare how these are working at national and subnational levels, and share lessons learned for the benefit of everyone involved in designing and implementing REDD+ projects. Essentially, by providing policy makers and communities with this information, the project aims to ensure implementation of REDD+ is as effective, cost-efficient and equitable as possible — and ultimately reduces carbon emissions, deforestation and forest degradation across the world, while producing benefits such as poverty alleviation and biodiversity conservation.

More information about REDD+ can be found at: http://www.cifor.org/online-library/browse/view-publication/publication/2871.html

For further information on CIFOR: **http://www.cifor.org/**

Implications of the CIFOR for peatlands and peat

CIFOR advises the Government of Indonesia on forestry management and peatland forests. In addition, CIFOR makes inputs to CBD, IPCC and UN-REDD and therefore has implications for peatland management, climate change processes and biodiversity in tropical countries. Staff of CIFOR has published extensively on sustainable management of peatland in Indonesia and greenhouse gas emissions from Indonesia's peatlands under different land uses and land use change.

Discussion

Networking between UN and non-UN bodies

The principal UN environmental conventions, agencies and programmes (CBD, UNFCCC, FAO, UNEP) interact and work together on a range of issues of mutual interest, provide each other with information and attend each other's meetings either as observers at COPs or as members of subsidiary or advisory bodies. Similarly, Ramsar and IUCN, as non-UN bodies, provide information to UN environmental organisations either informally or as members of their subsidiary bodies. For example, CBD and UNFCCC regard Ramsar as the primary source of expert information on the role of wetlands, including peatlands, in climate change whilst IUCN is the acknowledged authority on nature conservation and endangered and rare species.

In recent years FAO has widened its original brief of addressing hunger and poverty to embrace climate change issues, especially how to make agriculture and forestry 'climate smart' through mitigation schemes for the former (e.g. paludiculture) and reduced deforestation to maintain carbon stores in the latter.

The activities and role of International Environmental NGOs (IENGO)

IENGOs play an important role in the policy making and implementation of decisions taken by many of the international organisations presented in this report. The most prominent are Wetlands International (WI), World Wide Fund for Nature (WWF), International Union for Conservation of Nature (IUCN) and Birdlife International (BLI). Others are also involved either through membership of another NGO such as IUCN or as an observer on a subsidiary advisory body of a convention (e.g. IPS observer status on Ramsar STRP). In addition INGOs and others, including scientists and campaigning NGOs such as Friends of the Earth (FOE) and Greenpeace sponsor and attend 'side events' at COPs of various key conventions in order to lobby delegates on specific current or emerging issues of environmental concern to them. INGOs are very efficient and successful at this kind of activity and many of the same individuals attend different COP side events and participate in several different international organisations, for example, CBD, IUCN and Ramsar. The impact of this group probably far exceeds their number.

International research institutes that focus on peatlands

Most of the international organisations listed in this report are information gathering, assessment and policy formulating bodies that advise their parent organisations (UN, FAO or contracting parties) on specific matters outlined in their objectives. CGIAR differs in that it is a 'consultative group' that co-ordinates the activities of 15 research centres around the world, mostly in tropical and developing countries, to address problems of global hunger and poverty. These centres focus on major food staples such as rice, potatoes, maize and fish. The reason for including CGIAR in this assessment is because one of its centres, CIFOR, makes major input to biodiversity and climate change science and policy through CBD, UNFCCC and IPCC. CIFOR co-ordinates policy research on tropical peatland. Another CGIAR research institute (IWMI) is an international partner organisation of the Ramsar Convention.

International trade and health regulatory bodies affecting transnational transport of peat

The remaining few international organisations, IPPC, WTO, SPS and IMO are concerned with commercial aspects of peat transportation between and importation into countries. They are concerned with health and safety rather than environment and climate change. IMO is an agency of the UN established in 1958 to regulate and ensure the safe transportation by ship of goods and commodities, including peat, traded between countries. IPPC is an international convention under the UN that was formed by FAO and WTO with the remit to prepare, implement and monitor the standards for preventing the import of plant pests. Together with the Codex Alimentarius Commission (Codex) and World Organization for Animal Health (OIE), IPPC contributes to the Sanitary and Phytosanitary Regulations (SPS), an international treaty of the WTO. SPS sets constraints on member-states' policies relating to food safety as well as animal and plant health with respect to imported pests and diseases. International trade in peat and peat products can be affected by SPS measures.

Role of IPS and peat industry in responsible management of peatland

From 1999 to 2002 the International Peat Society and International Mire Conservation Group worked together on a project to prepare a comprehensive document on the 'Wise Use of mires and peatlands' that culminated in 2002 in the publication of the book '*Wise Use of Mires and Peatlands – Background and Principles including a Framework for Decision-making'*[2]. This book highlights the nature and importance of peatlands and identifies problems resulting from their use with suggestions on how these problems might be resolved through application of the '*Wise Use*' approach. This book was presented at a side event at Ramsar COP8 in Valencia, Spain in 2002.

Subsequently, IPS, IMCG and other partners worked together to prepare the '*Guidelines for Global Action on Peatlands*' (GGAP)[3] that were adopted by the Ramsar Convention at COP9 in Kampala, Uganda in 2005. These Guidelines recommend a series of priority approaches and activities for global action on the wise use and management of peatlands under seven themes:

A. Knowledge of global resources
B. Education and public awareness on peatlands
C. Policy and legislative instruments
D. Wise use of peatlands
E. Research networks, regional centres of expertise, and institutional capacity
F. International cooperation
G. Implementation and support

The overall aim of the guidelines and their implementation is to achieve recognition of the importance of peatlands to the maintenance of global biodiversity and the storage of the water and carbon that is vital to the world's climate system, and to promote their wise use, conservation and management for the benefit of people and the environment.

Following acceptance of the GGAP by Ramsar several multi-stakeholder meetings were held to formulate strategies and actions to implement it. General agreement on the way forward could not be reached and the

[2] Joosten, H. and Clarke, D. (2002) Wise use of Mires and Peatlands – Background and Principles including a Framework for Decision-making. International Mire Conservation Group and International Peat Society, Jyväskylä, Finland.
[3] http://www.ramsar.org/cda/en/ramsar-documents-guidelines-guidelines-for-global/main/ramsar/1-31-105%5E20867_4000_0__

process ran out of steam and came to a halt after a meeting in Espoo, Finland in July 2006. Individual stakeholders proceeded to implement parts of the GGAP according to their own agendas and objectives.

One of these strands led to the preparation of the *'Strategy for Responsible Peatland Management'* (SRPM)[4] by a multi-stakeholder group of peatland and peat scientists and practitioners led by the IPS at the instigation of EPAGMA. The SRPM, published in 2010, applies commonly agreed principles for the '*Wise Use of Peatlands*' to management of all peatlands and provides objectives and actions for implementation. The SRPM is directed at everyone responsible for or involved in the management of peatlands, or in the peat supply chain, and is applicable to all types of peatland under every use. The SRPM consists of eight priorities grouped under three major headings that need to be implemented to fulfil its vision and objectives:

Values of and services provided by peatlands:

- Biodiversity
- Hydrology and water regulation
- Climate and climate change processes

Activities related to peatlands:

- Economic
- After-use, rehabilitation and restoration

Means of promoting Wise Use:

- Human and institutional capacity and information dissemination
- Engagement of local people
- Good governance

The SRPM acted as a catalyst for further action and many aspects of it have been adopted by numerous stakeholders and used as the basis for codes of practice, peatland sustainability agendas, national peatland plans and other peatland responsible management initiatives. For example the SRPM is referred to in the EPAGMA '*Code of Practice*' and the '*Responsible Peat Project*' that is leading to certification of peatlands and peat extraction and processing in the Dutch horticulture industry.

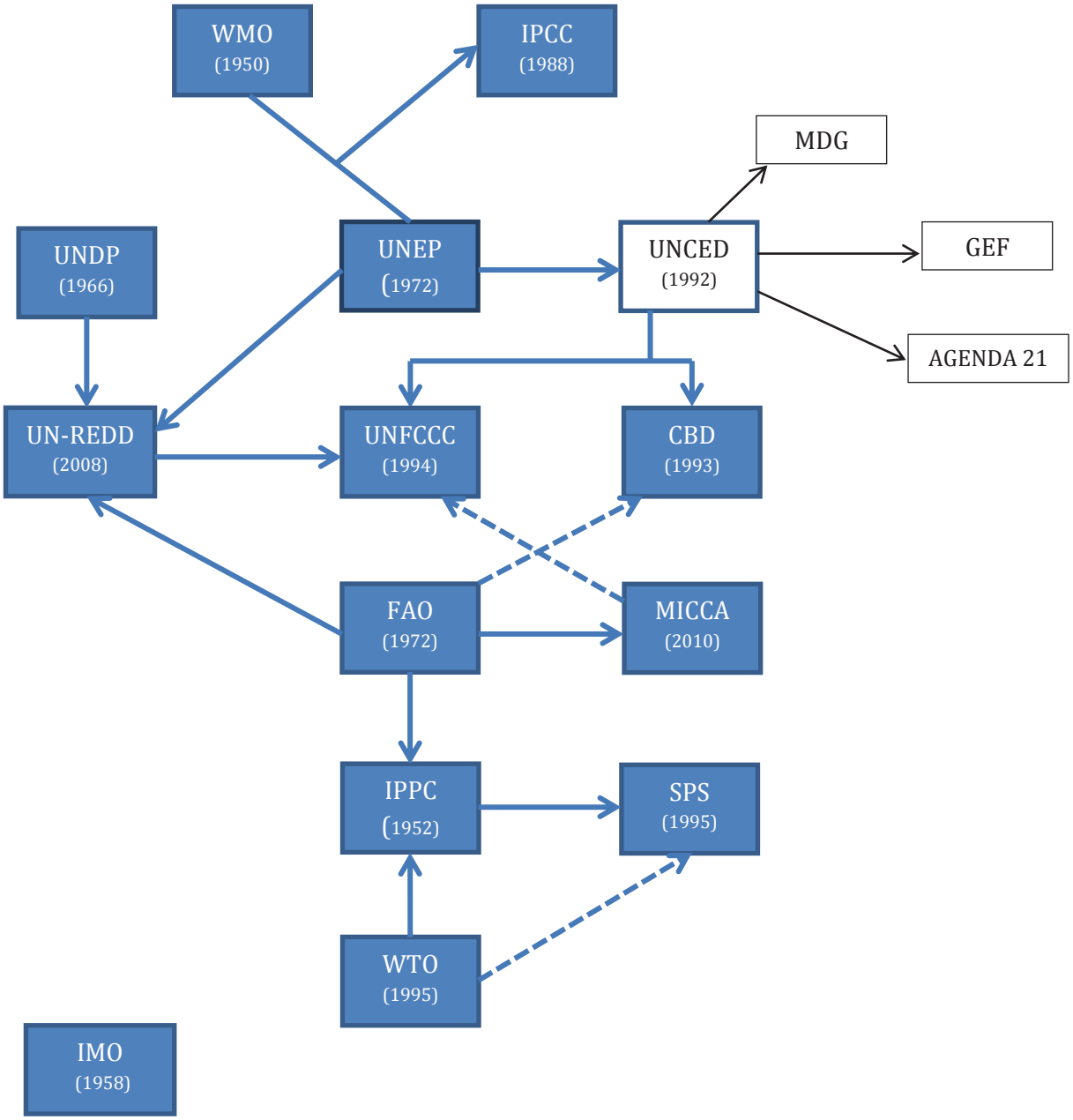
[4] Clarke, D. & Rieley, J.O. (2010) Strategy for Responsible Peatland Management. International Peat Society, Jyväskylä, Finland. ISBN 978-952-99401-2-7

Conclusions

1. Management of peatlands, peat use and its commercial supply chain are influenced by the decisions taken by the international conventions, agencies and programmes assessed in this Report. Management of peatlands and use of peat are affected by these decisions and ensuing policies implemented by governments at international, national and regional levels.
2. The most important international bodies that protect and promote peatland environmental quality are CBD (biodiversity), UNFCCC (GHG emissions and climate change), FAO/MICCA (drained peatlands and GHG mitigation), IUCN (nature conservation) and Ramsar (wetland/peatland wise use).
3. Other international organisations affect peatlands, peat use and the peat industry in more specific ways, for example, regulating international trade (IMO and WTO), formulating sanitary and phytosanitary standards (IPPC and SPS) and enforcing them (WTO) and focusing on reducing GHG emissions from tropical peatlands by preventing deforestation (UN-REDD) or implementing mitigation measures for drained peatlands (FAO/MICCA).
4. Stakeholders involved in peatland management, peat use and the peat supply chain should become acquainted with the international bodies mentioned in this Report and their implications for their own activities and business.
5. In addition, they should update themselves regularly on any changes to the aims, objectives and policies of these bodies and be alert to any new implications for peatland management and peat use as a result.
6. It is clear that peat industry organisations such as EPAGMA and CSPMA can lobby their own governments (EU or Canada) but they cannot influence or participate in the work of the international bodies whose decisions affect their member companies. The same applies to individual companies or groups of companies within countries.
7. While EPAGMA and CSPMA should continue to lobby their respective governments on local, national and regional regulations that affect their businesses it is only through the activities of IPS that influence can be exerted on the policy making processes of these international organisations.

Figure 1

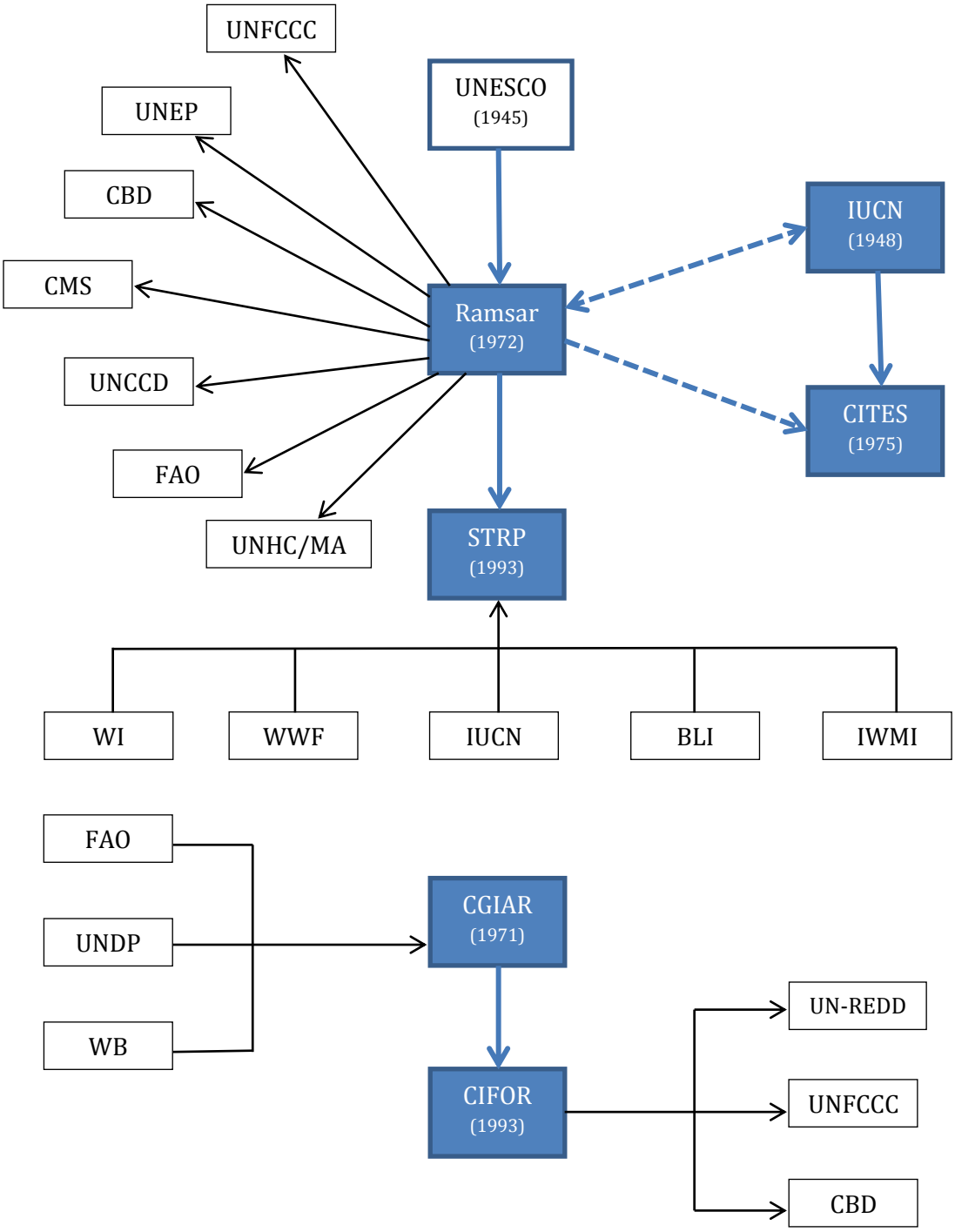
Relationships between Principal United Nations Conventions, Agencies and Programmes that have implications for Peatlands and Peat (dates of establishment in brackets)



Blue boxes represent international organizations described in this report. White boxes indicate links between these organizations and between them and others. For explanation of acronyms consult Annex 1.

Figure 2

Relationships between Principal Non-United Nations Conventions, Agencies, Programmes and International NGOs that have implications for Peatlands and Peat (dates of establishment in brackets)



Blue boxes represent international organizations described in this report. White boxes indicate links between these organizations and between them and others. For explanation of acronyms consult Annex 1.

Annex 1

Acronyms

AR – Assessment report

AFOLU – Agriculture, forestry and other land use (IPCC and MICCA Programme)

BAP – Biodiversity Action Plan

CBD – Convention on Biological Diversity

BLI – BirdLife International

CCAFS – Climate Change, Agriculture and Food Security Program (FAO and CGIAR)

CDM – Clean Development Mechanism (Kyoto Protocol)

CER – Certified emission reduction

CGIAR – Consultative Group on International Agricultural Research

CH4 – Methane

CIFOR – Centre for International Forestry Research

CITES – Convention on International Trade in Endangered Species of Wild Fauna and Flora

CO2 – Carbon Dioxide

COP – Conference of the Parties (all conventions)

CPM – Commission on Phytosanitary Measures

CSPMA – Canadian Sphagnum Peat Moss Association

ENGO – Environmental Non-governmental organisations

EPAGMA – European Peat and Growing Media Association

ERU – Emission reduction units

EU – European Union

FAO – Food and Agriculture Organization of the United Nations

FAOSTAT – FAO Corporate Database

GATT – General Agreement on Tariffs and Trade

GEF – Global Environment Facility

GGAP – Guidelines for Global Action on Peatlands (Ramsar)

GHG – Global Greenhouse Gas

GTOS – Global Terrestrial Observing System

IAC – InterAcademy Council (IPCC)

IENGO – International Environmental NGO

IMO – International Maritime Organization

IOP – International Observer Partners

IPCC – International Panel on Climate change

IPPC – International Plant Protection Convention

IPS – International Peat Society

ISPMs – International Standards for Phytosanitary Measures

IUCN – International Union for Conservation of Nature

IUFRO – International Union of Forest Research Organisations

IWMI – International Water Management Institute (CGIAR)

LBAP – Local Biodiversity Action Plan (CBD)

LCA – Life Cycle Analysis (MICCA Programme)

LMOs – Living modified organisms

LUC – Land Use Change

LULUC – Land Use and Land Use Change

MAB – Man and the Biosphere (UNESCO)

MDG – Millennium Development Goals (UN)

MICCA – Mitigation of Climate Change in Agriculture

NAMA – Nationally Appropriate Mitigation Actions (MICCA Programme)

NBSAPs – National Biodiversity Strategies and Action Plans (CBD)

NFP – National Focal Point

NPPO – National Plant Protection Organisation

N2O – Nitrous Oxide

RC – Ramsar Convention

RPPO – Regional Plant Protection Organisation

SAC – Special Area of Conservation (CBD)

SBI – Subsidiary Body for Implementation (UNFCC)

SBSTA – Subsidiary Body for Scientific and Technological Advice (UNFCC)

SBSTTA – Subsidiary body for Scientific, Technical and Technological Advice (CBD)

SRPM – Strategy for Responsible Peatland Management (IPS)

STRP – The Scientific and Technical Review Panel of the Ramsar Convention

TFB – Task Force Bureau (IPCC)

TFI – Task Force on National Greenhouse Gas Inventories (IPCC)

TSUs – Technical Support Units (IPCC)

UN – United Nations

UN-FCCC – United Nations Framework Convention on Climate Change

UN-REDD – UN collaborative initiative on Reducing Emissions from Deforestation and Forest Degradation

UNCED –UN Conference on Environment and Development (1992, Rio de Janeiro)

UNDP – United Nations Development Programme

UNEP – United Nations Environment Programme

WMO – World Meteorological Organization

Annex 2

Glossary

Agenda 21 – action plan of the United Nations with regard to sustainable development, signed at the UN Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, in 1992.

Biodiversity (Biological diversity) – the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (Convention on Biological Diversity).

Bioenergy – renewable energy made available from materials derived from biological sources.

Biosafety – safe handling, transport and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health.

Climate change – a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. (UNFCCC)

Climate-smart agriculture – agriculture that sustainably increases productivity, resilience (adaptation), reduces/removes greenhouse gases (mitigation), and enhances achievement of national food security and development goals. (FAO)

Conservation – protection, preservation, and careful management of natural resources and of the environment .

Convention – an agreement between states covering particular matters, especially one less formal than a treaty .

Deforestation – the process whereby natural forests are cleared through logging and/or burning, either to use the timber or to replace the area for alternative uses. Negative effects of deforestation include reduced biodiversity, release of carbon dioxide, increased soil erosion etc. (The World Wide Fund)

Ecosystem – a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. (Convention on Biological Diversity)

Emission – the production and discharge of something, for example gas.

Environmentally-friendly technologies – technologies that can help preserve the environment through energy efficiency and reduction of harmful waste.

Fen – a peatland which in addition to precipitation water also receives water that has been in contact with mineral soil of bedrock. (IPCC)

Greenhouse effect – warming that results when solar radiation is trapped by the atmosphere; caused by atmospheric gases that allow sunshine to pass through but absorb heat that is radiated back from the warmed surface of the earth. (Wise Use of Mires and Peatlands)

Greenhouse gases – any gas in the atmosphere that contributes to the greenhouse effect. These include carbon dioxide, methane, ozone, nitrous oxide, CFCs, and water vapour. Most occur naturally as well as being created by human activity. (Wise Use of Mires and Peatlands)

Mitigation – the action of lessening in severity or intensity.

National strategies – strategies and action plans established by the local governments.

Peat – soft, porous or compressed, sedentary deposit of which a substantial portion is partly decomposed plant material with high water content in the natural state (up to about 90 percent). Countries may define *peat* according to their national circumstances. (IPCC)

Peat – sedentarily accumulated material consisting of at least 30% (dry weight) of dead organic material. (Wise Use of Mires and Peatlands)

Peat extraction – the excavation and drying of wet peat and the collection, transport and storage of dried product. (Wise Use of Mires and Peatlands)

Peatland – an area with or without vegetation with a naturally accumulated peat layer at the surface. (Wise Use of Mires and Peatlands)

Protocols – supplementary international agreements to the Convention on specific issues.

Rehabilitation – the re-establishment, on formerly drained sites, of some but not necessarily all the hydrological, biogeochemical and ecological processes and functions that characterized pre-drainage conditions. (IPCC)

Restoration – the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. In case of drained former wetlands, restoration always has to include 'rewetting'. (IPCC)

Rewetting – the deliberate action of changing a drained soil into a wet soil, e.g. by blocking drainage ditches, disabling pumping facilities or breaching obstructions. (IPCC)

Stakeholder – a person or an organization having an interest and direct influence in particular organization.

Substrate – an underlying layer, e.g. the substance on which a crop grows (Wise Use of Mires and Peatlands)

Sustainable use – usage of natural resources to meet the needs of the present without compromising the ability of future generations to meet their own needs. (Wise Use of Mires and Peatlands)

Swamp – wetlands dominated by trees or woody species. (IPCC)

UN Agency – an autonomous organization working with the United Nations and incorporated into the United Nations System.

Wetland – an area which is inundated or saturated by water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. (Wise Use of Mires and Peatlands)

Wise Use – use for which reasonable people, now and in the future, will not attribute blame. (Wise Use of Mires and Peatlands)

Annex 3

Chronology

1945 UNESCO (United Nations Educational, Scientific and Cultural Organization)

1948 IUCN (International Union for Conservation of Nature)

1950 WMO (World Meteorological Organization)

1952 IPPC (International Plant Protection Convention)

1958 IMO (International Maritime Organization)

1966 UNDP (United Nations Development Programme)

1971 CGIAR (Consultative Group on International Agricultural Research)

1972 UNEP (United Nations Environment Programme)

1972 FAO (Food and Agriculture Organization of the United Nations)

1972 Ramsar (Ramsar Convention on Wetlands of International Importance)

1975 CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)

1988 IPCC (Intergovernmental Panel on Climate Change)

1992 UNCED (United Nations Conference on Environment and Development)

1993 CBD (Convention on Biological Diversity)

1993 CIFOR (Center for International Forestry Research)

1993 STRP (Scientific and Technical Review Panel of the Ramsar Convention)

1994 UNFCCC (United Nations Framework Convention on Climate Change)

1995 SPS (Agreement on the Application of Sanitary and Phytosanitary Measures of the WTO)

1995 WTO (World Trade Organization)

2008 UN-REDD (United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation)

2010 MICCA (Mitigation of Climate Change in Agriculture Programme)

Annex 4

IMO Regulations for Transportation of Peat

MSC 84/24/Add.3
ANNEX 12
Page 218

PEAT MOSS

DESCRIPTION
Surface mined from mires, bogs, fens, muskeg and swamps. Types include moss peat, sedge peat and grass peat. Physical properties depend on organic matter, water and air content, botanical decomposition and degree of decomposition.
May range from a highly fibrous cohesive mass of plant remains which when squeezed in its natural state exudes clear to slightly coloured water, to a well decomposed, largely amorphous material with little or no separation of liquid from solids when squeezed.
Typically air-dried peat has low density, high compressibility and high water content; in its natural state it can hold 90 percent or more of water by weight of water when saturated.

CHARACTERISTICS

ANGLE OF REPOSE	BULK DENSITY (kg/m^3)	STOWAGE FACTOR (m^3/t)
Not applicable	80 to 500	2 to 12.5
SIZE	**CLASS**	**GROUP**
Fine Powder	MHB	A and B

HAZARD
Oxygen depletion and an increase in carbon dioxide in cargo and adjacent spaces.
Risk of dust explosion when loading. Caution should be exercised when walking or landing heavy machinery on the surface of uncompressed Peat Moss.
Peat Moss having a moisture content of more than 80% by weight should only be carried on specially fitted or constructed ships (see paragraphs 7.2.2 to 7.2.4 of this Code).
Dust may cause eye, nose and respiratory irritation.

STOWAGE & SEGREGATION
No special requirements.

HOLD CLEANLINESS
Clean and dry as relevant to the hazards of the cargo.

WEATHER PRECAUTIONS
Prior to loading, this cargo shall be stockpiled under cover to effect drainage for reduction of moisture content. This cargo shall be kept as dry as practicable. This cargo shall not be handled during precipitation. During handling of this cargo all non-working hatches of the cargo spaces into which this cargo is loaded or to be loaded shall be closed.

LOADING
Trim in accordance with the relevant provisions required under sections 4 and 5 of the Code.

PRECAUTIONS
Bilge wells shall be clean, dry and covered as appropriate, to prevent ingress of the cargo.
Appropriate precautions shall be taken to protect machinery and accommodation spaces from the dust of the cargo. Bilge wells of the cargo spaces shall be protected from ingress of the cargo. Due consideration shall be paid to protect equipment from the dust of the cargo. Persons, who

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may be exposed to the dust of the cargo, shall wear goggles or other equivalent dust eye-protection and dust filter masks. Those persons shall wear protective clothing, as necessary. All personnel of the ship carrying this cargo and all personnel involved in handling of this cargo shall be cautioned that washing hands before eating or smoking and prompt treatment of cuts and scrapes are necessary in case of contact with this cargo or its dust. Entry of personnel into cargo spaces shall not be permitted until tests have been carried out and it has been established that the oxygen content has been restored to a normal level.

VENTILATION
Surface ventilation only, either natural or mechanical, shall be conducted, as necessary, during the voyage for this cargo.

CARRIAGE
No special requirements.

DISCHARGE
No special requirements.

CLEAN-UP
No special requirements.

EMERGENCY PROCEDURES

SPECIAL EMERGENCY EQUIPMENT TO BE CARRIED Nil
EMERGENCY PROCEDURES Nil **EMERGENCY ACTION IN THE EVENT OF FIRE** Batten down; use ship's fixed fire-fighting installation if fitted. Exclusion of air may be sufficient to control fire. **MEDICAL FIRST AID** Refer to the Medical First Aid Guide (MFAG), as amended.

Annex 5

Acknowledgements

This Report is the result of a collaborative effort between Jack Rieley who led the project and edited the material, Sandra Lubinaite, IPS Intern and members of the IPS Secretariat, Executive Board and Scientific Advisory Board.

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Other contributors are:

Samu Valpola

Sakari Sarkkola

Catherine Farrell

Gerald Schmilewski

Barbara Kalisz

Nick van de Griendt

About the International Peat Society

This document of 'International Conventions, Agencies and Programmes' was created in response to a request made by IPS members during the Executive Board and Industry representatives' meetings in Tallinn and Brussels in autumn 2013. The report contains brief introductions and implications to peat and peatland management of 20 international bodies and agreements, which are considered the most important and influential for professional peatland management. The document was prepared by Jack Rieley and Sandra Lubinaite with inputs from members of the IPS Executive Board, IPS Scientific Advisory Board and IPS Secretariat.

Established in 1968, the International Peat Society (IPS) is an international non-profit and non-governmental organization with a principal aim to promote international cooperation and Wise Use of peatlands and peat by enhancing the constructive dialogue between various environmental, governmental, scientific and industrial stakeholders.

Members of the IPS include mire and peat scientists, peatland managers and researchers, universities and research centres, governmental organizations, as well as professionals of the peat industry and users of peat in horticulture and energy production; altogether IPS has more than 1500 members in 42 countries; including 19 National Committees.

The most notable IPS publications include *Global Peat Resources* (1996), *Wise Use of Mires and Peatlands* (2002), *Peatlands and Climate Change* (2008) and *Strategy for Responsible Peatland Management* (2010). A major part of the IPS work includes organizing events for peat related matters, such as the quadrennial International Peat Congresses, as well as publishing the members' magazine *Peatlands International* and the monthly newsletter *Peat News.*

IPS has established cooperation at an international level with both governmental and non-governmental organizations, such as International Mire Conservation Group (IMCG), International Society for Horticultural Science (ISHS), Food and Agriculture Organisation (FAO), Society of Wetland Scientists (SWS), Ramsar Convention, European Peat and Growing Media Association (EPAGMA) and others.

IPS derives benefit from an extensive knowledge capacity that comes from the large number of peat and peatland professionals who belong to the Society and work together.

Further information is available at **www.peatsociety.org**