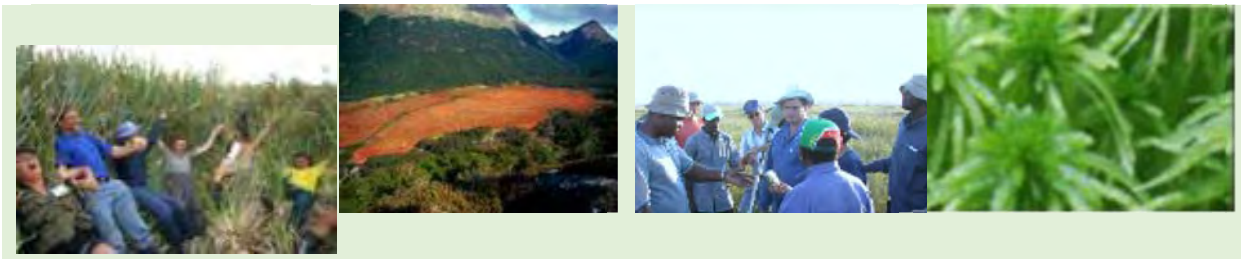

IMCG Bulletin: May 2017

Word from the Secretary-General

INTERNATIONAL MIRE CONSERVATION GROUP

www.imcg.net

Dear mire friends

This Bulletin continues the series of reports on the May 2017 peatland events, which we started in the April issue. The events had a strong focus on SE Asia and what could be learned from there for conservation and wise use of peatlands in other parts of the tropics, notably the Congo Basin and Western-Amazonia.
The current focus in SE Asia is on preventing fire and haze and that is correct so: Fire and haze are the most urgent political, economic and health issues, and create the most visible problems. To prevent fire and haze, it suffices to raise the water level above a threshold and to manage the land better. Comparison of countries with similar peatland drainage conditions but different management (e.g. Indonesia and Malaysia, or Russia/Ukraine and Belarus) illustrates the importance of management for suppressing peatland fires.

Effect of drainage	Damage	Where?	Solution
fire + haze	health, welfare, economy and political relationships	local, national, regional	raising water table to >40 cm + better management
emissions	climate	global	raising water table: the higher the better
subsidence	land availability, food security	local, national, global	raising water table to in average at or over the peat surface

Fire and haze make greenhouse gas emissions visible, but the emissions from microbial oxidation are on long-term average more important in volume. Microbial oxidation continues every day, every month, every year, also when the peat is not burning. These emissions can hardly be reduced by management: a drained, well-managed plantation emits the same volume as a drained abandoned area, and even more when taking nitrous oxide emissions from fertilization into account. Reducing emissions requires raising the water level: the higher the better. Reducing emissions from SE Asian peatlands is very relevant, but will not save the world: Indonesia's long-term average 1 Gigaton of annual peatland emissions (fire +microbial oxidation) is "merely" 2-3% of all global anthropogenic emissions. Reducing these emissions to zero (the 1 Gigaton reduction that is envisaged) will be a hell of a job, because it requires average water levels to be raised to around or above the surface. Raising the level to -40cm will "only" halve the emissions…
The same accounts for subsidence: raising the water to -40cm reduces the rate of subsidence, but does not stop it. It will only achieve that the threatening loss of large tracts of land ill come a few years later.
We cannot afford to lose land, now that we need it most. Population growth will continue over the next decades and too many people are still living in severe poverty. And we have decided in Paris 2015 to replace the vast majority of fossil resources by renewable ones. For all this we need land and we cannot allow it to be flooded by the sea. If you are heading for the cliff, it is not enough to slow down: you must stop and turn around! **Peatlands must be wet!**
So keep on sharing your ideas and experiences with your fellow-IMCGers by sending news, photographs and other contributions for the next Bulletin by June, 30, 2017 to Hans Joosten at joosten@uni-greifswald.de.

IMCG News

Mires and Peat

Find the journal online at http://mires-and-peat.net/. In May 2017 Mires and Peat has published the following papers:

- Sphagnum farming on cut-over bog in NW Germany: Long-term studies on *Sphagnum* growth. [G. Gaudig, M. Krebs & H. Joosten] Volume 20: Article 04. http://mires-and-peat.net/media/map20/map_20_04.pdf
- From meadow to shallow lake: Monitoring secondary succession in a coastal fen after rewetting by flooding based on aerial imagery and plot data. [M. Koch, F. Koebsch, J. Hahn & G. Jurasinski]. Volume 19: Article 11. http://mires-and-peat.net/media/map19/map_19_11.pdf
- Diversity and species composition of beetles in the herb-shrub layer of a large isolated raised bog in Belarus. [G.G. Sushko]. Volume 19: Article 10. http://mires-and-peat.net/media/map19/map_19_10.pdf

Send your new manuscripts on any topic relating to mires, peatlands and peat to the Editor-in-Chief Olivia Bragg: o.m.bragg@dundee.ac.uk

News from the regions

Global

Using satellites to map and monitor peatlands

Catriona Croft-Cusworth

New methods using satellite data are finding increasing success in assessing the extent, distribution and even the volume of peatlands around the world, as well as monitoring threats. Some of the latest developments in this area were presented at a side event during the UNFCCC Bonn Climate Change Conference held in May 8-18. Frank Martin Seifert from the European Space Agency (ESA) shared the ongoing work of the European Copernicus satellite program. Five of the satellites, known as 'Sentinels', are already in orbit, imaging the surface of the Earth. But what about peat, which mainly lies below the Earth's surface? Can a satellite detect that? "Most peat is not directly visible from space," Seifert says. "But you can still derive a lot of the characteristics of peatlands, and any critical changes, from satellite images."

Two of the 'Sentinels' are particularly useful for mapping wetlands and peatlands. Sentinel-1 is a radar mission with cloud-penetrating, night-and-day imaging capability, while Sentinel-2, the high-resolution optical mission of the Copernicus program, can map the entire land surface of the Earth in a matter of days. Together, these two satellites can detect extent, moisture and water levels of wetlands and peatlands, as well as threats, such as land conversion for agriculture and urban developments, logging in swamp forests, degradation and damage caused by fires. The data will also be useful for monitoring, reporting and verifying successes of conservation and restoration on the ground. Combined with ground data and modelling, satellites can help to ensure consistency and transparency of data, enabling international comparisons. ESA is also sensitive to the demands of countries to manage their own resources using their own data, and making their own assessments.

The Copernicus satellite data is available for free and open access, but capacity is needed to interpret and analyze it. Data analysis toolboxes can help build this capacity – for example, a new toolbox will be released later this year on wetland inventories and habitat mapping in Africa, to manage wetlands, assess threats and detect changes. CIFOR and partners have also begun to develop data toolboxes, such as the Global Wetlands map, the CarboScen land-use scenario simulator and the Indonesia Peatland Network Toolbox, for managing peatlands in relation to climate change. But even with these advanced tools at hand, further research will always be needed at the ground level to see how dynamics play out in the landscape. http://blog.cifor.org/50077/peatlands-the-view-from-space?fnl=en

Global Peatlands Initiative: Joining forces to save the world's peatlands

The importance of peatland for humanity is undeniable. This is a notable lesson we have learned since the devastating forest and peat fires in 2015 in Indonesia. Experts estimate that drained and burnt peatland is responsible for 5 % of anthropogenic carbon emissions, which affects climate change, and peat fire-caused haze has a negative impact on the economy and human health. This lesson learned is not limited to Indonesia.

Indonesia has the world's largest tropical peatland, followed by the Democratic Republic of Congo, Peru, and other tropical countries. To conserve and restore peatlands globally, UN Environment (UNEP) initiated the Global Peatlands Initiative (GPI) whose membership includes forest and tropical peat countries, multilateral organizations, and non-governmental organizations (incl. IMCG) that have committed to the protection, restoration and sustainable management of peatland.

"Indonesia is the first country ever to undertake peatland restoration on such a massive scale and will reduce up to one gigaton of greenhouse gas emission. They are on their best way to do more for the Paris Agreement than any other nation. The Global Peatlands Initiative provides a platform for other countries to learn from Indonesia's exemplary efforts to restore their peatlands. The commitment of the Government of Indonesia to host the GPI Partner Meeting is fundamental to the initiative," said Tim Christophersen, Senior Programme Officer for Forestry and Climate Change at UN Environment.

On a global level the issues around peatland management oftentimes result from insufficient knowledge of the value of peatland ecosystems. Consequently, peatlands as a vulnerable, mega-biodiversity ecosystem tend to be converted for agricultural and forestry use, which entails massive peat drainage. Land-use change policy of this nature is misguided and unwise. Governments of vast peatland countries should, therefore, protect peatlands decisively. This effort aligns with the commitment of countries to limit the increase of global average temperature as agreed in the Paris Agreement.

The Minister of Environment and Forestry of the Government of Indonesia, Siti Nurbaya, whose opening remarks were presented at the meeting, emphasized that "The Indonesian Government is not going to backslide on peatland preservation and degraded peatland restoration. Strong law enforcement is necessary. Our government is committed to walk hand in hand with national and international partners to improve governance of peatlands, including civil societies and private enterprises. The Global Peatlands Initiative is a critical platform for us to advance peatland protection which serves a crucial wider public interest."

"The Global Peatlands Initiative creates a big opportunity for the Peatland Restoration Agency to share with and learn from other countries regarding effective and efficient peatland conservation and restoration. We, therefore, believe that this type of fora is crucial for the future of our fight against climate change and humanity as a whole. I am hoping that the number of GPI partners will continue to rise for a significant ripple effect of the initiative," said Head of Indonesia's Peatland Restoration Agency (BRG), Nazir Foead.

http://www.unep.org/newscentre/global-peatlands-initiative-joining-forces-save-world%E2%80%99s-peat

Nazir Foead addressing journalists in Riau, Sumatra, Indonesia (Photo: Hans Joosten)

Tim Christophersen, Senior Programme Officer of Forests and Climate Change for UN Environment, noted that countries are unaware of how peatlands fit into the climate convention. He said that UN Environment will put out a Global Rapid Response Assessment later this year on peatlands and next year, this will be followed by the release of a more in-depth scientific global assessment. The research is meant to help countries find out if they have peatlands, determine their size and ascertain how best to protect them. [Global Peatlands Initiative Webpage] [Second Partner Meeting Webpage] [UN Environment Press Release] [CIFOR Blog Post on Black Gold]

Opening of the 2nd GPI Partner Meeting. Second and third from the right: Tim Christophersen and Bambang Hendroyono. (Photo: Hans Joosten)

Tim Christophersen of UN Environment: 'Peatlands are one of the least-understood ecosystems.'

By Leona Liu, originally posted on Forests News.

With 425 people in attendance the thematic Global Landscapes Forum: Peatlands Matter event in Jakarta (see below) brought together local and global actors to accelerate positive action in the management of peatlands around the world. Tim Christophersen, Senior Programme Officer of Forests and Climate Change for UN Environment, spoke to Forests News' Editor-in-Chief Leona Liu about the current challenges for countries to fully leverage the power of peatlands in their climate change mitigation and adaptation strategies. UN Environment participated in the Forum's afternoon science session, The rediscovered carbon stocks in tropical wetlands and peatlands, organized by the Center for International Forestry Research (CIFOR). The panel discussed the latest tools for identifying and locating wetlands and peatlands, and revealed how scientists are reassessing carbon stocks. "Many countries don't know where [peatlands] are in the Climate Convention," said Christophersen. "We're only now starting to have that knowledge. UN Environment will put out a Global Rapid Response Assessment later this year on peatlands that will be followed next year by a more in-depth scientific global assessment on peatlands that will hopefully help all countries to answer the following questions: Do we have peatlands? Where are they? How big are they? How much carbon is there? What can be done to protect them?

What is the importance of peatlands? How do they figure into climate change adaptation and mitigation strategies and broader development goals?

Peatlands are fascinating ecosystems. They are found in 180 countries, so there's probably one near you wherever you might be. They are one of the least understood ecosystems. We've only recently seen that they

have enormous carbon storage. Basically, for thousands of years, organic matter has accumulated. So for the climate, there is an enormous potential to keep that carbon in the ground and continue to sequester, or serve as a carbon sink. Peatlands comprise only about 3 percent of the world's surface area, but are probably responsible for 5 percent of all greenhouse gas emissions. If we can plug that leak, it would probably give us enough leverage to reach the target of the Paris Agreement to stay within 2 degrees of global warming. If we can't plug that leak of peatland fires and peatland degradation, it might be very difficult to stay within safe limits and stay within the Paris Agreement target.

Are the countries that already have REDD+ schemes in place fully leveraging the potential of peatlands for climate change mitigation and adaptation?

Not yet. For example, Indonesia has a forest reference emission level under the Climate Convention to measure how many emissions they have and how they want to reduce them, but it does not take into account the peat store or the fires that are burning on peatlands. The same situation is happening in many other countries where peat is not yet included in those efforts, but we're seeing a change now. Countries are more alert to the possibilities and the challenges [of peat]. That's why [UN Environment] formed the Global Peatlands Initiative, which brings together more than 20 international organizations and countries like the Congo Basin countries, Peru, and Indonesia to look at how peatlands can be better integrated into their Sustainable Development goals and into the climate efforts that are being undertaken.

What are some of the challenges for countries to fully leverage the power of peatlands?

First of all, many countries don't know where [peatlands] are in the Climate Convention. Many years ago in 2006, in Kenya, climate negotiators tried to bring peatlands into the discussion, but some countries said, 'Well, we don't have peatlands', including the host country Kenya. And yet, five kilometers outside of the convention venue there were lots of peatlands, so there was no knowledge as to where those peatlands were.

We're only now starting to have that knowledge. [UN Environment] will put out a Global Rapid Response Assessment later this year on peatlands that will be followed next year by a more in-depth scientific global assessment on peatlands that will hopefully help all countries to answer the following questions: Do we have peatlands? Where are they? How big are they? How much carbon is there? What can be done to protect them? So the first point is that [countries] don't know that there are peatlands. The second point is that in many cases- and Indonesia is really the country that is the most important country for this topic right now- many of these areas are under agricultural production. They used to be peatlands, but now they are often drained and there are plantations and agricultural fields on them. And the fire problematic that we see in Indonesia is largely due to this drainage of peatlands.

What are some takeaways you'd like to have at the end of the day?

Well, I think the motto of this event- 'Peatlands Matter'- which is also the hashtag that is now all over Twitter, is the core of the message we want to bring to policymakers. Peatlands do matter for the climate, but also for development. These are millions of hectares of land in many tropical countries. There are millions of people who depend on them for their livelihoods. In some cases, they are overused, overexploited, managed badly, or drained too deep that the water table falls too low. We have to turn the tide around and make sure peatlands are successfully managed. Here at the Global Landscapes Forum, we are hearing many successful examples of how that can be done. We would like to bring [these examples] to other countries- some of which are here today, and some of which are not. We would like to use the Global Landscapes Forum to really elevate this topic on the international policy agenda.

http://www.landscapes.org/tim-christophersen-un-environment-peatlands-one-least-understood-ecosystems/
http://blog.cifor.org/49813/tim-christophersen-of-un-environment-peatlands-are-one-of-the-least-understood-ecosystems?fnl=en

Global Landscapes Forum spotlights role of peatlands in climate mitigation and community development

18 May 2017: In Jakarta, Indonesia, the Global Landscapes Forum (GLF) held a thematic session on the management and protection of peatlands. The session drew attention to the role of peatlands in climate change mitigation, in sustaining livelihoods and communities, and in the protection of biodiversity. The GLF session on 'Peatlands Matter' sought to prove that local experiences are a crucial component of peatland management. The event brought peatland communities to the forefront of the conversation, aiming to learn from on-the-ground experiences and share community knowledge with policy-makers, scientists and stakeholders. Plenaries addressed community perspectives and priorities in peatlands, and challenges and opportunities regarding peatlands around the world. Scientific discussions organized by CIFOR, UN

Environment, the World Bank, and the World Agroforestry Center (ICRAF) explored various topics, including measuring carbon stocks in peatlands, studying the health effects of fire and haze, leveraging investment for peatland restoration, and making the connection between people and peat. [GLF Event Highlights] [Event Programme]

The GLF events showcased case studies from around the globe. In Peruvian Amazonia for instance, the Pastaza Marañon Basin stores an amount of carbon in peat soil equivalent to more than 100 years of the country´s anthropogenic emissions of greenhouse gases. These peatlands however are showing clear signs of degradation. A team of scientists recently published a pilot study that was the first to attempt to map and characterize the degradation of this area. In Indonesia, peatland degradation owes to logging, drainage and burning. Key challenges in Indonesia's effort to prevent and respond to land and forest fires include lack of capacity and coordination of relevant public actors, and lack of awareness among communities and companies about fire-related risks. In the framework of the 'Generating Anticipatory Measures for Better Utilization of Tropical Peatlands' (GAMBUT) project, UN Environment and the UN Office for Project Services (UNOPS) are testing technically sound peat rehabilitation methods in Central Kalimantan, engaging land-use managers and communities. This project will support communities' involvement in peatland and peat forest fire control through small grants, while improving communities' welfare through the development of alternative, environmentally friendly activities, such as horticulture and fishery. [CIFOR Blog Post] [Characterizing Degradation of Palm Swamp Peatlands from Space and on the Ground: An Exploratory Study in the Peruvian Amazon] UN-REDD Press Release on the GAMBUT Project] In concert with the GLF, the Center for International Forest Research (CIFOR) of the CIGAR Consortium released a mapping of global peatlands and wetlands, using high spatial detail and a multi-source approach (satellite, climatic and topographic data). According to CIFOR, the research found "unprecedented extents and volumes of peatlands in the tropics, three times the size of previous estimates, and mainly outside Asia." The map indicates that South America, particularly Brazil, may host the largest peat areas, followed by Indonesia. The interactive map is meant to facilitate scientific engagement to validate new peat hotspots, and to support countries hosting peatlands to direct, locate and prioritize their conservation and management. [CIFOR Press Release] [CIFOR Brief: New Map Reveals More Peat in the Tropics]. The research is meant to help countries find out if they have peatlands, determine their size and ascertain how best to protect them.

Read about the day's discussions, including key messages, challenges, opportunities and ways forward, in the Outcome Statement: http://www.landscapes.org/wp-content/uploads/2017/06/FINAL-GLF-Peatlands-Outcome-Statement_0321.pdf and in the Donor and Partner Event Report: http://www.landscapes.org/wp-content/uploads/2017/06/FINAL-GLF-Peatlands-DonorPartnerReport-03.pdf.

Oil palm and pineapple plantation in South Sumatra, Indonesia. (Photo: Hans Joosten)

Asia

Is finding an alternative crop to oil palm the key to preventing haze?

*Jose Montesclaros**

The majority of forest fires in Southeast Asia occur in states which produce oil palm, according to Global Forest Watch. Forests are cleared to make way for oil palm plantations. To save on clearing costs, farmers resort to burning. Could a long-term solution to preventing forest fires lie in promoting alternative commodities that can grow in wet peatlands?

Unless the practice of draining peatlands is addressed, haze will continue to be a challenge. At the root of the issue is the choice of oil palm as the dominant crop. Oil palm is highly profitable and offers higher wages than other crops. The World Agroforestry Centre reports that oil palm in Indonesia yields profits of up to IDR44 million to IDR295 million (USD3300 to USD22,000) per hectare per annum and wages in oil palm are two to seven times greater than average agricultural wages in the country. The other reason is that oil palm takes only three to four years before bearing fruit. This short lead time reduces the risks to investors, in comparison to plants such as sago, which takes 10 to 15 years to grow before they can be harvested.

To prevent farmers and private companies from draining peatlands, it must be economically attractive to keep the peatlands wet. Alternative commodities must meet three key conditions. First, they must be able to grow in natural wet peat conditions. Second, they must be able to compete with oil palm in profitability, to translate into equivalent or higher wages to farmers and returns to investors. Third, they must be able to reduce investor risk by having short lead-time periods before harvest.

The Food and Agriculture Organisation (FAO) of the United Nations has already identified commodities that can grow in naturally wet peat conditions. These include sago, papyrus, wild rice, wetland taro, water celery, water spinach and Chinese water chestnut. Apart from these, there are also plants that can grow in moderately drained peatlands, such as rice, bananas, beans, carrots, celery, corn, lettuce, mint, onions, potatoes, parsley, radish, pasture-sod, sugar cane, chilli, soya bean, tobacco and a few horticultural crops. The challenge, however, is that there is limited information on which of these commodities meet the second and third conditions of comparable profitability and time taken before investors start getting net positive returns on their investments. Among the limited studies available, one shows that if sago was chosen as alternative crop, the internal rate of return is up to 8%, compared to 20% of oil palm. Alternatively, some crops can be grown in less than a year, like radish or celery, but it is not known if there will be sufficient demand for these. Additional preparations may also be needed, including undertakings to reduce the acidity of the soil, prevent pests and diseases, or increase the value-add of producers through additional processing.

There is a need for more research and institutional support in alternative commodities, which needs to be considered when developing and implementing long-term rehabilitation plans. Demand-side interventions include research to identify alternative commodities that are in demand, who the buyers are, what qualities and traits they desire and what prices they are sold at. Buyers may include domestic buyers within Indonesia and Malaysia, as well as importers from higher income countries. Supply-side interventions require identifying technologies that allow cost effective production. Research will be needed in boosting yields in producing commodities, such as through increasing crop resistance to submergence or flooding, pests and diseases.

For instance, if heavy research led to growth in the productivity of cassava production, from just six tonnes per hectare to up to 30 tonnes per hectare, can this not be done in the case of the crops identified by FAO?

Along with boosting yields, it will also be important to hasten the time before crops can be harvested.

Agricultural transformation will have an important part to play in addressing haze, but this requires farmers, businesses, investors, academia, and governments to play their parts.

* Modified from the original paper. Jose Montesclaros is Associate Research Fellow at the Centre for Non-Traditional Security Studies at the S. Rajaratnam School of International Studies at the Nanyang Technological University in Singapore. This commentary first appeared in RSIS Commentary. Read the original commentary *here*.

- http://www.channelnewsasia.com/news/asiapacific/commentary-is-finding-an-alternative-crop-to-oil-palm-the-key-to-8871136
- http://www.eurasiareview.com/22052017-haze-prevention-transforming-agriculture-use-analysis/

Indonesia

Jakarta extends moratorium

Indonesian President Joko Widodo has approved a two- year extension to the moratorium on issuing new licences to use land designated as primary forest and peatland, the Environment and Forestry Minister announced on May 24, 2017. The moratorium was established in 2011 under the administration of previous President Susilo Bambang Yudhoyono, to reduce emissions from fires caused by deforestation. This is the third extension. The latest rollover would give the authorities more time to pin down regulations on forest use. Environment and Forestry Minister Siti Nurbaya Bakar said in a text message: "While we are gathering enough material to decide on licensing and primary forest and peatland governance, the presidential instruction is extended for now."

By last November, the government's forest moratorium covered an area of over 66 million ha.

- http://www.straitstimes.com/asia/se-asia/jakarta-extends-moratorium-on-licences-for-forest-use
- http://uk.reuters.com/article/us-indonesia-environment-forests-idUKKBN18K0CV

Illegal logs rafted out of the Ex-Mega-Rice-Project area, Central Kalimantan, Indonesia. (Photo Hans Joosten)

Study finds moratorium does little to curb deforestation

A new study has found forest cover losses in Indonesia remained high during a six-year moratorium on forest conversion. Using latest satellite data from the University of Maryland, the World Resources Institute (WRI) said in its study that deforestation increased significantly in 2014 and 2015 after declining in 2013, suggesting that the government's moratorium on the issuance of permits for primary forests and peatlands had "scant effect on forest protection." "This could be because the moratorium is issued in the form of Presidential Instruction, which does not entail legal consequences for the perpetrators," the WRI said in its study. The study recorded that forest cover loss in Indonesia decreased in 2013 before increasing to 796,500 hectares (ha) and 735,000 ha in 2014 and 2015 respectively. The WRI said almost half of nationwide deforestation in 2015 took place in Kalimantan, where it reached 323,000 ha. The forest cover loss rate was also alarming in Papua although the government said it would prioritize the moratorium, which aimed at slowing unsustainable agriculture expansion into primary forests and peatlands in the easternmost region. The study also found the highest level of deforestation within moratorium areas in 2015 was in Kalimantan, reaching 69,000 ha, followed by Sumatra with 39,000 ha and Papua with 25,000 ha.

http://www.thejakartapost.com/news/2017/05/26/study-finds-moratorium-does-little-to-curb-deforestation.html

Felda Global Ventures defying law by clearing peat forests

New evidence has emerged that Malaysian-based agri-business Felda Global Ventures (FGV) continues to clear peat forest, contrary to its policies and industry standards, on its PT Temila Agro Abadi (PT TAA) plantation in West Kalimantan, Indonesia. Satellite imagery and drone images show that FGV's subsidiary PT TAA continues to clear forest and peatland. The total cleared area since 2016 is 1,612ha of mostly peat forest. This cleared land includes high conservation value (HCV) areas. Since FGV announced its new policy, it has cleared 864 ha of mostly forested peatland.

During a meeting between research outfit Aidenvironment and FGV and its advisers in Jakarta on April 22, Aidenvironment suggested that FGV adopt an immediate stop-work order in Indonesia in view of legislation, buyers' zero-deforestation procurement policies, Roundtable of Sustainable Palm Oil (RSPO) standards and FGV's own group sustainability policy. FGV's legal adviser stated that President Jokowi's peat moratorium would not apply to FGV because the government had previously issued permits to clear the peat.

http://www.freemalaysiatoday.com/category/opinion/2017/05/29/fgv-brazenly-defying-law-by-clearing-peat-forests/

Forestry Ministry hopes no forest fire this year

The Ministry of Environment and Forestry (KLHK) said it hopes that this year there would be no forest fire in Indonesia. Forest fires have left a scene of destruction almost every year in a number of Indonesian regions such as Riau, West Kalimantan and Central Kalimantan. Addressing the "Global Peatlands Initiative" on May 15th, Secretary General of KLHK Bambang Hendroyono (see above) said "We want to be better than in 2016, when forest and bush fires were reduced up to 20 percent," The ministry has set a target that in 2017 the agency could restore the condition of 400,000 hectares of damaged peatlands or 20 percent of the target for five years. The Indonesian government already taken steps toward protection, restoration and management of peatlands such as by issuing regulation PP No 57 of 2016 banning the exploitation of peatlands until the ecosystem has been fully resorted, drying and burning peatlands and any activities that would reduce the water surface. According to Bambang, there are four methods of restoring damaged peat ecosystem as outlined in PP 57/2016 -- natural successions, rehabilitation or replanting of areas having protective function or cultivation function in line with local wisdom, building water pools to maintain the level of the surface of ground water. "These methods are important to ensure the restoration of 400,000 hectares peat ecosystem set for this year. One of the targets of BRG is canal blocking, building water pools to keep the humidity in the concession area"

http://www.antaranews.com/en/news/110934/forestry-ministry-hopes-no-forest-fire-this-year

Indonesia assures its ASEAN neighbours that it will prevent haze in 2017

On May 18 Indonesia promised its neighbours a haze-free year, saying new measures to combat forest fires should stop the polluting smoke wafting across Southeast Asia. The country's environment minister Arief Yuwono told representatives from neighbouring Brunei, Malaysia, Singapore and Thailand that it is pushing on with tough measures implemented in 2016 to reduce fires and resultant haze which choked the region two years ago. From June until October, Indonesia and nearby countries are often shrouded in a haze caused by smouldering fires. But Nazir Foead, head of the Peatland Restoration Agency was optimistic there would be no repeat of 2015, which saw one of the worst outbreaks in years. "With the preparation the government is making, the re-wetting activities, I would say there should be no more haze going to the neighbours," Foead said. "Fire will still happen, smoke will come out, but it can be put out immediately, so it shouldn't create the trans-boundary haze," he told reporters at the Peatland Matters conference in Jakarta. Foead said his agency had worked with farmers on ways to avoid the slash-and-burn technique that is widely used to clear land quickly and cheaply.

Indonesia has been regularly criticised by neighbours and environmental groups for failing to end the annual fires, which cost the country $16 billion in 2015 and hit more than 500,000 Indonesians with respiratory ailments. Scientist Herry Purnomo has worked with local communities to prevent peatland draining and believes authorities are better prepared this year to fight any forest fires. "The weather is expected to be drier this year... we expect to see more fires compared to last year but not as bad as 2015," Purnomo told the Thomson Reuters Foundation (http://news.trust.org).

But discouraging people from using fire to clear land means going much deeper than the attitudes of bureaucrats in faraway Jakarta. The practice is baked into the mindsets of many who firmly believe not only

that it is cheap but, falsely, that it is a source of fertiliser. So some plantation companies are attempting to help villages that border their concessions to break their fire habit. Three years ago Singapore-based pulp and paper company Asia Pacific Resources International Holdings Ltd (APRIL) offered 100 million rupiah in prize money for villages that remained fire-free for a year. Winnings from the programme go towards infrastructure such as bridges or markets. A year later the company spruced up the programme, offering advice on clearing land without fire and agriculture as well as the annual prize money. The programme resulted in a dramatic fall in the area of land consumed by fire. Throughout the nine villages, covering more than 400,000 hectares of land, that were participating in the programme in 2015, only 54 hectares were burned. The company has since expanded the programme to 27 villages. “There is a culture of burning the land,” Amirul Mukminim, a department head with the local government, says. “Most of the community had the perception that burning is legal and normal.” But as the message filtered into the sermons during Friday prayers, attitudes started to change.

Not everyone is a fan of the approach. Greenpeace says that, though welcome, APRIL’s outreach to villages deflects attention from how it manages peat land within its concessions and those held by suppliers, which contribute about half of its raw material. “It’s not enough for the company to point to work in one area to reduce fires without demonstrating how it is reducing fire risks elsewhere, such as through raising water levels across the entirety of its operations on peat,” says Annisa Rahmawati, senior forest campaigner of Greenpeace Indonesia. APRIL defended its approach: “Fire prevention is one aspect of a holistic landscape approach that aims to balance responsible production with forest conservation and protection. We are focused on a science-led approach to responsible peat land management.” Other plantation companies have picked up the model, at least in part. Singapore-based palm oil company Musim Mas offers prizes of roughly US$2,500 to villages that remain fire-free. It says its efforts cover 72 villages comprising more than 500,000 hectares. The company wanted to move fast because it was concerned about burnishing its sustainability credentials and fending off legal probes as governments cracked down on plantation companies.

Singapore has threatened to haul plantation companies – many of which are listed there – to court to answer for the haze from Indonesia.. During the worst of the burning season, prevailing winds from Sumatra coat the city state in fine particulate matter. The government of Singapore has demanded that six Indonesian suppliers linked to Asian Pulp and Paper Group explain their sustainability practices to its National Environment Agency. In March last year Malaysian palm oil giant IOI Group was stripped of its sustainability certificates by the Roundtable for Sustainable Palm Oil. The loss meant multinational companies dumped it as a supplier.

- http://www.scmp.com/week-asia/politics/article/2094952/dry-season-coming-indonesia-readies-fight-forest-fires-singapore
- http://www.dailymail.co.uk/wires/reuters/article-4518938/Indonesia-promises-neighbours-haze-free-year.html
- http://www.straitstimes.com/asia/se-asia/clear-skies-likely-despite-haze-season-indonesian-official
- https://asiancorrespondent.com/2017/05/indonesia-assures-asean-neighbours-will-prevent-haze-2017/#S575AEYRLyDFekkV.97

Peatland restoration work on track despite slow progress

Indonesia’s Peatland Restoration Agency is coordinating efforts to build nearly 20,000 canal-blockings as part of its peatland restoration programme this year. In 2016, more than 16,000 canal-blockings were built. "I’m convinced (that target can be achieved),” said Nazir Foead, head of the Peatland Restoration Agency. “Why? Because the local governments and communities are fully involved. “The community will build their own canal-blockings with technical and financial support from the government and donors; and then companies have to do it with our supervision, and our guidance as well." The agency has been tasked to restore around two million hectares of peatland in seven provinces that have been damaged due to forest fires in Indonesia. It has been given a target to repair 400,000 hectares of degraded peatland in 2017, about half of it is in concession areas. With nearly half the year gone, Nazir told Channel NewsAsia that only less than 10 per cent of the work has been done. But he is unfazed by the challenge, indicating that the target remains on track. The agency has been focusing efforts on establishing a detailed high-resolution map to better manage the country's peatland forests. "This is a massive taxpayer-funded project,” said Nazir. “We have to plan it very well because we want to avoid (inaccuracies); from the end of last year until May, we were finalising detailed mapping. That takes a bit of time, once that is done, it’s all about mobilising our partners.” Nazir added that work to restore the peatland is usually done at the end of the rainy season. He explained that constructing canal-blocking requires a lot of equipment – and logistics can be more costly when the ground is wet. "If you do it in the beginning or in the middle of the rainy season it’s going to be very expensive to bring all of the equipment,” said Nazir. "Secondly, the technical work in constructing it is best avoided during floods and in the wet season."

http://www.channelnewsasia.com/news/asiapacific/peatland-restoration-work-on-track-despite-slow-progress-8856536

CIFOR studying effectiveness of peatland restoration in Riau

The Center for International Forestry Research (CIFOR) is carrying out a long-term study on the condition of peatland in Tanjung Leban, Bengkalis District, Riau Province, to monitor the dynamism of carbon on peatland that was restored after being gutted in fire. “The study will be carried out for three to five years in three different monitoring plots,” said Daniel Murdiyarso, senior CIFOR scientist in Tanjung Leban village, Riau, on May 17th. The three plots are located in a mixed forest, an oil palm plantation and a rubber plantation, respectively. The peatlands are about five to eight meters deep. The parameters being monitored include carbon stock, peat depth, water level, net primary production (NPP) and surface elevation change. CIFOR has installed devices for the study since February 2017 and involved students and lecturers of Riau University, as well as local villagers. The study is also expected to provide information on how replanting of trees having economic value such as rubber and oil palm on peatlands could provide long-term benefit for the local villagers. Muhammad Nus, a local villager, said his one-hectare peatland had improved after being restored with United Nations Development Programme assistance in 2015. “Previously, this land was planted with oil palm trees and was gutted by huge fires in 2008. Later, it was flooded for four months, so oil palm would not grow anymore,” he said. After undertaking studies on his peatland, “jelutung” trees (Dyera spp) were planted by Japanese researchers and researchers from the University of Riau. Since then, his peatland has has remained moist and free from fire. http://www.indoberita.co/2017/05/18/cifor-studying-effectiveness-of-peatland-restoration-in-riau.html

Jelutung plantation in South Sumatra. (Photo: Hans Joosten)

Government allocates Rp865 billion for peatland restoration

The Indonesian government through the Peatland Restoration Board (BRG) has set aside Rp865 billion in fund to continue the national peatland restoration program, particularly in seven priority provinces. "The state budget fund allocated for the BRG in 2017 amounts to Rp865 billion to restore peatland in seven priority provinces," BRG Chief Nazie Foead said on 16 May, 2017. The fund will be used to restore peatland covering an area of 400,000 hectares in 2017 in the seven priority provinces of Riau, Jambi, South Sumatra, West Kalimantan, Central Kalimantan, South Kalimantan and Papua. Especially Riau province, the board has allocated Rp100 billion for this year’s peatland restoration program in eight districts: Dumai, Siak, Kepulauan Meranti, Bengkalis, Pelalawan, Indragiri Hilir, Rokan Hilir and Kampar. The BRG has set itself the target of restoring 30 percent of 2,492,527 hectares of peatland in 2016, 20 percent in 2017, 2018 and 2019 each, and 10 percent in 2020. https://en.tempo.co/read/news/2017/05/17/206875988/Govt-Allocates-Rp865-Billion-for-Peatland-Restoration

Global Landscapes Forum reaches out to communities for solutions on peatlands

Local communities were at the centre of discussions at the "Global Landscapes Forum: Peatlands Matter" event, May 18, 2017. "Peatlands are not just land, but our identity as Dayak people," said Emmanuela Shinta, an indigenous leader from the Ranu Welum Foundation at the opening plenary. "I'm here to bring the stories from the ground, from those who need to be heard." CIFOR's Director General, Peter Holmgren, announced that communities would be at the core of activities for the Global Landscapes Forum as it enters a new phase, connecting the Sustainable Development Goals and the global climate agenda under the Paris Agreement. "Peatlands provide livelihoods for millions of people worldwide and have tremendously important environmental functions. We need to support local communities in finding the best way forward," he said. "When we put people first, then we can make progress for the climate too. The reverse order is not desirable, or even possible."

Peatland farmer in Central Kalimantan, Indonesia. (Photo: Hans Joosten)

Peatlands are home to tens of millions of people in Indonesia and around the world. But these landscapes are at a critical juncture. Draining, burning and conversion of peatlands for agriculture and other purposes are causing severe degradation, threatening the survival of communities, economies and the environment. The convergence of development and climate challenges in these landscapes makes finding sustainable solutions for peatlands one of the greatest development challenges of our time. "We need to support local communities in finding the best way forward, addressing most, if not all, of the Sustainable Development Goals," says Peter Holmgren. "Unfortunately, policies in the past have led to unwanted results, and people are now paying a high price in health and livelihood challenges. At the same time, we are negatively impacting biological diversity, as well as the local and global climate. The way forward is a landscape approach with a local focus and leadership."

The key to ensuring that science is benefiting local communities is through constructive dialogues and gleaning new knowledge from listening to the stories of people who live in peatland ecosystems, said Plenary moderator Damayanti Buchori (Bogor Agricultural University). This set the tone for the day, which went beyond just technical discussions on peatlands research by featuring firsthand experiences from stakeholders involved in these landscapes. "What's needed is cooperation between communities and the government," said Eddy, a farmer and community representative leader from Sumatra, Indonesia, who was one of the panelists. "I think mistakes in the past are rooted in a lack of cooperation. Indigenous communities have been cast out by

corporations. Cooperation can enable us to plant crops in peatland areas. We need to preserve them and restore them for our livelihoods." Challenges addressed were diverse, including identifying and developing new crops that can grow in peatland environments, mitigating the proliferation of palm oil plantations, tackling the health effects of peatland fires, increasing the fertility of peatland soil, and attracting more investment from the private sector. "There are many players within the peatlands landscape, all with different competing interests," said Buchori. "The question is: How can we live side by side?" The Forum served as a living example that it is not only possible to achieve this aim, but also necessary and urgent for the benefit of the climate, the environment and local livelihoods.

- http://blog.cifor.org/49787/event-highlights-global-landscapes-forum-peatlands-matter?fnl=en
- http://www.cifor.org/press-releases/global-landscapes-forum-reaches-out-to-communities-for-solutions-on-peatlands/
- http://www.environewsnigeria.com/indonesia-communities-form-part-discussions-address-peatland-concerns/

Peat extraction in Rawa Lakbok, Java, Indonesia (Photo Hans Joosten)

'If we're to protect vital peatlands, we must also protect peatland communities'

Aida Greenbury and Martijn Wilder, Chairs of the Private Sector Roundtable of the Asia Pacific Rainforest Partnership

There is now a global scientific consensus that the world is in a race against time to halt catastrophic and irreversible climate change. The incoming UN secretary general has said it's the biggest crisis facing humanity and the biggest curse we could bequeath our children. Central to tackling this crisis is the protection of forests and peatland right here in Indonesia. But protecting forests and peatlands also means identifying ways for people that live and work around these areas to sustain their families.

According to FAO, there are approximately 90 million hectares classified as primary and secondary forests and approximately 15 million hectares of peat in Indonesia across the 7 provinces of Riau, Jambi, South Sumatra, West Kalimantan, Central Kalimantan, South Kalimantan, and Papua. Of these, 11.8 million hectares of peatland are in concessions zoned for productive use. Estimates indicate between 60-70 percent of industrial plantations takes place on peatlands. Agriculture, including these industries, employs around 40 percent of workers in some of the poorest provinces in Indonesia. In addition to large industry concessions, 1.1 million hectares of the areas targeted for restoration in Indonesia are occupied by local villagers for subsistence and smallholder agriculture.

Simple maths show we need to bring these farmers and village communities on board if we are going to make the kind of impact required to address the challenges we face. And it's here that the private sector, as one of

the drivers of innovation, must step up and find practical solutions that can maintain employment, while also protecting the peatlands we need to soak up carbon dioxide.
Today at the Global Landscapes Forum in Jakarta, experts from across the spectrum from academia to private and public corporations will join with global policymakers to try and identify realistic and practical solutions needed to confront these often conflicting demands on our globally important forests and peatlands.
Major regional players in the world of business which have been supporting the Asia Pacific Rainforest Partnership will be working to see if there are win-win solutions that can work for both farmers and the needs of our fragile environment. Only by being honest about the challenges we face and sincerely working together will we stand any chance of avoiding the worst impacts of climate change.
http://www.landscapes.org/protect-vital-peatlands-must-also-protect-peatland-communities/

Pineapple cultivation in South-Sumatran peatswamps. (Photo: Hans Joosten)

Indonesian governor asks president to let timber firms drain peat in his province
West Kalimantan governor Cornelis wants to exempt timber firms in his province from the national ban on peatland drainage, drawing the ire of green groups who say such a policy shift could spell the end of one of the Bornean orangutan's last strongholds, the Sungai Putri rainforest. Cornelis outlined his request in a letter to president Joko Widodo (Jokowi) dated Apr. 25 — days after the Ministry of Environment and Forestry sanctioned a plantation firm for building an illegal drainage canal through Sungai Putri. "Companies will lose confidence to invest in the forestry sector," Cornelis wrote. An exemption was needed, he argued, "in order to maintain a conducive and comfortable investment climate."
Reports of timber firm PT Mohairson Pawan Khatulistiwa (MPK)'s activities in Sungai Putri, one of the last best coastal peat swamp forests on the island of Borneo, began to emerge last year. In March, the environment ministry visited the area; on Apr. 21, it ordered the company to stop operating and close the canal, which then stretched 8.1 kilometers long. Rosa Vivien Ratnawati, a member of the ministry's law enforcement team, said that if the company did not obey the ministry's instructions, its permit could be frozen or revoked. The ministry would also consider a lawsuit, she said.

The canal dug through the Sungai Putri forest (Photo: International Animal Rescue).

The governor asks in his letter for every timber plantation firm whose permit precedes Jokowi's signing last December of a new peat regulation, and that had started operating by then, to be allowed to proceed as usual. Greenpeace forest campaigner Ratri Kusumohartono pointed out that Cornelis is a member of the Governors' Climate and Forests Task Force, an international consortium of governors dedicated to reducing carbon emissions. In 2015 he attended the UN climate summit in Paris. "I think the fact that he's made that commitment yet wants to open the peat and forest in his province for development is a double standard," Kusumohartono said. Cornelis in his letter makes an economic case for the plantations, emphasizing the enormity of both the investments being made and the benefits they will produce for the province. He also says the companies will protect the forest in their concessions from local people who encroach on them.
https://news.mongabay.com/2017/05/indonesian-governor-asks-president-to-let-timber-firms-drain-peat-in-his-province/

The Battle over Peatlands

Peatlands restoration is a bone of contention between Environment and Forestry Minister Siti Nurbaya and Industry Minister Airlangga Hartarto, who represent two conflicting interests. Presidential Regulation No. 57/2016 states that permit holders cultivating peatland can manage it until their permit expires. Those who have not begun cultivation are asked by the government to provide a peatland management plan. If they do not implement this plan, they will lose their license after two years. A number of permit holders of commercial forestry and oil palm plantations have already complied with these regulations.

The dispute was triggered within the government itself. Industry Minister Airlangga Hartarto and West Kalimantan Governor Cornelius sent letters to President Joko Widodo objecting to the program of restoring peatlands. They argued that production of timber and palm oil would be disrupted. Exports of these products, government revenues and income for individuals worth hundreds of trillions of rupiah would plunge. The letter from Industry Minister Airlangga Hartarto even claimed that non-performing loans would blight the banking sector, Indonesia's investment grade would suffer and unemployment would rise. In his letter, Airlangga stated that the area of commercial forest affected by the program totalled 780,000 hectares, with oil palm plantations covering 1.02 million hectares, equivalent to 17 percent of the land cultivated by private companies.

The adverse effects of the restoration program will appear in a short time, while the development of new plantations will not bring immediate results. On the other hand, the impact of land clearing by burning to start new business operations is no less alarming. The effects of these fires spread to other economic sectors. Airports have to be closed, public transport is restricted, the number of respiratory tract infections increases drastically and relations with neighbouring countries suffer…

- http://www.ecodaily.org/featured/the-battle-over-peatlands/
- https://en.tempo.co/read/news/2017/05/24/314878263/The-Battle-over-Peatlands

Bonn Challenge

A BONN Challenge Roundtable Meeting was successfully held in Palembang, South Sumatra, Indonesia on 9-11 May 2017 with twenty-nine foreign delegates attending to discuss various environmental issues. Indonesia is the first Asian country to host the high-level environmental meeting since it was initiated in Bonn in 2011. South Sumatra has one of the largest peatland areas but a large area was damaged by catastrophic fires. The province is now striving to rehabilitate damaged areas.

Perfect mirror in blackwater in Maludan peatswamp forest, Sarawak, Malaysia (Photo: Hans Joosten)

Malaysia

Noor Azura binti Ahmad (azura@gec.org.my)

Review Malaysian Wetlands Policy

The Malaysian Wetlands Policy (2005) is being reviewed this year in a series of workshops organized by the Ministry of Natural Resources and the Environment (NRE) with technical support from the Forest Research Institute of Malaysia (FRIM). Since the policy was drawn over 11 years ago, the sustainable management of wetlands has become more challenging; especially in meeting the obligations of the Ramsar Convention. Concerns of all relevant parties must be considered especially the government and authorities of Peninsular Malaysia, Sabah and Sarawak states. The review is timely, considering the adoption of the 4th Ramsar Strategic Plan 2016 –2024 at COP12 held at Punta del Este, Uruguay in June 2015. The NRE is also undertaking review of the National REDD+ Policy where a consultation workshop was recently held.

Sustainable Management of Peatland Ecosystems in Malaysia

In Malaysia, preparations for the Sustainable Management of Peatland Ecosystems in Malaysia (SMPEM) project are under way with the Design Mission that took place from 1st to 15th May 2017. Five sites have been identified in four states. They are Southeast Pahang Peatland Landscape in Pahang state, Klias Peninsula Peatland Landscape in Sabah; Maludam Peninsula Peatland Landscape in Sarawak; North Selangor Peat Swamp Forest and buffer zone, and South Selangor Peatland Landscape in Selangor. GEF has allocated US$9.4 million which will be matched by more than $30 million from the government of Malaysia and other sources. The design is expected to be completed by September 2017 and project implementation to be commenced from early 2018.

Klias peatswamp forest, Sabah, Malaysia (Photo: Hans Joosten)

19th Meeting on Transboundary Haze

The 19th Sub-Regional Ministerial Steering Committee (MSC) Meeting on Transboundary Haze Pollution was held in Kuala Lumpur on 18th May 2017. It discussed key issues pertaining to haze prevention measures in the five MSC countries comprising Brunei Darussalam, Indonesia, Malaysia, Singapore and Thailand.

The Ministers noted the ASEAN Specialised Meteorological Centre's (ASMC's) outlook that dry weather conditions are expected for the region between June and October 2017. In addition, with a chance of El Niño conditions emerging in the upcoming dry season, below normal to normal rainfall is expected for the region, and hotspot activities in 2017 are likely to be more active compared to that in 2016. MSC countries pledged to remain vigilant and continuously monitor and step up their haze preventive efforts to minimise any possible occurrence of transboundary smoke haze from land and forest fires in anticipation of the drier weather in the coming months.

The MSC countries reaffirmed their readiness to provide assistance, if requested, and work among MSC countries for emergency response when necessary, and called for enhanced cooperation and coordination to ensure the timely and effective deployment of international resources for firefighting assistance, mitigate land and forest fires, and to control smoke haze pollution.

Retrieve the full press release here.

Peatland slash and burn activities in Sarawak, Malaysia (Photo: Hans Joosten)

Thailand

Some haze in May

Thailand experienced some haze, especially from fires in the North and some in the South, but fires were swiftly extinguished and the damaged area is not extensive. Wildfires in Nan, Phayao and Surat Thani had burnt 80 rai (13 hectares) of forest land. Other affected areas were Lampang and Thung Salaeng Luang National Park. http://www.nationmultimedia.com/news/national/30308252

Europe

Finland

Don't drain the swamp: Often overlooked, peatlands emit staggering quantities of carbon dioxide

By Harrison Tasoff | Posted May 22, 2017

Is Finland an environmental paradise? A recent, highly regarded effort to rank 180 nations based on environmental performance seems to think so: The wealthy Scandinavian country was at the very top of the list. Yet some environmentalists and scientists are asking why the Finns – and residents of other countries, too – are contributing to climate change by destroying one of their important natural resources. No, it's not Finland's stunning boreal forests, which are generally in excellent condition. It's a much more humble, yet crucial natural feature: peat bogs, muddy wetlands filled with decaying plant matter that the Finns drain and mine for energy. The country's 130 peat-fired heating and power plants have moved millions of tons of carbon from the ground to the atmosphere. In doing so, those plants produce about as much pollution as if they were burning low-grade coal, which makes sense because the mud-like peat is actually a precursor to coal.

"I think at the moment they're going in the wrong direction," says Paloma Hannonen who oversees peatland conservation at the Finnish Association for Nature Conservation, the country's largest environmental group. In 2015 a new government took office, rolling back many of the environmental initiatives started by the previous administration, Hannonen says.

"Even those of us who are in the industry don't use the word 'sustainable' because it is not sustainable," says Donal Clarke, who worked at the Irish peat company Bord na Mona for 17 years. "Once you open a bog it's

gone.” While peatlands can slowly regenerate, they accumulate only half a millimeter of peat per year. Pristine bogs can be tens of thousands of times deeper than that. Yet for thousands of years, especially in Europe from the Middle Ages to the mid-twentieth century, peat mining has proven irresistible to humans seeking an easy-to-harvest fuel source. And the practice is still common in countries that lack ready alternatives — even in places where environmentalism is popular, like Finland and Ireland.

“Because we have very limited energy sources in Finland, peat is used,” explains Jaakko Silpola, the former secretary general of the International Peatland Society, and a senior specialist at the world’s largest peat company, Finland’s Vapo Oy. Finland claims that only one percent of its peatlands have been harvested for fuel from previously drained land. But “that’s complete bullshit” according to Teemu Tahvanainen at the University of Eastern Finland, who headed the peatlands group that created the first European Red List of Habitat, which came out just a few months ago.

Torronsuo Bog, Finland. (Photo: Hans Joosten)

Finland might vastly overestimate the size and number of its peatlands. Tahvanainen says that many areas designated as peatlands are really forests with only a thin layer of peat. What’s more, he says Finland has a low bar for what land it considers “degraded,” or land that is damaged enough that the government surrenders it to mining. In Finland, a bog is considered degraded even if only it’s peripheries are drained, Tahvanainen says. “It’s completely foolish to say that just one percent is used for mining. It’s just, it doesn’t make any sense,” says Tahvanainen.

Finland has already drained roughly 56 percent of its 22 million acres of peatland, mostly for forestry, and the country isn’t going to stop anytime soon. Finland is trying to eliminate coal and cut its use of oil for transportation in half by 2030, and during the transition peat will continue to provide about five percent of the country’s energy, according to Silpola, at the peat company Vapo Oy.

http://scienceline.org/2017/05/dont-drain-swamp/

United Kingdom

Fire on Thorne Moors

Paul Buckland (paul.buckland@bugscep.com)

I was pleased to see that a national paper, the Daily Mirror, had picked up on the fire on Heysham Bog, although I guess inevitably with the Press they got their facts wrong. Large Heath, *Coenonympha tullia*, is hardly Britain's rarest butterfly (see http://www.ukbutterflies.co.uk/species.php?species=tullia), although local races (subspp) are distinct. It is unfortunate that one of its other regions, where it is locally not uncommon, Thorne Moors National Nature Reserve in South Yorkshire, has also recently been seriously damaged by fire (see http://www.thornetimes.co.uk/moorland-nature-reserve-badly-affected-by-fire/). Records on Thorne Moors, along with those of other Lepidoptera have recently been collated in Moat, R. (2016). Checklist of the Lepidoptera of Thorne Moors 1834-2014. Thorne, Thorne & Hatfield Moors Conservation Forum, which chronicles a sad story of decline. Helen Kirk, as Secretary (and much more) of the Thorne & Hatfield Moors Conservation Forum and active on the Moor s for over 30 years, provides a much more authoritative account of the disaster on Thorne in the local paper, but it does not seem to have been picked up nationally. The problems with Large Heath and reintroduction are also considered in a recent MSc thesis: Millar, R. (2015). The role of reintroduction in conservation: a case study of Large Heath butterfly on Hatfield Moors, South Yorkshire. Faculty of Science & Technology. Plymouth, Plymouth University: 122. A shortened version of this will appear shortly in volume 10 of Thorne & Hatfield Moors Papers.

Scottish peatland restoration wins £26,000 funding boost

A project to restore peat bogs at Forsinard, in Sutherland's Flow Country, is among six international initiatives to win funding from the European Outdoor Conservation Association (EOCA). The scheme, run by RSPB Scotland, will receive nearly £26,000 to remove nearly four hectares of forestry plantation to be removed and restored to blanket bog. Non-native sitka spruce and lodgepole pine trees were planted around 30 years ago on peatlands in the Dyke plantation, near Forsinard. The trees have caused significant damage to the bog.
http://www.scotsman.com/news/environment/scottish-peatland-restoration-wins-26-000-funding-boost-1-4456870

Protest sign in Forsinard, Sutherland, Scotland. (Photo: Hans Joosten)

Peatland conservation relevant papers May 2017

Collected by Hans Joosten: joosten@uni-greifswald.de

1. Environmental history and vegetation dynamics in response to climate variations and human pressure during the Holocene in Bassa Nera, Central Pyrenees: http://www.sciencedirect.com/science/article/pii/S0031018217300329
2. Paleoenvironment change and its impact on carbon and nitrogen accumulation in the Zoige wetland, northeastern Qinghai-Tibetan Plateau over the past 14,000 years: http://onlinelibrary.wiley.com/doi/10.1002/2016GC006718/abstract
3. Using spatial statistics to identify emerging hot spots of forest loss: http://iopscience.iop.org/article/10.1088/1748-9326/aa5a2f/pdf
4. Pollution and climate change drive long-term change in Scottish wetland vegetation composition: http://www.sciencedirect.com/science/article/pii/S0006320716307832
5. Middle to late Holocene flood activity estimated from loss on ignition of peat in the Ishikari lowland, northern Japan: http://www.sciencedirect.com/science/article/pii/S0921818116304842
6. Late Holocene lowland fluvial archives and geoarchaeology: Utrecht's case study of Rhine river abandonment under Roman and Medieval settlement: http://www.sciencedirect.com/science/article/pii/S0277379116306588
7. Lagoonal settlements and relative sea level during Bronze Age in Northern Adriatic: Geoarchaeological evidence and paleogeographic constraints: http://www.sciencedirect.com/science/article/pii/S1040618216302282
8. The so called 'Herodotus Springs' at 'Keri Lake' in Zakynthos Island western Greece: A palaeoenvironmental and palaeoecological approach: http://www.sciencedirect.com/science/article/pii/S1040618216300416
9. Sea level changes and past vegetation in the Punic period (5th–4th century BC): Archaeological, geomorphological and palaeobotanical indicators (South Sardinia – West Mediterranean Sea): http://www.sciencedirect.com/science/article/pii/S1040618216301501
10. Latest Holocene depositional history of the southern Venice Lagoon, Italy: http://journals.sagepub.com/doi/abs/10.1177/0959683617708450
11. Duurzaam herstel van hoogveenlandschappen. Kennis, praktijkervaring en kennisleemten bij de inrichting van hoogveenkernen: http://dt.natuurkennis.nl/uploads/OBN212_NZ_Duurzaam_herstel_hoogveenlandschappen.pdf
12. Post-fire ecohydrological conditions at peatland margins in different hydrogeological settings of the Boreal Plain: http://www.sciencedirect.com/science/article/pii/S0022169417301798
13. Modelling Holocene peatland dynamics with an individual-based dynamic vegetation model: http://www.biogeosciences.net/14/2571/2017/
14. Recent increases in permafrost thaw rates and areal loss of palsas in the western Northwest Territories, Canada: http://onlinelibrary.wiley.com/doi/10.1002/ppp.1951/abstract
15. Scaling effects of riparian peatlands on stable isotopes in runoff and DOC mobilization: http://www.sciencedirect.com/science/article/pii/S0022169417301956
16. Wetland drying indirectly influences plant community and seed bank diversity through soil pH: http://www.sciencedirect.com/science/article/pii/S1470160X17302832
17. Spatial distribution of insect indicator taxa as a basis for peat bog conservation planning: http://www.sciencedirect.com/science/article/pii/S1470160X17302534
18. Recent ^{210}Pb, ^{137}Cs and ^{241}Am accumulation in an ombrotrophic peatland from Amsterdam Island (Southern Indian Ocean): http://www.sciencedirect.com/science/article/pii/S0265931X17300747
19. Organic composition and multiphase stable isotope analysis of active, degrading and restored blanket bog: http://www.sciencedirect.com/science/article/pii/S0048969717311646
20. Re-assessing the vertical distribution of testate amoeba communities in surface peats: implications for palaeohydrological studies: http://www.sciencedirect.com/science/article/pii/S0932473917300767
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Forest removal in the Flow Country, Sutherland, Scotland. (Photo: Hans Joosten)