

# Peatlands

*International*

issue 2.2018



Open Position: IPS Secretary General (full-time)  
Executive Board Elections in Rotterdam & Executive Board Candidates 2018  
From peat production to bird reserve - A peat bog specialist combines environmental and business perspectives  
A Cutting-Edge Work Environment: Klasmann-Deilmann Opens New Innovation Centre  
That's LIFE - Restoring the Humberhead Peatlands End of Project Conference  
Extract from the Diary of a Raised Bog: Mid-summers day (June 21st)  
How an Indonesian Village Keeps Peat Fires in Check  
PEATART in the Cultural Capital of Europe 2018  
Tapestry of Light  
GDPR and IPS



Growth



Substrates



Potting Soils



Raw Materials



Energy



Renewable Energy

## Keeping an eye on our responsibility as we continue to grow

Our substrates ensure the growth of fruit, vegetables, ornamental plants, trees and shrubs worldwide. We turn our renewable resources into climate-friendly energy sources. The key criterion for our activities is sustainability. And we are pursuing ambitious plans for the future.

Klasmann-Deilmann is one of the global market leaders to have emerged from Germany's medium-sized businesses, and we are at home all over the world.



*we make it grow*

# Editorial

## Busy times!

**T**oday, everything is moving faster and faster. One minute, not to mention one hour or day, is such a long time in communication - spreading news, photos and information - whether true or false. This has a tremendous effect on our daily work.

Wherever you work, travel or holiday, there is almost no escape from being online. Field working is not the same as before: you are constantly expected to answer the phone, emails or to communicate on social media, sometimes, so much so, that it seems to play the main role, rather than doing research and observation. The more new tools and ways of working we have, the more and the faster we are expected to provide solutions.

The decisions that need to be made in relation to peatlands and peatland management - and the science behind them - are now needed more than ever. At the same time, the time window for producing and distributing reliable unbiased research results and information has become narrower than ever. It sometimes seems that

Dr Valpola busy for the IPS in Amsterdam, January 2018.



the demands of high-quality peat and peatland research are no longer understood. However, the importance of peatland management has become increasingly evident and several international bodies are producing recommendations, guidance or directives all over the world.

In this respect, the role of the International Peatland Society is perhaps more important than ever before in the 50-year history of the Society. The last two years of our history have been extremely busy and filled with new strategies, new structures and new people and with the quest to find a way to progress our aim of achieving responsible peatland management. This has not been an easy path as most of us work for the Society in a voluntarily capacity and, at the same time, have all the usual daily commitments but

Peatlands International is the global magazine of the International Peatland Society (IPS). It provides the almost 1,500 individual, institute and corporate members of the Society with up-to-date information on peat and peatland matters, reports and photos of conferences and workshops, background reports and publication reviews.

To serve all of our members, we provide always a good balance between economic, social and environmental points of view. To receive Peatlands International in your email every three months, visit [www.peatlands.org/join-us](http://www.peatlands.org/join-us) and sign up as a member or subscribe for € 60/year.

Peatlands International  
ISSN: 1455-8491

Publisher: International Peatland Society  
Nisulankatu 78 B, 40720 Jyväskylä  
phone: +358 40 418 4075  
email: [ips@peatlands.org](mailto:ips@peatlands.org)

Editor-in-Chief  
Gerald Schmilewski, acting IPS Secretary General  
Assistant to the Editor-in-Chief & Layout  
Susann Warnecke, IPS Communications Manager

Editorial Board  
Rachel Carmenta, UK; Lydia Cole, UK; Catherine Farrell,  
Ireland; Marie Kofod-Hansen, Sweden; Juhani Päivänen,  
Finland; Jack Rieley, UK; Anne Jelle Schilstra, the  
Netherlands; Paul Short, Canada; Lech Szajdak, Poland;  
Michael Trepel, Germany; David Wilson, Ireland

Are you interested? Contact [ips@peatlands.org](mailto:ips@peatlands.org).

Cover: Typical bog plants.  
Photo: Ilze Ozola, Latvia  
[www.peatlands.org/publications/peatlands-international](http://www.peatlands.org/publications/peatlands-international)

it is so great to see the enthusiasm,  
determination and professionalism  
of the people working on our  
Commissions and Expert Groups.

Just a few days ago we took a giant  
step forward: the position of full-  
time Secretary General is now open!  
I have no doubt that we will have a  
score of excellent applications and  
yours could be one of them! We will  
also have elections during the Annual  
Assembly and 10 very good candidates  
are running for the position on the  
Executive Board of the IPS.

Make sure that you are with us in  
Rotterdam!

*Samu Valpola*

2nd Vice President  
[samu.valpola@peatlands.org](mailto:samu.valpola@peatlands.org)

IPS Annual Assembly  
IPS 50th Jubilee Symposium  
Global Peatland and Peat  
Industry Summit  
9 - 13 September 2018



Welcome to Rotterdam!  
[www.ipsjubileesymposium.nl](http://www.ipsjubileesymposium.nl)

# Contents

*We are looking for new and active members of the Editorial Board. If you are interested, mail us at [ips@peatlands.org](mailto:ips@peatlands.org).*

- 3 Editorial: Busy times!
- 4 Welcome to Rotterdam!
- 8 Open Position: IPS Secretary General (full-time)
- 10 GDPR and IPS
- 10 Executive Board Elections in Rotterdam
- 12 A Cutting-Edge Work Environment: Klasmann-Deilmann Opens New Innovation Centre
- 14 Tapestry of Light
- 22 That's LIFE - Restoring the Humberhead Peatlands End of Project Conference, Restoring England's largest lowland peat mire - LIFE and Beyond
- 26 Extract from the Diary of a Raised Bog: Mid-summers day (June 21st)
- 29 PEATART in the Cultural Capital of Europe 2018
- 30 Peat and Peatland Events

**IPS Secretariat**  
Nisulankatu 78 B  
40720 Jyväskylä  
Finland  
[peatlands.org](http://peatlands.org)



From peat production to bird reserve - A peat bog specialist combines environmental and business perspectives  
page 6

Candidates to the  
Executive Board 2018  
page 11



How an Indonesian  
Village Keeps Peat  
Fires in Check  
page 17

# From peat production to bird reserve

*A peat bog specialist combines environmental and business perspectives*

**A** cold spring wind blows across the treeless Miehonsuo peat production area, biting into the hands and fingers. Minna Arola, who has worked as Oulun Energia's resource coordinator for a year now, is preparing to fly a drone to observe the peat bogs

– including areas that are still in production and those where production has ended.

The drone is primarily used to inspect water-barrier structures and during springtime to monitor the flooding situation in areas that are



Kurunneva. Photo: Kati Leinonen

otherwise difficult to access. Area control is a key part of environmental work in peat production. Arola's sphere of responsibility covers the entire production cycle, from land acquisition and permission processes to the eventual restoration of the production areas.

The Miehonsuo area is in the final stages of peat production. In addition to production machinery and peat stacks, the area features vegetation and fertilizer testing grounds. New applications for phased-out peat bogs are developed constantly. The cackle of migrating birds can be heard somewhere behind the willow plantations. They can frequently be seen flying over the wetlands recently established in the area, but their species remains a mystery.

"Unfortunately, I am just an engineer, not a biologist", Arola exclaims. However, spending time with nature is one of Arola's favourite pastimes. During the summertime, the environment is rich with different plants and habitats, and sometimes even traces left by large predators can be found.

## Fields and Wetlands

Negotiations with landowners are also part of Arola's work. Some of the more memorable moments include an accordion concert given by a landowner and a visit to the famous cloudberry market in Ranua.

As well as dealing with land rents and acquisitions, Arola also negotiates how the land will be used after peat production has ended. Should it be turned into forest, fields or wetland? In the production phase, new applications for water barriers, such as dams, are also often on the agenda.

"Negotiating and integrating many different interests into a workable whole is an important part of my work", Arola says.

Minna Arola. Photo: Kati Leinonen



A good example of successful post-production land use is the Kurunneva peatland in Rantsila, formerly a peat production area, today used for recreation and crop cultivation. Environmental awareness has increased among landowners, and today many of them value wetlands, which are also appreciated by hunters, as well as by birds and other wetland animals.

The use of peatlands requires many kinds of expertise. Arola is currently involved in a project entitled Sulfa II, which explores ways to reduce the risk of emissions of acidic water from peat production areas.

Prevention is important. "Once started, the acidification process is difficult to stop", Minna Arola says.

*Katariina Parhi*

katariina.parhi@gmail.com

Open Position

# IPS Secretary General (full-time)

The International Peatland Society is seeking to recruit a full-time Secretary General (*pääsihteeri, toimitusjohtaja* in Finnish) as its Chief Executive.

new services and new sources of income, and strengthening existing services; and will take a leading part in the development of strategy and policy.

## The position

The Secretary General will report to the Executive Board (EB). The appointee will have more extensive hours and a wider mandate than previous, part-time, Secretaries General, in keeping with the latest strategy developed by the EB.

The person appointed will be expected to take the lead in implementing the strategy, developing

The appointee will be encouraged to generate project management income, and in the longer term will be expected to establish a project management system. She or he will initiate relevant projects and acquire the necessary funds, subject to approval by the EB. Such projects will include co-operation in projects initiated by other organizations. The appointee will take charge of projects already identified by the EB, finding partners and identifying funding. These will include Updating *Global Peat Resources*, the *Peat Dialogue* and *Sphagnum Farming*.



The appointee will be the visible figurehead of the IPS in international affairs. She or he will be expected to reinforce existing partnerships, particularly with the international agencies, and to form new ones with organizations and institutes with similar interests.

The position will involve liaison with relevant international conventions and the promotion of the IPS perspective based on scientific evidence. It will also involve the setting up and maintenance of alliances and information exchange with knowledge institutions and other NGOs.

The appointee will oversee and encourage the organs of the IPS, including National Committees, Commissions, expert groups and individual members and will encourage and help them to organize seminars, conferences and other meetings and events. She or he will also work to increase membership of the organization.

The appointee will have overall responsibility for the governance and administration of the organization, and shall be responsible for ensuring the smooth running of the Society in accordance with its Statutes and Internal Regulations, and for the implementation of decisions taken by the Annual Assembly and the Executive Board.

The appointee will be responsible for the supervision, development and care of the Secretariat. She or he will have overall responsibility for finance and for the budget.

## The Person

The successful candidate will have demonstrated leadership qualities which will include:

- an academic degree in a relevant scientific discipline, preferably a higher degree; together with an interest in scientific developments.
- well-developed analytical skills.
- the ability to gain access to sources of information; a knowledge of organizations that provide funding for research projects and an ability to liaise with these organizations.
- project management skills, experience of working on or managing research projects.
- the ability to work with professional voluntary colleagues and to manage professional staff,



International Peatland Society

if necessary from a distance.

- an ability to develop strategy and to identify long-term goals and to be creative in finding new ways to achieve goals.
- relationship skills in dealing with stakeholders, an ability to win people over, and a feeling for different cultures.
- an ability to communicate clearly and authoritatively; with convincing presentation skills, and the ability to relate to the media, including social media.
- fluency in English: knowledge of other languages an asset.
- a knowledge of finance and organizational administration.
- willingness to travel.

## The Appointment

The position is full-time. Applications including a CV and salary requirements should be sent by e-mail to [gerald.schmilewski@peatlands.org](mailto:gerald.schmilewski@peatlands.org).

The closing date for applications is **15 July 2018**.

## The Organisation

The International Peatland Society (IPS) is a non-governmental, non-profit multidisciplinary organisation dealing with peatlands and peat. It is dedicated to the responsible management and Wise Use of peatlands and peat.

Its mission is to promote the gathering, exchange and communication of peatland knowledge and experience. Its vision is to be the leading international organisation in this sphere. It strives to be seen by the international community as an

impartial and knowledgeable organisation for the provision of advice and knowledge.

It has implemented its mission principally by organising Congresses, conferences and seminars; by publishing books, magazines and newsletters; and by supporting the compilation and publication of the Wise Use principles and the Strategy for Responsible Peatland Management.

The structure of the organisation is based on sixteen National Committees (NCs). It has some 1,400 individual and corporate members in 43 countries. It carries out much of its work through scientific and industry Commissions supported

by expert groups. The Society is governed by an Executive Board (EB) elected every four years by National Committees. The EB is advised by a Scientific Advisory Board (SAB) consisting of Commission Chairs and the Second Vice President.

It has a Secretariat based in Jyväskylä, Finland currently consisting of a part-time Secretary General and a full-time Communications Manager (CM) supported at times by temporary interns. The CM is also the principal administrator of the Society whose responsibilities include finance and accounts.

IPS Executive Board

## GDPR and IPS

The General Data Protection Regulation (GDPR) 2016/679 is a regulation in EU law on data protection and privacy for all individuals within the European Union and the European Economic Area (EEA). It aims primarily to give control to citizens and residents over their personal data and to simplify the regulatory environment for international business by unifying the regulation within the EU.

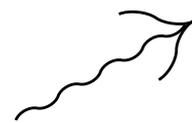
Basically, no personal data may be processed unless it is done under a lawful basis specified by the regulation, or if the data controller or processor has received an unambiguous and individualized affirmation of consent from the data subject. The data subject has the right to revoke this consent at any time.

IPS has asked all its members in the EU on 23 May 2018 for their consent for emails and direct marketing, and updated their mailing lists accordingly. **Please check your email settings in MailChimp (e.g. link in the footer of Peatland Snippets) in case you are not hearing from us anymore, or wish to be deleted.**

IPS Policy: [peatlands.org/main/internet-policies](https://peatlands.org/main/internet-policies)

Source: [https://en.wikipedia.org/wiki/General\\_Data\\_Protection\\_Regulation](https://en.wikipedia.org/wiki/General_Data_Protection_Regulation)  
See also: <https://gdpr-info.eu>

## Executive Board Elections in Rotterdam



The next elections to the IPS Executive Board (EB) will be held in Rotterdam, the Netherlands, on **13 September**. All 16 National Committees are invited to send their representatives to the Assembly where each “country” has one vote.

This year, there will be **six vacant seats** on the Board. The candidates on page 11 were formally nominated by their National Committees. The IPS Presidents Gerald Schmilewski, Guus van Berckel and Samu Valpola; as well as EB members Paul Short and Donal Clarke will continue their terms until 2020. Current EB members Moritz Böcking and Claes Rülcker are not available for re-election. Observer terms for the four Asian and the Swedish National Committee will end in September with the Assembly.

The EB is responsible to the Annual Assembly for the management of the Society. To reflect the balance of industry and science IPS stands for, EB members shall come from both areas. Further emphasis is laid on a cultural, gender and geographical balance.

# IPS Executive Board Candidates 2018



**Sabine  
Jordan**

- Doctor of Agronomy, Swedish University of Agricultural Sciences
- MSc in Geography, Agriculture & Sociology, Humboldt-Universität zu Berlin, Germany
- Board member Swedish Peat Research Foundation



**Giedrius  
Kavaliauskas**

- Master degree Transport engineering, Kaunas University of Technology, Lithuania
- President of the Lithuanian Peat Producers' Association "Lietuviškos durpės"



**Lulie  
Melling**

- Doctor of Philosophy, Hokkaido University, Japan "GHG fluxes from tropical peatland of Sarawak, Malaysia"
- Ambassador of Hokkaido University
- Director of Sarawak Tropical Peat Research Institute



**Erki  
Niitlaan**

- Tallinn University of Technology, Institute of Mining, PhD (not graduated)
- Non-profit institution Estonian Peat Association Managing Director
- Engineering Dureau STEIGER LLC Board member, partner



**Mitsuru  
Osaki**

- Professor of Research Faculty and Graduate School of Agriculture, Hokkaido University
- President of "Japan Peatland Society"
- Former Associate Scientist in Maize Unit of CIMMYT in Mexico



**Jack  
Rieley**

- Ph.D. Botany, Ecology, University of Durham, UK
- Managing Director, Rieley Consultants Ltd
- Honorary Professor of Geography, University of Nottingham
- Member of Ramsar STRP
- Editor of Mires and Peat



**Iman  
Santoso**

- Vice Chairman of Indonesia Forest Concessionaires Association
- PhD in Agriculture Economic, Bogor Agricultural University, Indonesia
- Master of Science in Forestry, Michigan State University



**Frank  
Tamminga**

- Managing Director of the Aurich-Wiesmoor Torfvertriebs (AWT) GmbH, Germany
- Final degree as a Business Economist
- Apprenticeship in industrial management assistance



**Nick  
van de Griendt**

- Business economics, Erasmus University, Rotterdam
- 5th generation in family business; director owner of Sphagnum group and former director owner of Griendtsveen group.
- Honorary Consul of the Republic of Estonia



**Zhengping  
Wang**

- MSc and BSc of Shenyang Agricultural University, Soil Science, Agricultural Chemistry and Soil Fertility
- Former post-doctorate and Assistant Professor at Wetland Biogeochemistry Institute, Louisiana State University, USA

*A Cutting-Edge Work Environment*

# Klasmann-Deilmann Opens New Innovation Centre

**A**fter an 18-month construction phase, Klasmann-Deilmann GmbH's Innovation Centre in Geeste, Germany has opened. A new greenhouse has also been built in its immediate vicinity.

Visitors from all over the world came for the official celebrations, including business partners and customers from China, Taiwan, Argentina and Germany. The International Peatland Society's (IPS) President Gerald Schmilewski conveyed warm greetings and best wishes on behalf of the society.

The guest speaker was Professor Franz Josef Radermacher, who addressed the prospects for and challenges of feeding a growing global



Carl-Gerrit Deilmann.

population and discussed opportunities for the world's climate and for soils arising from extensive carbon sequestration measures.



Klasmann-Deilmann Innovation Centre. All photos KD.

In his ceremonial address, Carl-Gerrit Deilmann, Chair of the Administrative Board, stressed that "Klasmann-Deilmann is very much bound up with the resource that is peat. However, our company is also seeking to explore completely new avenues. We have therefore located our new headquarters at a site that will, in the future, no longer have its own peat supply. This will spur us on to develop innovative products and business models - which

is why we have called this building our Innovation Centre. Our goal is completely new growing media, new substrate constituents, new cultivation systems - in other words, genuine innovation.”

The reason for Klasmann-Deilmann’s major investment in this new structure is the company’s continuous growth. For some years, the previous administrative building has no longer had sufficient space. In the Innovation Centre, additional PC workstations and open-plan areas are now provided for more than 40 employees.

The building houses an academy and a multimedia exhibition area, thus providing a suitable setting for events. In this new building, central functions are brought together. From now on, the Klasmann-Deilmann Group will be managed from here, and strategic and international cooperation will be strengthened, both within the Klasmann-Deilmann Group and with its partners, customers and stakeholders.

The Research Centre, an experimental greenhouse, has been purpose-built for research projects on



innovative growing media, cultivation systems and substrate constituents. The entire location is thus geared towards research, development and innovation.

“We wanted to create a forward-looking work environment that enables dialogue and transparency; one that creates an atmosphere conducive to innovation”, commented Moritz Böcking, Managing Director at Klasmann-Deilmann.

*Dirk Röse*

Klasmann-Deilmann GmbH  
Geeste, Germany  
dirk.roese@klasmann-deilmann.com



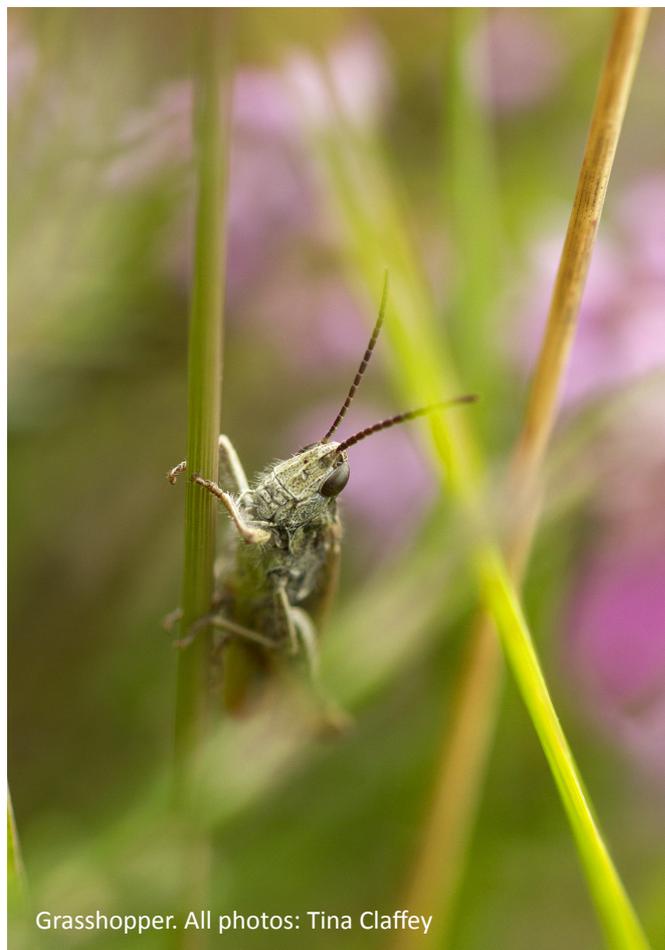
# Tapestry of Light

**F**or as long as I can remember I have been drawn to the natural world. My Dad was a huge nature lover, always encouraging me to slow down, observe and listen. In the process he taught me to identify the different songs of the robin, blackbird, thrush and the little wren from a young age. He had a gift for whistling himself, and could mimic each and every bird tune.

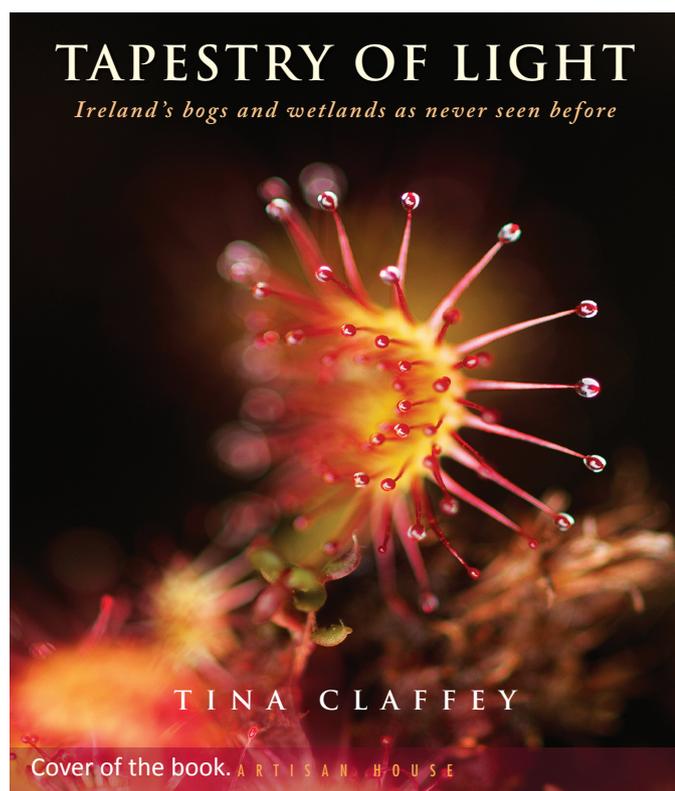
I studied photography through art in the Crawford Art College in Cork city. We were taught the basics on the technical side, but encouraged to think outside the box, and unleash our creativity and freedom with the camera and its lenses.

My technical understanding of photography came later, when I worked as assistant for Joerg Koester, a German fashion & industrial photographer. One of our assignments brought us to Kenya on a wedding dress fashion shoot. This trip was such a feast for the senses, I knew I had to return to Africa.

And return I did. I left Ireland in January 2000, and travelled to Botswana, southern Africa to work as



Grasshopper. All photos: Tina Claffey



a documentary photographer for Irishman Graham McCulloch, who was doing flamingo migration research in the Makgadikgadi Salt Pans as part of his PhD with Trinity College.

This was a whole new world, sleeping in a tree, living under the stars, and flying in a microlight to photograph the thousands of flamingos from the air arriving in the salt pans to nest.

One year led to the next, and I spent 9 years in pristine wilderness areas, working eventually in the safari industry.

Working alongside some of the finest safari guides in the world, I was made aware of the importance of observation. The tracks and trails at your feet, whether it be of a lion, leopard, or wild dog. The warning calls of birds to indicate that a predator was nearby. All senses needed to be on high alert for survival when living in this environment.

I returned to Ireland in 2009 to my hometown in County Offaly.

From Botswana to Birr was quite a shock to the system! It was difficult to re-adjust to life back in Ireland, and I missed living in the wilderness.

In 2011, I joined John Feehan for an eco walk in Killaun Bog, a small raised bog just 4 miles from Birr.



Frogspawn.

My childhood memories of hard work, as we cut, stacked and brought our turf home. This walk with John Feehan was a very different bog experience. We walked in an area of Killaun Bog in late Summer that had been given back to nature. John gave us each a small magnifying glass, and as he walked and spoke comprehensively of the area, he would scoop small samples of mosses and tiny plants and hand them to us to view through the magnifier.

## It was an epiphany for me.

A wilderness, right on my doorstep with as much significance as the Kalahari itself.

I returned there with my camera the very next day. Every plant, moss, insect and mammal has also adapted to survive in this ancient wilderness. I ventured through Killaun, and explored many other wild bogs in the whole area of the midlands. Every visit I discovered something new.

I began to go for days at a time, driving home at the end of the day with excitement to download my images. I invested in a macro lens, which revealed the beauty of this amazing micro wilderness in detail that cannot be seen with the naked eye. As the seasons changed, each visit would reveal a new perspective. A different angle of the sun, plants appear, flourish and die, and in each stage there is beauty.

Following my solo photographic show in 2013, I was contacted by TG4's 'Imeall' arts programme, and found myself on a collaborative venture for the programme with the legendary John Sheahan of The Dubliners. The producers aimed to marry my photography with Sheahan's poetry inspired by the bog.



Raft Spider.

It was an inspiration to spend time with John on that bleak, grey and damp November day, while he created magic with his stories and mystical poetry that included 'Tapestry of Light'. This poem seemed to capture all that I strive to capture in my images:

*Silver netting of the dawn,  
Embroidered through the silent night,  
Woven into dewy webs,  
Suspended tapestry of light.  
Cobwebs greet the morning air,  
Strings of priceless jewels glistening,  
Veiling gateway, bush and tree,  
Lending wonder to our waking.  
Nature's gift holds me enthralled,  
Treasure of the dawning day,  
Till the fairy breezes call,  
Stealing all my dreams away*  
© John Sheahan

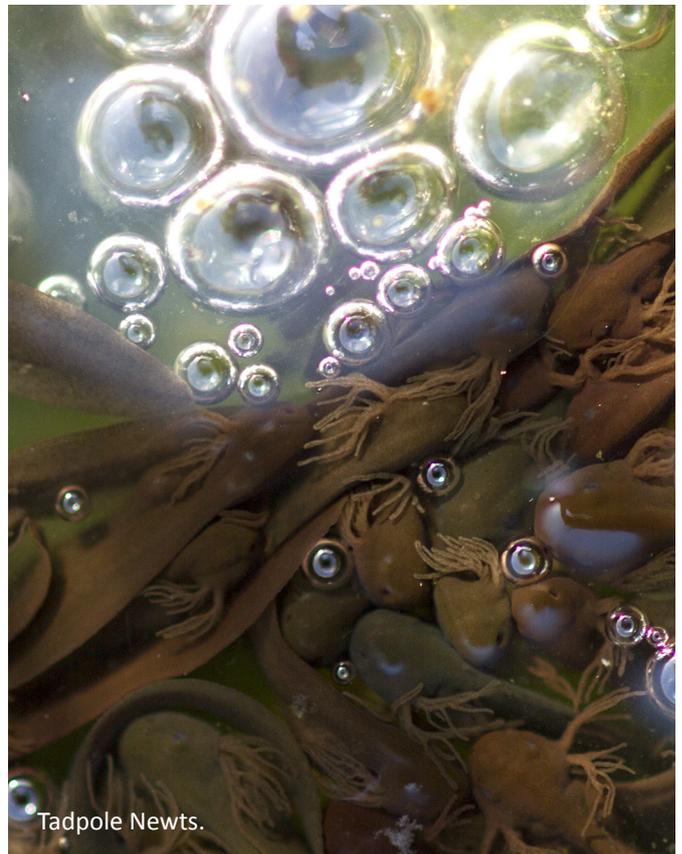
Over time, I found I had slowly built up a library of images through the seasons.

A book seemed like the natural next step. Not a reference book, but a celebration of the unique flora and fauna of our beautiful Irish bog wilderness through images, infused with the poetry of John Sheahan.

## A 'Tapestry of Light' book.



Four Spot Chaser Dragonfly.



Tadpole Newts.

I was incredibly lucky to find wonderful independent Irish publishers, in the heart of Connemara, Artisan House, who believed in this venture and me, and have produced a book beyond my expectations.

The production of the book would not have been possible without the generous support of my sponsors, including the NPWS's 'The Living Bog' project, the Dutch Federation of Conservation of Irish Bogs, Coillte, Offaly, Laois & Tipperary County Council, RPS and friends.

Tapestry of Light is available nationwide (Ireland) or directly at [www.artisanhouse.ie](http://www.artisanhouse.ie).

*Tina  
Claffey*

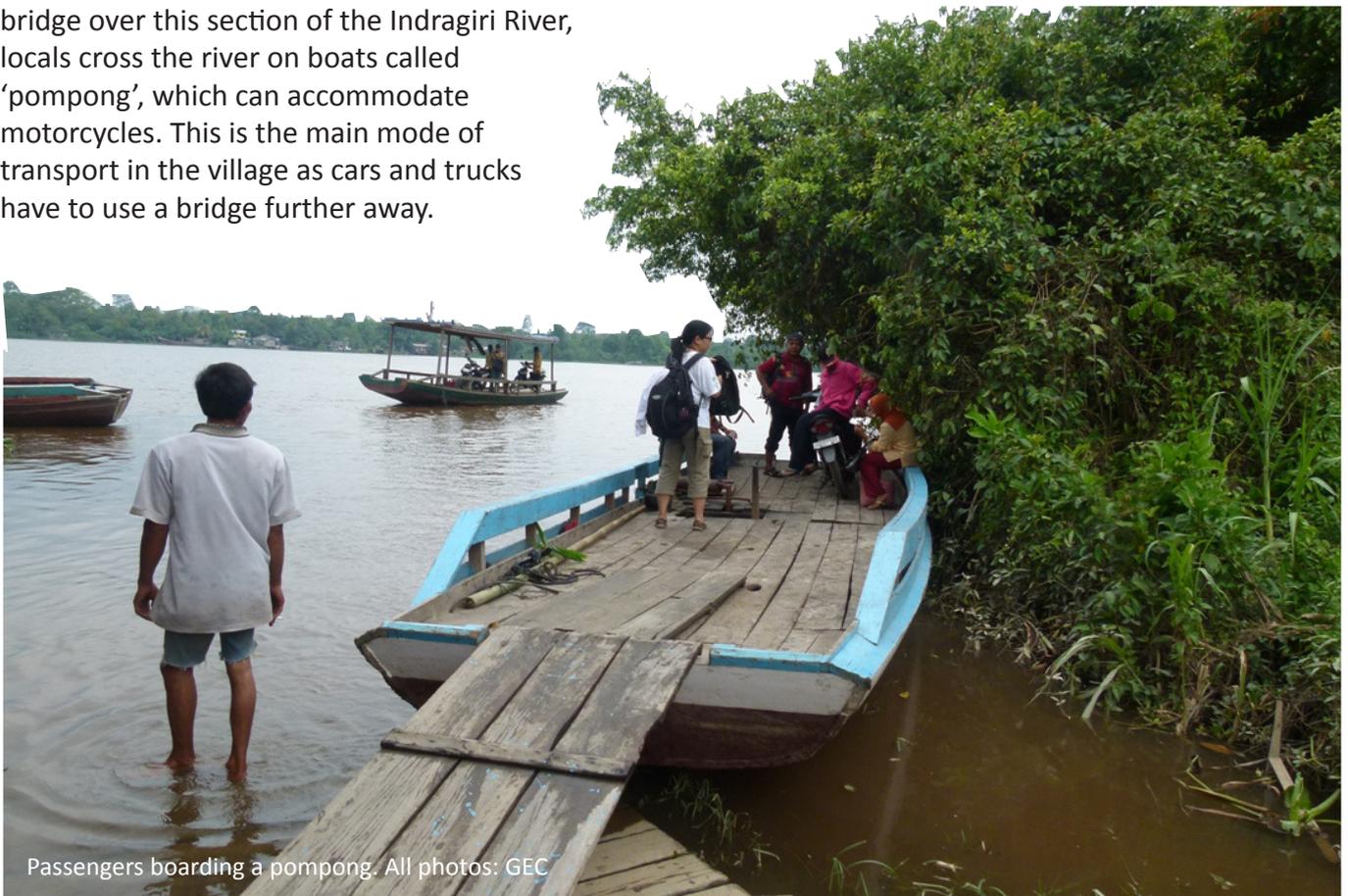
[tinaclaffey@gmail.com](mailto:tinaclaffey@gmail.com)  
[www.tinaclaffey.com](http://www.tinaclaffey.com)

# How an Indonesian Village Keeps Peat Fires in Check

**O**n the northern bank of the Indragiri River in Riau province, Sumatra, lies a village that looks like many others; however it is inhabited by some of the most progressive people on the island. The village is divided into four sub-villages and is home to over 2000 villagers. Built in the 1980s, it is populated by farmers from Java, Kalimantan and Sulawesi who moved there under the Indonesian government's transmigration programme. While the village has schools, it is still lacking electricity, a water supply and roads. With no bridge over this section of the Indragiri River, locals cross the river on boats called 'pompong', which can accommodate motorcycles. This is the main mode of transport in the village as cars and trucks have to use a bridge further away.

## A Challenging Environment

The main occupation here is agriculture, with palm oil and rubber being the main commercial crops. The raw harvest is sold to middlemen who transport the produce to factories nearby. Subsistence crops, especially rice and palawija (secondary crops planted after rice is harvested) such as



Passengers boarding a pompong. All photos: GEC



In 2011, this rice cultivation area was too dry to plant. At the back is an abandoned water gate.

be good for planting rice. However, a poorly planned drainage project made the rice area too dry and rubber plots too wet and improper management of the site also created acid sulphate soils which are toxic to plants.

This problem was exacerbated by a lack of technical knowledge of nutrient and hydrological management methods. One reason that fire is employed by village farmers is because chemical fertilisers are priced beyond their means. Ash from burning weeds and

pumpkin, tapioca, sweet potatoes, corn and fruits are planted for the farmers' own consumption and for the local market.

waste is alkaline, helping to neutralise the acidic soil and provide some of the nutrients which it is lacking.

The people supplement their diet with fish from the surrounding rivers, and catfish, reared in ponds, can be smoked and sold in nearby towns to supplement their income. Others work as labourers at neighbouring pulp and paper plantations.

Poorly planned canals can also over drain the soil, making it more prone to fire. With two dry seasons as well as the practice of using of fire for disposing agricultural waste, this became a serious problem for the area. Left unattended, fires can destroy large areas of farmland and affect human health and the thick smoke and haze has been known to cause fatalities.

Being from Java, where the earth is rich volcanic soil, many of the first arrivals to the village faced a culture shock when they moved to their new home. This is because they had moved to a site on deep peat where the land was swampy with acidic water. This affected their crops and they struggled to grow rice as the land was totally unsuitable. A stretch of land near the river was found to

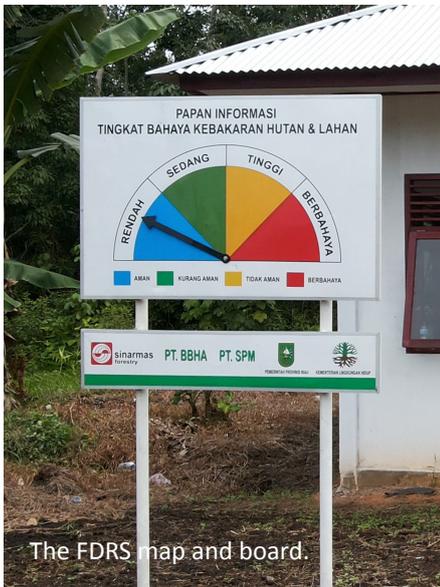
## Finding Solutions

Years after moving to the area, the community were still struggling to thrive in their new environment. In 2012, the SEApeat project, supported by the European Union (EU) engaged with the villagers to help them find solutions and encourage the sustainable management of peatlands in the area.

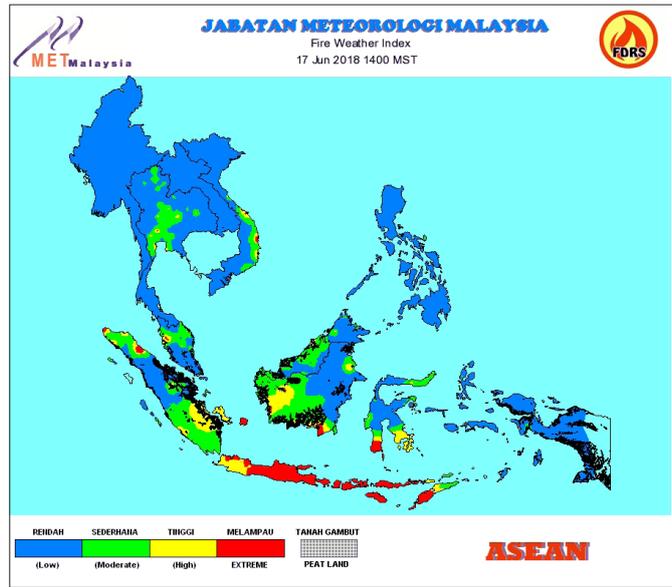


The area can be planted with rice again.

One of the first things they did was to map the topography of the area. The villagers themselves helped to take GPS readings and draw a map so that experts could help



The FDRS map and board.



current fire risk rating. The current FDRS reading is updated daily by the community and everyone is informed not to use fire when the rating is yellow or red.

To disseminate information, a

work out how the problem could be corrected. Following this, some canals were blocked and others were opened to correct the hydrological balance, meaning that the rice paddies could be planted again and could achieve good yields.

An interesting solution which the villagers came up with in 2011 was to create Village Regulations (Peraturan desa/Perdes) related to runaway fires. According to these rules, any person who starts a wildfire due to negligence has to compensate their affected neighbours.

A fine is levied from a person for each tree damaged by the fires that they caused: an oil palm tree is valued at IDR350,000 and rubber trees IDR100,000 each and the penalties can reach to hefty sum if a large area is burned. This scheme means that people now keep a careful eye on fires when they burn tree cuttings and weeds, and this has resulted in a drastic reduction in the number of wildfires.

Harapan Jaya villagers employ various technologies to manage fire risk and communicate with their neighbours. One of the most important tools employed is the Fire Danger Rating System (FDRS) readings. The FDRS is a computer system which calculates the risk of fires starting, based on wind speed, moisture, fine fuel and other factors.

Run by the Indonesian National Institute of Aeronautics and Space (LAPAN), the system then generates a map which shows the fire risk rating across the area. To translate this to farmers on the ground, FDRS boards are used to indicate the

local radio station called Selasih FM was created. Apart from entertaining the villagers and spreading breaking news, the radio also raises awareness of these issues by discussing best management practices for agriculture on peatlands, hydrological management and related matters.

Unfortunately, the channel has not been working since the mixer was damaged by lightning, and efforts to get the channel back up and running have been hampered by the lack of electronic service centres in such a remote district.

The radio service would not be so critical if internet access in the village was better - at the moment, service to the area is limited and unreliable. The village has a website and Facebook account where news on events and activities is shared and the village also appears on Wikipedia Indonesia at [https://id.wikipedia.org/wiki/Harapan\\_Jaya,\\_Tempuling,\\_Indragiri\\_Hilir](https://id.wikipedia.org/wiki/Harapan_Jaya,_Tempuling,_Indragiri_Hilir).

To reduce the use of fire and to address the problem of fertilisers, a Cattle, Biogas and Fertiliser Project (SISKA) was started to produce fertilizer for crops and biogas for cooking.

As part of this project, cattle are fed with oil palm fronds and their waste is channelled into a digester to produce methane gas. The post-processed waste is then collected for fertiliser. This process reduces dependence on expensive chemical fertilisers and ash from burning agricultural waste.



## Masyarakat Peduli Api (MPA) or Fire Aware Community

A precursor to this community fire brigade was formed to fight fires way back in 2003, but it was inoperational for years due to a serious lack of funds. In the past, every time a fire broke out owners and some friends would try to contain the blaze using small Robin pumps. However, quite often, the pumps would die out before the fires did.

In 2012, a pulp and paper company contributed firefighting clothes and shoes to the community; but no pumps, hoses or equipment. Again, the team could not do much to manage the fires.

Following this, from 2012, Yayasan Mitra Insani and the EU contributed water pumps and equipment via the SEApeat project. The government's Nature Conservation Agency

(BKSDA) then trained the MPA team in the proper use of equipment and firefighting techniques.

Harapan Jaya's firefighting team is now a certified MPA that also helps put out fires in the neighbouring villages of Bayas and Kemuning.

## Lingering Issues

**Maintaining** the canal blocks can be difficult. Many have been built over the years, but currently only five blocks are in good condition. Others have deteriorated and several have been washed away by heavy rains. The villagers have no specific funds to rebuild and maintain damaged structures. This makes hydrological management less than ideal and some parts of the village are still regularly flooded.

**Underpowered equipment:** The current pumps used by the MPA are not quite powerful enough to fight large fires and need to pump for a longer time to do their job, increasing the cost

of fuel and manpower. They need better pumps that are able to quickly douse fires before they spread. Sometimes better pumps are loaned by the plantation company, but this is a temporary measure.

**Cost:** MPA activities require funds for patrolling, operation and maintenance, but there are no funds provided by the government. To help cover these costs, the village planted pineapples and the funds raised from selling the fruits were intended to cover MPA costs. However, unfortunately the fruits are often stolen by people who pass through the land. In the meantime, the MPA charge land owners between IDR 500,000 and 1,000,000 as compensation for putting out fires on their lands.

**Manpower:** Community firefighters often worry about their land and crops while fighting fires. They receive little compensation and often fork out their own money to fuel the pumps and cover running costs. To offset this, a claims system should be set up, perhaps funded by the compensation pool.

## Documentation and future plans

To help document and guide fire management efforts in the village, a Best Management Practice booklet was produced in 2014 and an updated version was produced the following year.

The book is written in a narrative style, containing case studies and comments by villagers. They highlight the peatland management and fire control measures that have been implemented. The second book was reorganised in concise snippets which are more direct and action oriented: [www.aseanpeat.net/view\\_file.cfm?fileid=578](http://www.aseanpeat.net/view_file.cfm?fileid=578).

A video was made to showcase the local community's efforts towards a more sustainable future: [www.youtube.com/watch?v=iTfFg54Tpcs](http://www.youtube.com/watch?v=iTfFg54Tpcs).

The enterprising villagers often explore new ideas to improve their standard of living and fund firefighting efforts. Currently there is a campaign to grow organic vegetables which are healthier for their families and are grown in small garden



patches using recycled tyres and containers. Villagers are also keen to start a homestay business, but this is currently on hold as they are too far away from major cities.

Noor Azura Ahmad

Global Environment Centre  
Petaling Jaya  
Selangor Darul Ehsan, Malaysia  
[azura@gec.org.my](mailto:azura@gec.org.my)

## About the GEC

The Global Environment Centre was established in 1998 to work on environmental issues of global importance.

It is a non-profit organisation which works regionally and internationally to support information exchange and capacity building. Find out more at [www.gec.org.my](http://www.gec.org.my) or call +603 7957 2007.

# That's LIFE – Restoring the Humberhead Peatlands End of Project Conference

Tue 15th to Wed 16th May 2018  
Doncaster, South Yorkshire

*Restoring England's largest lowland peat  
mire – LIFE and Beyond*

**D**uring the 20th Century the integrity of Thorne, Hatfield, Goole, and Crowle Moors, an extensive area of raised bog, and their unique biodiversity, were severely threatened by mechanised peat extraction and associated drainage. In 2004 the site was acquired from the peat extraction company by English Nature (now Natural England).

The combined area of 2878 hectares forms the Humberhead Levels National Nature Reserve.

In 2014, funding was secured from the European Union's LIFE+ programme to help the restoration of the Humberhead Peatlands. The project, called That's LIFE – Restoring the Humberhead Peatlands was launched in July 2014 and will continue to the end of June 2018.

The project has extended the area of peat bog habitat under active restoration and provided a long-term future for the plants, birds and insects



Learning about Nightjar birds to dry heath at Hatfield Moor. All photos: Jack Rieley



Rewetted former milled peat area at Hatfield Moor.

that have evolved to live on this unique wetland habitat and resulted in it being designated a Special Area of Conservation (SAC) and a Special Protection Area (SPA).

The project has also promoted research on and monitoring of the bog's unique bird and insect populations that will help inform similar restoration projects elsewhere.

This end of Project Conference was a celebration of everything that the project achieved, shared knowledge and best practice, and looked towards the future of bog restoration in Europe. The conference programme included presentations, workshops and site visits delivered by members of the LIFE+ Project team, project partners and bog restoration experts.

## Programme

### Day 1:

#### *Session 1: LIFE-funded lowland mire restoration work in England*

This session consisted of several presentations on various lowland raised bog restoration projects

in England including Cumbria bogLIFE, Marches Mosses BogLIFE, That's LIFE - Restoring the Humberhead Peatlands, and Thorne and Hatfield, a potted history.



Alex Jones explaining the pumping station controlling water levels on Thorne Moor.

Former milled peat area at Hatfield Moor.



*Session 2: Key elements of the Humberhead Levels LIFE Project*

Information was presented on water resource management on Thorne Moors, evaporation reduction to promote rewetting, nightjars, invertebrates reaction to scrub removal, and the invertebrate fauna of Thorne and Hatfield Moors.

*Session 3: Site visits to Hatfield and Thorne Moors*

**Day 2:**

*Session 4: Site visits to Hatfield and Thorne Moors (continued)*

*Session 5: What did peat ever do for us?*

Presentations were given on carbon sequestration, cultural ecosystem services and cranes in the UK and their reintroduction to the Humberhead Levels peatland. This was followed by a Q & A session on 'Next Steps'.

*Session 5: Keynote Humberland*

A Keynote presentation was given by Richard Lindsay of the University of East London on "Origin, History, Development and Changing Management of the Humberhead Levels Peatlands'.

The Conference was summed up and closed by Andrew Sells, Chairman of Natural England.

For more information on the conference, please do not hesitate to contact the author:

*Jack Rieley*

UK Peatland Society  
jack.rieley@peatlands.org



# We all have peat on the plate...

**In only 1m<sup>3</sup> peat substrate it is possible to produce up to 350,000 vegetable seedlings. Without peat efficient commercial horticulture is not conceivable. And our plates were nearly empty.**



Advertisement



 **BOL PEAT**

**A perfect and sustainable substrate begins at Bol Peat.**

Advertisement

[www.bolpeat.nl](http://www.bolpeat.nl)

# Extract from the Diary of a Raised bog:

*Mid-summertime day (June 21st)*

**A**nother day begins. I have lost count of the number of days that have passed since I was born. I know that I am old, very old; older than you who read this, older than the grass fields and forests that now surround me. I have lived and breathed here since before the time of Jesus, before Buddha and before Mohammed. I was already well grown

when the pyramids were erected in Egypt, when the Great Wall began to snake across China and the first farmers began to cultivate the land here in the west of Ireland.

Some days I feel tired and worn out. Long ago, humans first began to cut at my sides and I began to bleed, my strength failing, my structure



Moyarwood. All photos: Florence Renou-Wilson



Cotton grass.

collapsing. Later, other humans crossed me with their machines and opened deep gashes across my body that hurt more than the frequent fires that periodically ravaged me, or the times when the rains ceased and I began to shrivel with thirst. Yes, tired on many days but not today. Today, I feel alive; rejuvenated and restored. Today is the day when I bathe in light for the most hours, when I pull in and store so much of that beautiful carbon dioxide from the air and when I belch out that irritating methane gas.

During the dark hours, I breath slowly; my plants and microbes respiring silently, releasing the carbon dioxide (that may have only been plucked from the sky yesterday) back to the air. Sometimes it is older carbon that goes back skywards but not while I am bathed in water. However, it hasn't always been like that though; back when the humans ripped through my skin with their machines, I began to shrink with thirst - the water was always tantalisingly out of reach from the roots of my plants and much of the carbon that I had preserved for millennia was expelled back to the sky. Sad times indeed, as I slowly began

to die. However, just when it looked as if I could not continue, that my time on this planet was over, other humans came with their machines and began to heal my wounds. Quickly, my waters began to rise and as my strength began to return, old friends like those mischievous Sphagnum mosses began to spread again across my skin, filling the empty nooks and crannies.

As the first light appears on the horizon, I feel a stirring as my plants begin to ready themselves for a new day. Their photosynthetic apparatus begins to crank into action and the first of the days' carbon dioxide is pulled in through the pores on the leaves. This is my favourite time of the day, on this my favourite day of the year. As the sun rises and the light increases, the plants pull more of the precious carbon into their tissues to make sugars, and then new leaves, roots and stems. I know that during daylight hours at this time of year, these plants of mine will pull in more carbon that they release. Good times indeed!

As the sun rises higher in this Irish sky, I feel my body warm. Strangely, the parts that are

under water do not warm as fast as those on the extremities where the humans first cut me but were later unable to fully heal. There, on those scars, I feel uncomfortable and breath faster as my body warms. This is also a good time to rid myself of some methane. For most of the time, I am happy to store this gas within me, as for some reason I have the impression that it keeps me upright and buoyant. But during these warm mid-summer days, when my water levels are high and my plants are growing vigorously, I find this gas unbearable and want to expel as much of it as possible.

As the sun peaks in the sky, my plants also reach a crescendo in photosynthetic activity, signalled by a rapid movement of carbon, oxygen and sugars. There is animation across the broad expanse of my skin.

Insects tickle me as they flit from plant to plant, while birds swoop and sing. I'm proud to say that some of these visitors can only be found on me; they and their ancestors have evolved along with me over the long expanse of time - my journey is also their journey.

The Sun makes its slow journey into the western horizon; I let out a sigh and feel a wonderful sense of wellbeing. However, this moment quickly passes as I sense that elsewhere in Ireland and in other parts of the world, some of my peatland brothers and sisters do not have things as good as I do here. I know that many are experiencing the same pain that I had felt in bygone years. Some are now dead - never to return - their vast and rich memories lost forever, burned in human fires or borne away in wind and water.

As night approaches, stillness descends upon me. Another day has passed. I am still alive. I am Moyarwood.

*Moyarwood raised bog is located in the west of the Ireland (53° 20'49.2"N, 8°30'55.4"W). It was ditched in 1983 but never developed for peat extraction. However, significant degradation (subsidence) due to the drainage and from domestic peat extraction around the margins of the bog is evident. The drains were active until a rewetting programme commenced in 2012.*

More details can be found in Renou-Wilson, F., Moser, G., Fallon, D., Farrell, C., A, Mueller, C., Wilson, D., (2018). Rewetting degraded peatlands for climate and biodiversity benefits: results from two raised bogs. Ecological Engineering. <https://doi.org/10.1016/j.ecoleng.2018.1002.1014>.

David  
Wilson

david.wilson@earthymatters.ie

Bog view.



# PEATART in the Cultural Capital of Europe 2018

**T**he Dutch city of Leeuwarden is the cultural capital of Europe for 2018. As Leeuwarden is also the capital of the province of Friesland in the north of the Netherlands, the city has decided to include the rest of the province also in special activities during the year.

As part of the cultural year, PEATART has presented an exhibition, "DOWN TO EARTH – the Forgotten People of Soosaare", in the Museum Opsterlân in the city of Gorredijk, until the 24th of June.

After this exhibition, during the months of July and August, PEATART will run a pop-up gallery in the city centre of Leeuwarden, at Nieuwestad 53. Artist Dioni ten Busschen will be there, working on the sculpture of a famous Frisian horse made

of Estonian peat. The horse's head which can be seen on the photo is one of the first studies for the peat horse. Both horses and peat have been of great importance to the province of Friesland for centuries.

Finally, the peat horse will form part of an exhibition about the Frisian horse.

In September, if you are in the Netherlands, you are welcome to come and visit the PEATART gallery at Kerkstraat 76 in Amsterdam, [www.peatart.com](http://www.peatart.com).

*Nick van de Griendt*

[navdgriendt@sphagnum.nl](mailto:navgriendt@sphagnum.nl)



# Peat and Peatland Events

Convention on Biological Diversity (CBD)  
Subsidiary Body on Scientific, Technical and  
Technological Advice  
Montreal, Canada  
2 - 7 July 2018  
[www.cbd.int](http://www.cbd.int)

Finnish Peatland Society  
Summer Excursion  
Lauhanvuori Geopark  
14 - 15 August 2018  
[www.suoseura.fi/2018/05/21/kesaretki-2018](http://www.suoseura.fi/2018/05/21/kesaretki-2018)

National Conference on Ecosystem Restoration  
New Orleans, Louisiana, USA  
26 - 30 August 2018  
<http://conference.ifas.ufl.edu/ncer2018>

World Water Week  
Stockholm, Sweden  
26 - 31 August 2018  
[www.worldwaterweek.org](http://www.worldwaterweek.org)

Executive Board Meeting  
Geeste, Germany  
29 - 31 August 2018

United Nations Climate Change Conference  
Additional sessions of the subsidiary bodies  
Bangkok, Thailand  
4 - 9 September 2018  
<https://unfccc.int/documents/141354>

International Exhibition  
GREEN IS LIFE  
Warsaw, POLAND  
6 - 8 September 2018  
[www.greenislife.pl](http://www.greenislife.pl)

SER Europe Conference  
Restoration in the Era of Climate Change  
Reykjavík, Iceland  
9 - 13 September 2018  
[www.ser.org](http://www.ser.org)

Executive Board Meeting  
Rotterdam, the Netherlands  
9 September 2018, 14 - 18 hrs

**IPS Global Peatland and Peat Industry Summit**  
**Rotterdam, Netherlands**  
**10 September 2018**  
[www.ips50summit.nl](http://www.ips50summit.nl)

**50th IPS Anniversary Jubilee Symposium**  
**“Peatlands: past, present and future”**  
**Rotterdam, Netherlands**  
**11 - 13 September 2018**  
[www.ipsjubileesymposium.nl](http://www.ipsjubileesymposium.nl)

European Wood Pastures: past, present, & future  
Sheffield, UK  
5 - 7 September 2018  
[www.ukeconet.org/events.html](http://www.ukeconet.org/events.html)

IUCN UK Peatland Programme  
Peatland Connections: Building Prosperity  
The Shore: Loch Lomond, Balloch, UK  
2 - 4 October 2018  
<http://www.iucn-uk-peatlandprogramme.org/conference-2018>

Arctic Biodiversity Congress  
Rovaniemi, Finland  
9 - 11 October 2018  
[www.arcticbiodiversity.is](http://www.arcticbiodiversity.is)

Peatlands for People Revisited  
11 - 13 October 2018  
Vancouver/Surrey  
British Columbia, Canada  
[www.burnsbog.org](http://www.burnsbog.org)

IVG Forum Gartenmarkt  
7 November 2018  
Mainz, Germany  
[www.ivg.org](http://www.ivg.org)

**IPS Annual Convention 2019**  
**15 - 18 July 2019**  
**Yanji, China**  
[www.peatlands.org](http://www.peatlands.org)

**16th International Peatland Congress**  
**Tallinn, Estonia**  
**16 - 19 June 2020**  
[www.turbaliit.ee](http://www.turbaliit.ee)

More at: [www.peatlands.org/events](http://www.peatlands.org/events)

# PEATMOSS

## PACKAGING SOLUTIONS



### NEW GENERATION

#### FOUR STATION BALER VP-410 SERIES

- Best compression baler in the industry
- **NEW!** High performance sealing process with temperature control
- **NEW!** Quiet door closing with better movement control
- **NEW!** Smoother operation thanks to Servo-driven rotation
- Quick start-up - Easy to use interface



We are. **People for packaging**  
Visit **PTCHRONOS.COM**



/PTCHRONOS



🔗:PremierTech**CHRONOS**



/PremierTech**CHRONOS**

# Next issue(s)...

New authors and advertisers are welcome!

Please send your manuscript (max. 1,000 words, A4, Arial, no full cap lines, with author contact details, language proofread if possible, e.g. [www.englishproofread.com](http://www.englishproofread.com)), photos and illustrations (separate jpg or pdf files with the names of the photographers) and advertisements (pdf files, prices according to Media Kit) as soon as possible to the IPS Secretariat, [susann.warnecke@peatlands.org](mailto:susann.warnecke@peatlands.org).

Submission deadline: PI 3/2018: **15 September**



IPS Jubilee Symposium in Rotterdam - thank you!

International Peatland Congress 2020 in Estonia



New IPS Executive Board members 2018-2022