# Improving water from managed bogs: **SWAMP and Reform Water projects**







University College Dublin Ireland's Global University



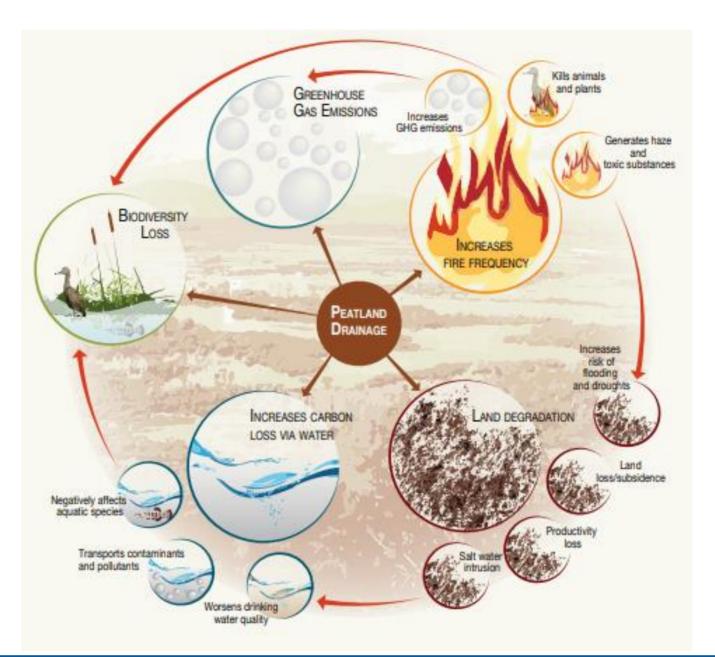


National Park & Wildlife Service

# What is the problem?

There is widespread evidence that drained peatlands used for peat extraction (horticulture/domestic turf cutting) and commercial forestry can negatively affect the delivery of water related ecosystem services.

Solutions are urgently required to satisfy not only Ireland's international commitments with regards to EU laws but for climate change and sustainability demands.



# The projects

The SWAMP and Reform Water projects will improve our understanding of the extent and status of mitigation measures in the peat extraction and forestry sectors, and how to minimise potential impacts and capitalise on the full range of ecosystem services. provided by peatlands.

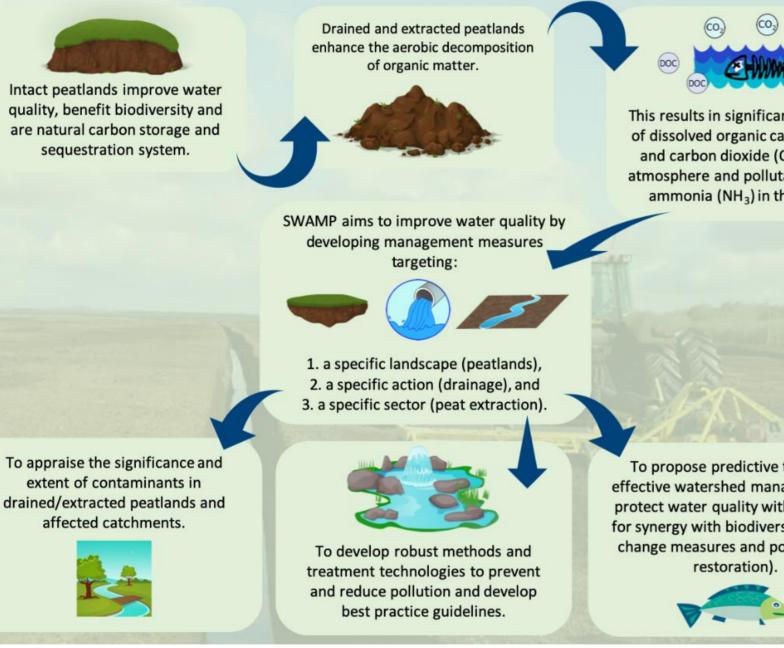


## Swamp

The SWAMP project aims to investigate the pressures on Irish waters from drained/extracted peatlands and develop mitigation measures in order to protect water quality from pollutants such as Dissolved Organic Carbon and Ammonia.



## SWAMP: Strategies to improve Water quality in **Managed Peatlands**





This results in significant emissions of dissolved organic carbon (DOC) and carbon dioxide  $(CO_2)$  to the atmosphere and pollutants such as ammonia (NH<sub>3</sub>) in the water.

To propose predictive tools for effective watershed management to protect water quality with potential for synergy with biodiversity-climate change measures and policies (e.g.

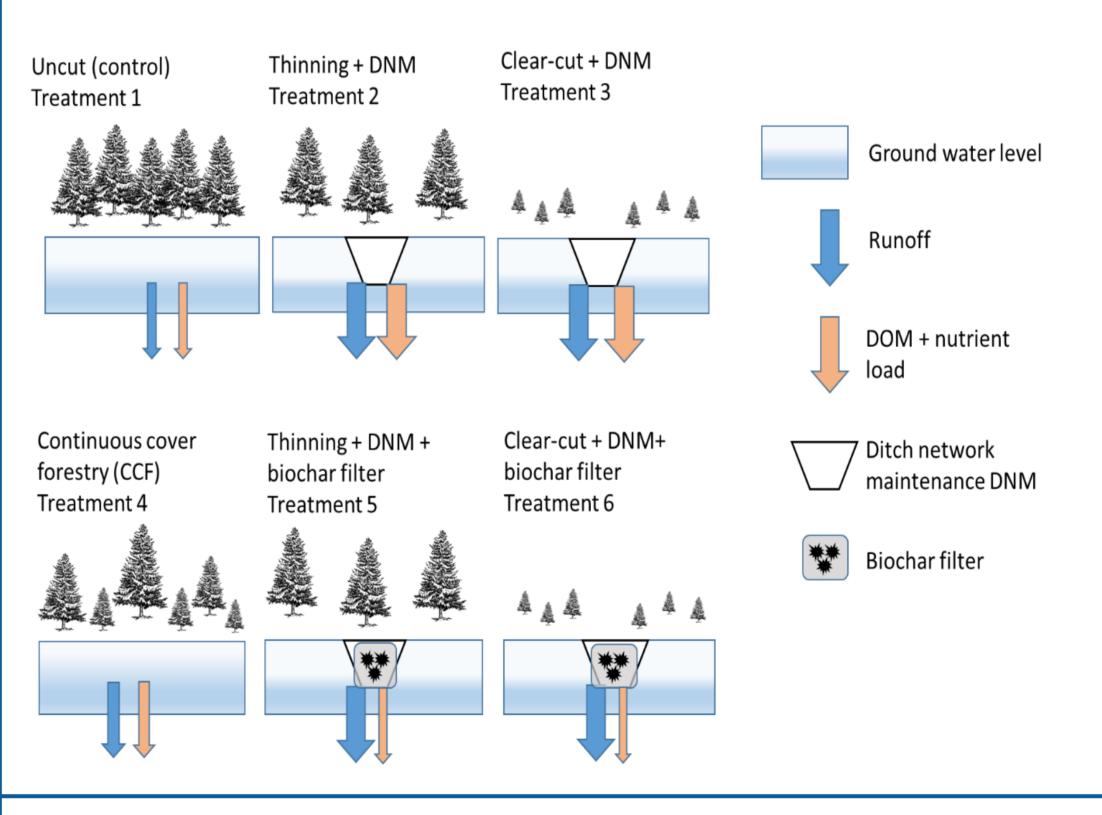


# **Reform Water**



The Reform Water project is an international WATER JPI funded project run alongside partners in Finland, Sweden and Estonia. The Irish branch of the project aims to investigate less invasive practices such as Continuous Cover Forestry to reduce the harmful effects of peatland forest management on inland waters.

Appropriate regulatory measures and innovative technologies, such as biochar filters, can be developed to ensure the status of water bodies is protected, maintained and improved in line with the requirements of national and international environmental standards.





Sustainable methods to prevent environmental damage from peat extraction developed through the Swamp project will include innovative water pollution prevention measures to reduce pollution in downstream water bodies, as well as peak flow control (such as controlled flooding in peatland ditches and flood plains).

## Funding

These projects are funded under the EPA Research Programme 2014-2020. The EPA Research Programme is a Government of Ireland initiative funded by the Department of Environment, Climate and Communications. It is administered by the Environmental Protection Agency, which has the statutory function of co-ordinating and promoting environmental research.

#### Disclaimer

Although every effort has been made to ensure the accuracy of the material contained in this poster, complete accuracy cannot be guaranteed. Neither the Environmental Protection Agency nor the authors accept any responsibility whatsoever for loss or damage occasioned or claimed to have been occasioned, in part or in full, as a consequence of any person acting or refraining from acting, as a result of a matter contained in this poster.

The Reform Water and SWAMP projects will produce Best Practice Guidelines in terms of management of both peatland forests and extracted peatlands to improve water quality but also water purification, with the latter of value to the regulatory/ enforcement sector, as well as to industry.



### **Contact information**

For more information: Dr Florence Renou-Wilson <u>Florence.Renou@ucd.ie</u> or Dr Cat Pschenyckyj <u>Cat.Pschenyckyj@ucd.ie</u>