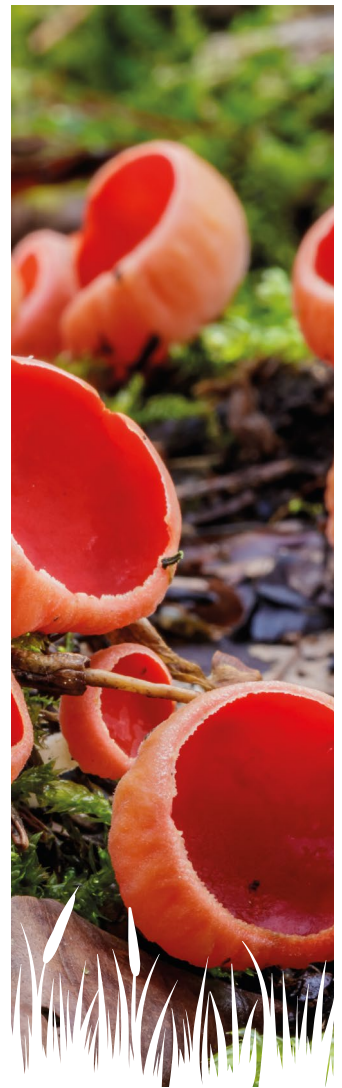
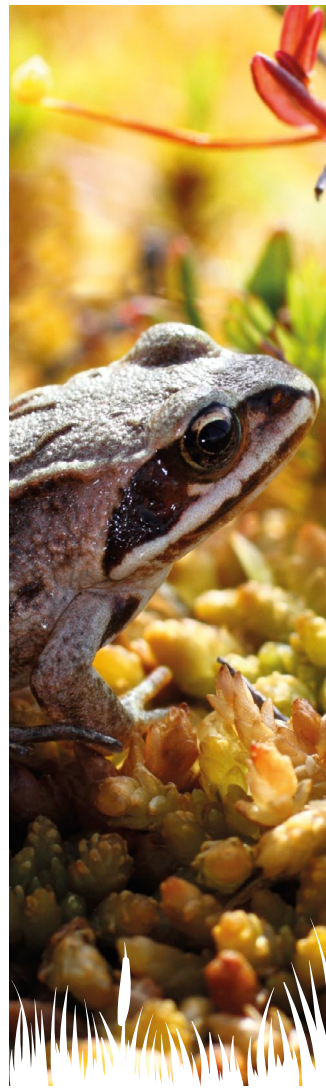




Community
Wetlands
Forum

Guidelines for Communities Managing Local Wetlands & Peatlands



Craig Bullock • Kate Flood • Aoife Kirk

MANAGEMENT • ECOSYSTEM SERVICES • COMMUNITY BENEFITS • ESTABLISHING A LOCAL GROUP • FUNDING



Supported by the **Just Transition Fund**
& the **Carbon Tax Fund**



Rialtas na hÉireann
Government of Ireland

This guide is intended to be a tool to help you to collaborate with like-minded local and national bodies to increase awareness and widen support and cooperation for the conservation and restoration of wetlands and peatlands (or bogs and fens).

This guide can be used as a source of:

Information on

- the benefits of wetlands and peatlands
- how to demonstrate benefits to others in the community

Resources or further information on

- how to access funding for protection, restoration or enhancement

Advice on

- how to take action
- how to set up a community/peatland group
- the questions to ask yourself and your group

Examples of Case Studies in Ireland provided





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1. Objectives

This guide is intended to support community groups and others looking to conserve and manage their local **wetland**¹ and **peatland** heritage site. The guide contains information on:

- wetlands and peatlands in Ireland and their conservation status
- national and international policies to protect wetlands and peatlands
- the concept of wetlands and peatlands as *natural capital* and their role in providing benefits to people, i.e. **ecosystem services**
- restoring wetlands and peatlands and their ecosystem services where they have become degraded
- forming and maintaining a successful community environmental group
- access and recreation
- potential sources of funding
- using the information in these guidelines to support funding applications.

When community groups become custodians of local wetlands and peatlands, there is an opportunity to root the **conservation** of such environments in the wider social and economic development of the community. They may want to achieve this by;

- increasing awareness,
- strengthening local pride and sense of place,
- stimulating community participation, and
- reducing conflicts regarding access or use of wetlands and peatlands.

1 See Appendix 1 for acronyms and definitions highlighted in blue and italicised throughout this document



For these reasons, the guide should also be of value to anybody looking to protect other local natural environments such as woodland, uplands or lakes.

These guidelines were proposed by the Community Wetlands Forum (a special interest group under the aegis of Irish Rural Link), with the support of the **National Parks and Wildlife Service (NPWS)** of the Department of Housing, Local Government & Heritage, as a means to encourage community interest in the management of local wetlands and peatlands (bogs and **fens**).

The drafting of these guidelines was funded by the **Environmental Protection Agency (EPA)** and was informed by workshops with members of four local community wetland groups in Abbeyleix in County Laois, Cloughjordan in County Tipperary, Girley Bog in County Meath and Cabragh in County Tipperary.

2. Wetlands and Peatlands in Ireland

Wetlands in Ireland include riverside *marshes*, *turloughs*, lakes fringes, and permanently wet ground, including wet meadows, *callows* and flood plains, as well as coastal and estuarine marsh and saltmarsh.² Although, throughout these guidelines, we discuss “wetlands and peatlands”, technically peatlands are a type of wetland that is especially common in Ireland due to our geographic location and high levels of rainfall.

Peatlands (also known as Bogs)

There are around 1.2 million hectares of peatland in Ireland of which 13% is blanket bog and 5% is raised bog [1]. Indeed, Ireland and the UK possess Europe’s largest areas of blanket bog.

Blanket bog covers large areas of our uplands and Atlantic coastal areas where vegetation rots very slowly due to the cool and wet conditions. There is estimated to be 774,860 [2] hectares of blanket bog in the Republic of Ireland and 140,000 hectares in Northern Ireland [3], although much of this area has become degraded.

Raised bog is formed in lowland areas, often from the build-up of woody and rotting vegetation in depressions and lakes left behind by the retreating glaciers of the Ice Age. It is estimated that originally there was approximately 310,000 hectares of raised bog in the Republic of Ireland and 25,196 hectares in Northern Ireland. Ireland supports over 50% of the remaining European Atlantic region raised bog resource.

Around 21% of blanket bog is considered to be “active”, in that it is actively growing peat and taking up (*sequestering*) *carbon* from the atmosphere. By comparison, only 0.5% of the area of raised bog remains in this condition [4].

2 A more comprehensive list can be found in Irish Wetland Types: [An Identification Guide and Field Survey Manual produced by the Irish Ramsar Wetlands Committee \(2018\)](#).



Fens

Whereas bogs are fed by rainwater only, fens are peatland environments that are fed by groundwater. **Fens** can be base rich or base poor depending on the nutrients in the groundwater. Poor fens are fed by acidic, peaty waters and are characterised by plants such as rushes, whereas rich fens are fed by limey waters and are characterised by plants such as black bog rush and sedges. The NPWS lists 880 sites as fens or flushes.

Internationally, blanket bogs are rare, but raised bogs are the more threatened habitat in Ireland, having been drained and cut for turf, afforested and subjected to wildfires. Raised bog and fen habitats are listed in Ireland's six-yearly (Article 17) report under the EU Habitats Directive as being mostly in "bad" conservation status (85%). Around 92% of raised bogs, and 75% of blanket bogs are described as "degraded" and their overall conservation status remains "bad" [5],[6].

Peatlands are renowned for their specialised **flora** which includes different species of **sphagnum moss**, the building block of peatlands and a plant which only grows under saturated conditions. Another specialist bog plant is the insect-eating **sundew** which sustains itself in this low-nutrient environment by capturing tiny insects in sticky drops of water suspended from hairs on its leaves. Peatlands are vital habitats for breeding birds such as **curlew**, **snipe** and wintering birds such as **golden plover**. They are also important for amphibians, including **crested newt** and **common frog**. Although "common", these species have been disappearing rapidly across Europe to the point where they have often become rare due to the drainage of wetlands and loss of farmland ponds and ditches.

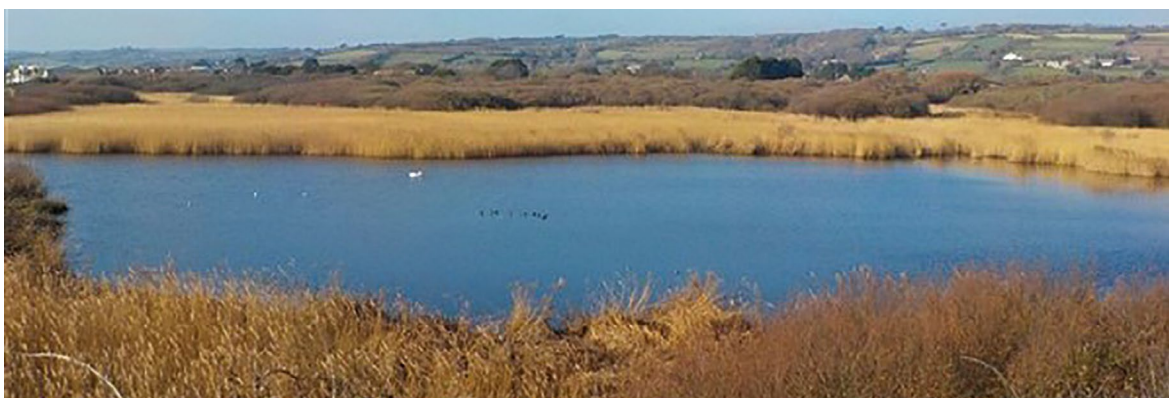


Photo: Freshwater Marsh

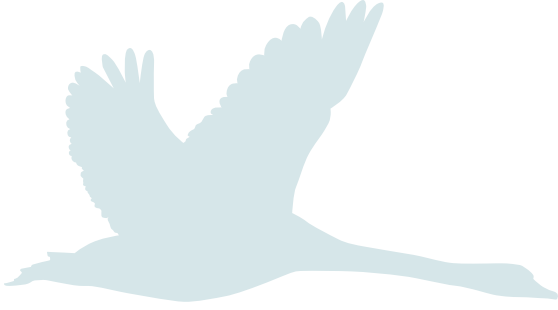


Photo: Pristine Raised Bog. (Source: Fernando Fernandez)

Riparian wetlands/woodlands, marshes and meadows are important for amphibians and insects such as dragonflies and butterflies. They are key habitats for breeding wildfowl such as **great-crested grebe** and for wading birds such as **lapwing**, as well as for wintering species such as golden plover and **whooper swans**. The elusive **water rail** can sometimes be seen, or more often heard, on the reedy fringes of the water's edge, and only very recently, the very rare and secretive **spotted crane** has been found breeding in Irish wetlands.

Further information:

[Irish Wetlands Guide](#) - IRWC

[Bog Plant Book](#) - IPCC

3. National, EU and International Policies to protect Wetlands and Peatlands

3.1. Irish Government and EU Policy

Ireland's **National Peatlands Strategy** was published in 2016 by the National Parks and Wildlife Service (NPWS). This was followed by the **National Raised Bog Special Areas of Conservation Management Plan 2017-2022**, published in 2017. However, only a minority of wetland and peatland sites have been designated for protection and many others are still of national or regional conservation value.

Of protected sites, **Special Areas of Conservation (SACs)** have been designated for protection under the **EU Habitats Directive** (92/43/EEC) and include wetland and peatland habitats. **Special Protection Areas (SPAs)** support important breeding and wintering birds listed in the **EU Birds Directive** (2009/147/EC). Other wetland/peatland sites are **Natural Heritage Areas (NHAs)** that have been designated under Ireland's Wildlife Act 2000.

Peatlands typically fall within the ownership of private landowners, although some are in the state ownership of Coillte, the Department of Housing, Local Government & Heritage, and **Bord na Móna (BnM)**. Others in the local community may have **turbary rights** to cut peat, or turf, for domestic fuel. Peat cutting is restricted on raised bog SACs and NHAs. Owners of turbary rights are entitled to compensation in return for not cutting peat or can be offered alternative sites for peat-cutting in non-designated areas, where feasible. Although having statutory protection, very few peatlands within SACs or SPAs remain in good condition, and only a handful can be described as intact. There are many other peatland sites that have no protection. Peatlands have been cut by hand for centuries, but the habitat damage has accelerated in recent decades due to changes in the means of peat extraction, particularly due to the use of machinery. The use of machinery makes the opening or maintenance of drains and the extraction of peat a much faster operation with greater impacts. Many larger sites were cut on an industrial scale by private operators and by BnM to fuel electricity power stations, for production of household briquettes or for compost and horticultural purposes.



However, in 2020 BnM ceased peat harvesting completely, despite its plans to wind down by 2028 and is undertaking restoration/ rehabilitation works on some bogs. Other undesignated peatlands continue to be cut for fuel or mushroom/ plant compost. As well as the loss of wildlife and habitat, this peat cutting can impact adversely on water quality and salmon spawning grounds, and also releases carbon dioxide, a major contributor to climate change. Many blanket bog sites were also planted with **conifer** plantations in the past which continue to impact negatively on their **ecohydrological** balance. Fens are frequently subject to negative impacts from land reclamation, drainage and inappropriate management.

The **EU Biodiversity Strategy** calls for Member States to restore at least 15% of degraded ecosystems by 2020. In Ireland, peatlands represent a classic example of such ecosystems given that so many are degraded. The **National Peatlands Strategy** brings together stakeholders from various Government Departments and Agencies. The key actions include the restoration of the protected raised bog network. The Strategy guides the official approach to the future management and conservation of peatlands, including curtailing peat cutting on designated bogs and introducing restoration of peatlands where possible.

Just Transition

A Just Transition refers to the ‘transition’ or change that a community experiences when climate action policies impact the community’s economic and social activities. In this case, the communities affected most are those impacted by the closure of peat harvesting plants and the move away from extracting and burning of **fossil fuels** (peat) for energy (heat, electricity) to establish renewable energy sources (wind and solar) and rehabilitate peatlands for the storage of carbon, in line with national and EU climate action policies. This kind of transition can be very difficult for workers and communities if the process does not include them.

‘Just Transition’ in relation to climate change emerged in the 1990s. It was developed by North American trade unions seeking to provide supports for workers who lost their jobs due to changes to environmental protection policies [38]. However, this concept evolved into a plan to invest in transitioning to environmentally and socially sustainable economies and communities.



“A just transition for all towards an environmentally sustainable economy ... needs to be well managed and contribute to the goals of decent work for all, social inclusion and the eradication of poverty.”

– INTERNATIONAL LABOUR ORGANISATION [38]

Social dialogue underpins Just Transition. For policies to be successful, employers, governments, workers, and communities need to be in conversation with each other to ensure environmentally, economically and socially sustainable communities [38].

In Ireland, the National Just Transition Fund seeks to provide transitioning supports to communities in the Wider Midlands region affected by the transition from turf cutting and burning to more sustainable practices. Irish Rural Link and the CWF applied for funding in 2020 and was successful. The project *Connecting Communities with Peatlands* will run for three years, and aims to provide capacity-building training for community groups who want to manage or engage with their local peatland(s). You can find out more about this project on page 24 of this document, or visit our [website](#).

3.2. International Policies

The **Ramsar Convention** is an international treaty which came into force in 1975. Recognising that wetlands are of international importance, particularly to migrating birds, the treaty provides for national action and international cooperation in the conservation and sustainable use of wetlands. Ireland ratified the Ramsar Convention in 1985 and the **Irish Ramsar Wetlands Committee (IRWC)** was set up in 2010. Some SACs and SPAs were identified as being of international value under this Convention. There are 45 Ramsar sites in Ireland, many of which are peatlands.

The presence of wetlands and peatlands in Ireland are helping the State to meet its commitments under the **Sustainable Development Goals (SDGs)** that were agreed by the **United Nations Development Programme (UNDP)** for achievement by 2030 and follow up on international agreements made by the UN Conference on Environment and Development held in Rio de Janeiro in 1992. The graphic below

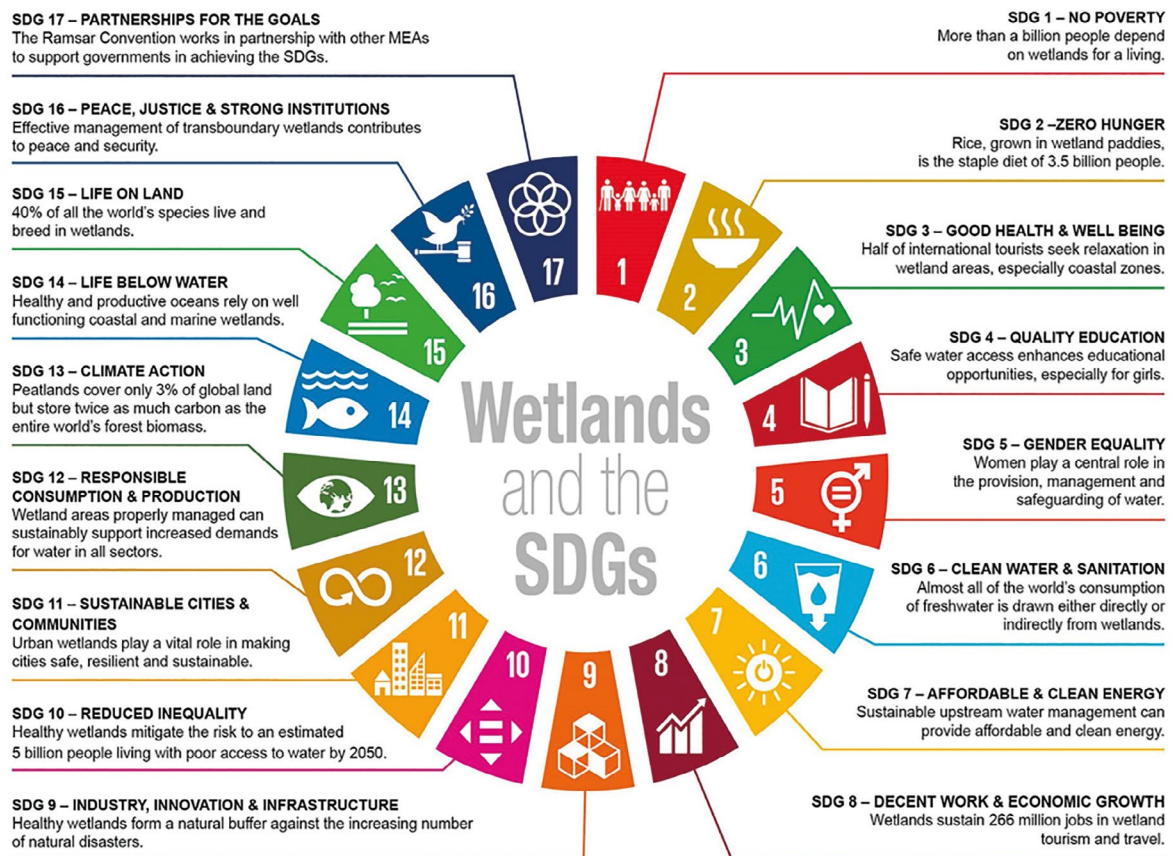


illustrates the contribution of wetlands and peatlands to these goals. In particular, SDG 3 on health and well-being (through enjoyment of the outdoors), SDG 4 on quality education (particularly environmental education), SDG 6 on clean water and sanitation (contributing to clean water), SDG 12 on responsible consumption and production, SDG 13 on climate action (CO₂ sequestration and carbon storage), SDG 15 on life on land (flora and fauna) and SDG 14 on life below water (flora and fauna). Wetlands and peatlands contribute to each of these goals through ecosystem services (see 5.1 below).



SUSTAINABLE DEVELOPMENT GOALS

How Wetlands Support Achievement of the SDGs



4. Local Action



Photo: Members of the Cloughjordan Community Development Committee

Many local communities value their local wetlands and peatlands as much loved features of the **cultural and natural landscape**. Across Ireland, numerous local groups have been established to protect these special places. Many receive mutual support through the **Community Wetlands Forum**. Government Departments and *non-governmental organisations (NGOs)* such as the *Irish Peatland Conservation Council (IPCC)* have also been active for 30 years and are continuing their efforts to raise awareness and protect bogs and wetlands. An *EU LIFE* (Nature & Biodiversity) project, *The Living Bog* (Raised Bog Restoration Project) is implementing restoration within twelve SAC bogs across the Midlands and engaging communities in the conservation of demonstration sites. This project is due to finish in December 2021.

The preparation of these guidelines was informed by workshops held with four community environmental groups. Some of the particular characteristics of these groups and keys to their success are noted in the box on the next few pages. The main issues discussed in the workshops were how to start and sustain local groups, how to forge alliances and get things done, and where to look for funding. Much of their advice has been included in these guidelines.

Further information can be found by following the links below:

[National Peatlands Strategy](#)

[National Raised Bog SAC Management Plan 2017-2022](#)

[RAMSAR Convention](#)

[Irish RAMSAR Wetlands Committee](#)

[UN Sustainable Development Goals 2030](#)

[The Living Bog LIFE Project](#)

[Peatlands Climate Action Scheme \(BnM\)](#)

Case Studies – Local Community Action

Much of the content of this guide is based on the experiences of the four case studies of Abbeyleix Bog, Girley Bog, Cabragh Wetlands and Scohaboy Bog. The results of meetings with these groups have been included in the text, but the following provides a brief description of the four groups. Since then, the CWF membership has grown. We have included four more case studies of Shanakyle Bog Restoration Project, Drummin Bog Project, Kiltewan Tidy Towns, and Carbury Bog Trust.

Abbeyleix Bog Project, Co. Laois

(Size: 198ha. Status: not designated) [Website](#)

Abbeyleix Bog Project (ABP) has a 50-year lease from Bord na Móna. Management is organised through a Board of Trustees, a Technical Advisory Group and Management Committee.

The bog is degraded, but is recovering and has an expanding area of active bog. A 5-year Conservation Management Plan was prepared in 2014/15 with funding from the Heritage Council and input from NPWS. ABP has a core of 25 members, but is able to call on around 50 volunteers.

It has two looped walkways that are elevated in many places. Costs are kept to a minimum through voluntary input and support of Government Agencies.





Girley Bog Meitheal, Co. Meath

(Size: 101ha. Status: NHA) [Facebook](#), [Map & Guide](#) (IPCC Website)

The Girley Bog Meitheal is a community-based group of individuals and organisations involved in the conservation and management of Girley Bog.

The Girley Bog Meitheal was set up to work in partnership with landowners and the local community to manage, conserve and communicate the heritage value of Girley Bog. The group includes representatives from the local community, state agencies, local authority, NGOs, researchers, and local businesses and landowners. The Girley Bog Meitheal run annual events including guided walks, wildlife workshops, and other wildlife and conservation activities. The National Looped Walk around edge of bog was built in 2009.





Cabragh Wetlands, Co. Tipperary

(Size: 80ha. Status: part of Lower River Suir SAC) [Website](#), [Facebook](#)

Cabragh Wetlands Trust is registered as a charity and owns 80 acres of this site. Cabragh is a wetland rather than a bog and is adjacent to former settling lagoons of Thurles sugar beet factory (since infilled).

It has a visitor centre, bird hides and walkways, and receives approx. 2,000 visitors each year. There is a strong focus on Irish natural and cultural heritage, education and social inclusion. Funded mainly through LEADER grants.





Scohaboy Bog and Sopwell Woodlands, Co. Tipperary

(Size: 393ha, Status: Scohaboy Bog NHA)

[Facebook](#), [Website](#) (CCDC), [Website](#) (Coillte)

Managed by the Cloughjordan Community Development Committee (CCDC) which is registered as a charity and acts as an umbrella group for 10 local voluntary groups. Scohaboy has a social inclusion remit. CCDC are local partner with Coillte and NPWS in Scohaboy Raised Bog Restoration LIFE Project. The Loop of Laghile and Loughaun, including a 400m boardwalk, are part of the National Looped Walking Trail scheme. Is to be extended by 1km with support of Dept of Rural and Community Development and the North and South Tipperary Development Companies.

CCDC and Coillte are also involved in the Knockanacree Community Woodlands project.





Shanakyle Bog, Co. Clare

(Size: 66 acres)

Shanakyle Bog is located near Parteen, Co. Clare. It is approximately 66 acres in extent, of which 30 acres were subject to restoration and rewetting work by Shanakyle Bog Restoration Group in 2021. The bog was managed for domestic turf cutting in the past with peat extraction peaking during the 1940s. Turf cutting has not been practiced in over 40 years on the bog.

The group was founded by ecologist Barry O’Loughlin and landowner Catherine ní Ciardha in early 2021. The group was awarded funding from the Department of Agriculture, Food and the Marine’s (DAFM) European Innovation Partnership (EIP) scheme under the Rural Development Programme. The bog supports three Annex I listed habitats of the EU Habitats Directive including “active raised bog (7110)”,





“degraded raised bog capable of natural regeneration (7120)” and “depressions on the peat substrate of the Rhynchosporion (7150)”. Rewetting of the bog was carried out in October 2021 and completed in December 2021. This involved installing peat bunds, peat dams, and overflow pipes to raise water levels on the bog and create favourable baseline conditions for Sphagnum development and carbon sequestration. This is the first raised bog restoration and rewetting project to be carried out in Co. Clare. In 2022, they will install bat roost boxes and bird nest boxes within bog woodland and mature oak treelines; continue with invasive species eradication; manage 10 acres of grassland for wildflower meadow creation / species-rich grassland for pollinators; install wildlife information boards and install trail cameras. They will also establish permanent quadrats on the bog to monitor changes in vegetation and the bog’s response to targeted rewetting measures. It is their hope to link in with the nearby University of Limerick to carry out carbon research projects and carry out bog walks and talks with the local farming community and local interest groups.





Drummin Bog, Co. Carlow

(Size: 20 acres) [Website](#)

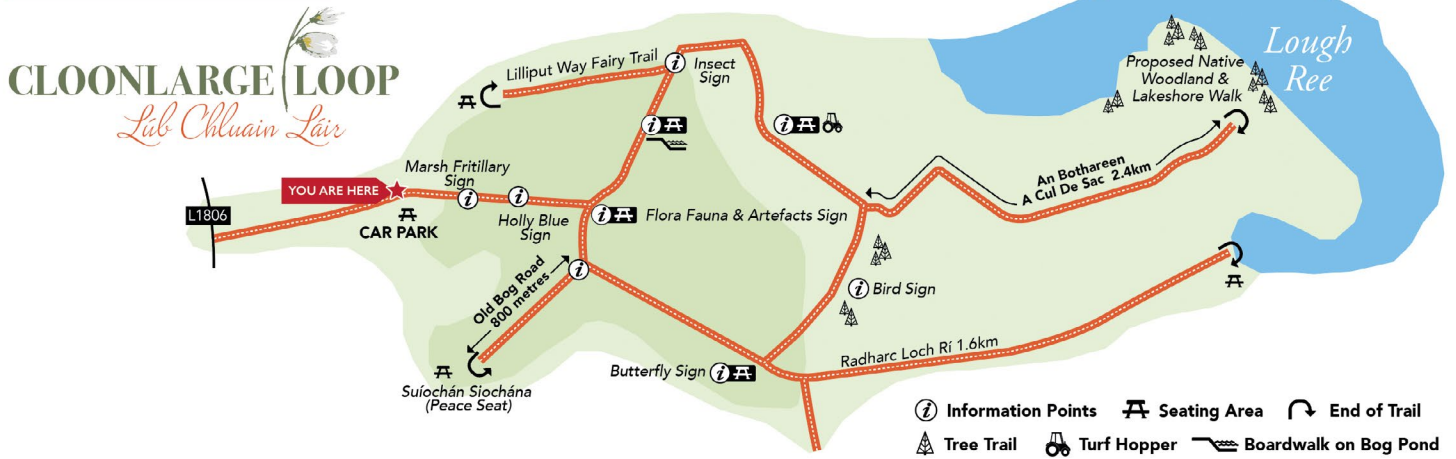
Drummin, or “Red” Bog, is situated in South Carlow close to the historical site of St. Mullins and the River Barrow. Small in size, covering about 20 acres and ringed by native woodland (with some Coillte planting at one end from around the 1960 – the 70s), it is the last remaining raised bog in Co. Carlow.

Extensively cutover during the Emergency, it was subsequently left alone except for some digging out of peat for garden centres in the 1970s. Drains were also run through during the Coillte planting. Drummin Bog is now extensively degraded, with strong heather coverage and ingress of mixed scrub and woodland. The Drummin Bog Project was formed in 2015 to protect and conserve this special place. A voluntary not-for-profit community organisation, the DBP engaged in long-term leases with the landowner of the main high bog area and Coillte. LEADER funding was secured in 2019 to conduct the initial baseline surveys, informing the restoration works program (topographical, hydrogeological, geological and ecological). This included a successful application to the Peatlands Community Engagement Scheme in 2021 that facilitated the blocking of drains (hydrogeological results are indicating increasing water levels are already fostering restoration of the area into a living bog once more).

In parallel, as part of raising awareness, building relationships and creating community outreach, Creative Drummin - Druimín Cruthaitheach has also grown out of Drummin Bog. With the support of the DBP, local ecological artist and educator Dr. Cathy Fitzgerald and community artist Jules Michael teamed together to seek funding to develop and deliver a long-term, embedded-in-place, arts-led ecosocial programme, with a series of on-going creative projects since 2017, supported by Creative Ireland, Carlow Arts Office and Artlinks.

Future plans for Drummin Bog include building on and extending the relationships that are developing between Drummin Bog and local schools, communities, scientists, Carlow Arts Office and Carlow County Council – which have inspired the 2022-23 Carlow-Arts Office led 3-county Art Council funded Gnáthóga Nádúrtha: Natural Habitats programme. Improving access with signage, a walkway onto the high bog, a looped walk through the woodland and further creative projects are envisaged over the coming years.





Cloonlarge Loop, Kilteevan Co. Roscommon

For the past five years (2017- 2022) Kilteevan Tidy Towns with the support of bog owners, landowners, stakeholders, and the local community developed the Cloonlarge Loop Walking /Cycling Trails. While they are involved in many other projects in the village and the surrounding area, Cloonlarge Loop became their flagship project.

Cloonlarge is part of Lough Ree Special Area of Conservation. Their guiding light through the process was Laura Gallagher, Conservation Ranger, South Roscommon, National Parks and Wildlife Service. Through Laura they learned about appropriate procedures before taking action and they developed a greater appreciation of the Special Area of Conservation. No action was taken on the bogs.

Roscommon County Council bought into their vision and supported them all the way. Over the years they established many positive relationships with Council staff.





Kilteevan Tidy Towns reopened former bog roads and integrated them into the existing road infrastructure and developed 5km /7km or 10 km walks around Kilteevan bogs.

The group has completed numerous project actions, installations, and publications such as removal of 5.5 tons of rubbish from the site, developing a small car park with a picnic bench and bilingual map, a fairy trail, signage on butterflies, flora, moths, and Lough Ree SAC, and installed barn owl boxes, bird boxes and a bug hotel, to name a few.

Kilteevan Tidy Towns secured funding for these initiatives through the following bodies, projects, schemes: The Peatlands Community Engagement Scheme, The Living Bog Project, The Outdoor Recreation Infrastructure Scheme, Creative Ireland, Roscommon Co Council, National Anti-Dumping Initiative.





Carbury bog, Co. Kildare

(Size: 180ha.)

Carbury bog is located just outside of Carbury village, Co. Kildare. Carbury Bog Trust was founded in 1906 when the Landlord of the local estate at the time entrusted 180 hectares of the bog in trust to the community, and they continue to own and manage the bog today. The Trust provide about 120 local families with turf for their personal use every year. People living in the area continue to cut turf on Carbury bog but are becoming increasingly aware of the environmental benefits of restoring and conserving peatlands.





Carbury Bog Trust is unique in the sense that the community own the bog, and manage what happens with their bog. The Trust plan to engage the local community through bog walks/talks with various experts including Ecologists, Hydrologists, Botanists etc. These will help to explain the importance of bogs for climate and biodiversity and what actions could be taken to enhance the bog. The community also have concerns around energy supply, which the bog has provided thus far. The Carbury Bog Trust hope to explore alternative renewable sources that could generate energy by and for the local community.



5. The Benefits of Wetlands & Peatlands

5.1. Ecosystem Services

Wetlands and peatlands are important habitats for unique and interesting flora and fauna as discussed above. The sights and sounds of breeding or wintering birds, such as curlew, snipe, ducks, swans or geese, are very evocative of these landscapes. Other species of the bog are sometimes more elusive, but subtly make their presence known, for example frog spawn in the bog pools and ditches, newt activity in springtime, and singing skylarks or meadow pipits in the skies above. These experiences are enjoyed by many visitors, but their very existence is valued too even by those who rarely visit such places.

This wildlife and habitat are part of our **natural capital**, the stock or wealth of the natural world that is of intrinsic value in its own right, but valued also in many different ways by all of us. **Ecosystem services** are the flows, or outputs, from this natural capital which are valued by human beings and which contribute personal, social and economic benefits to our quality of life and well-being.

Further information on natural capital and ecosystem services:

<https://www.naturalcapitalireland.com/resources>

https://thewaterforum.ie/app/uploads/2021/04/Peatlands_Full_Report_Final_March2021b.pdf



The diagram below (Figure 1) illustrates how natural ecosystem processes and functions (such as the food chain, photosynthesis or soil-nutrient cycles) supply **ecosystem services**, which in turn provide **benefits** to people. There is a feedback loop too in that our own management of the environment inevitably impacts on the continued availability, or **sustainability**, of ecosystem services.

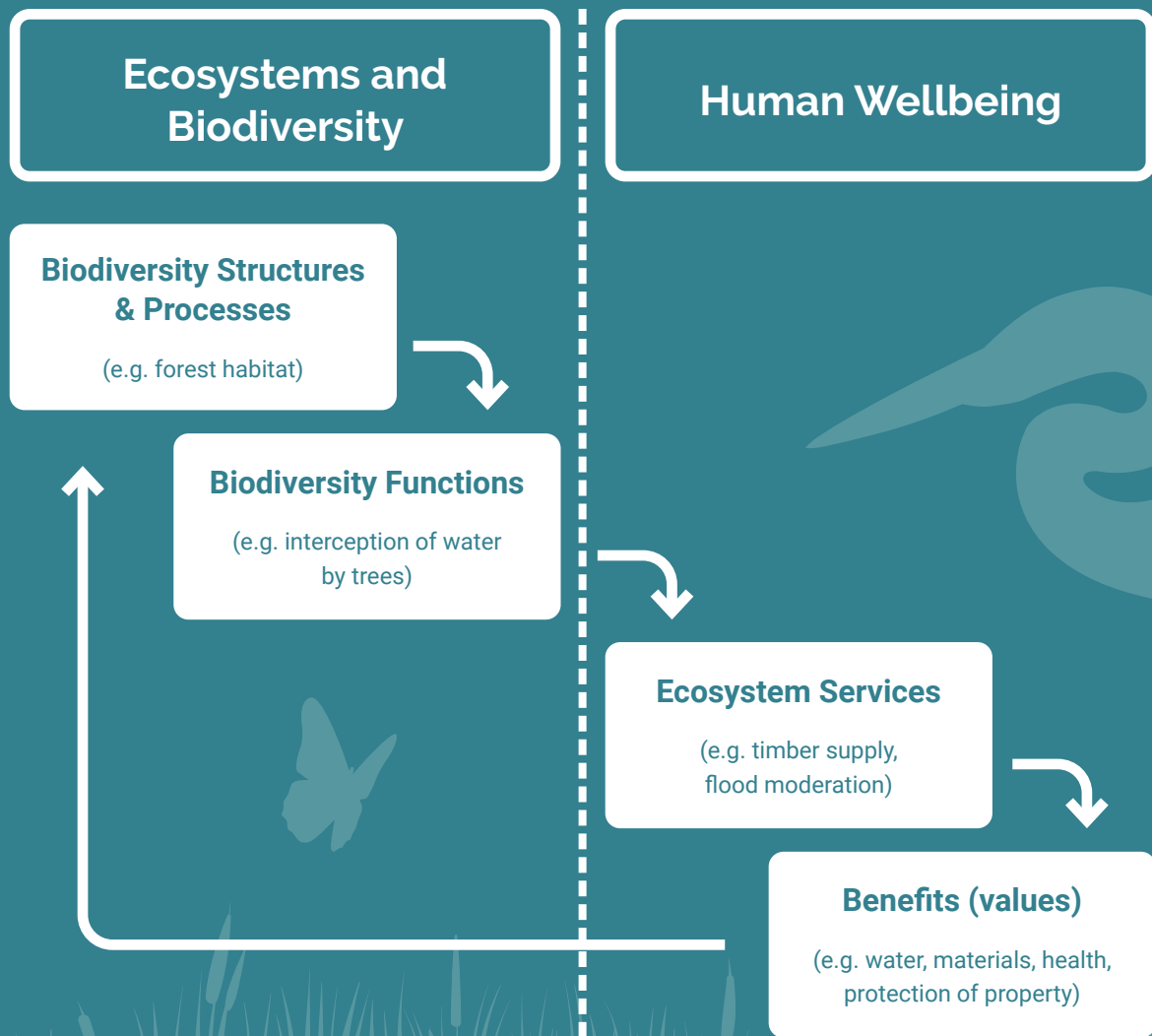


Figure 1. CICES Framework: Cascade Model [7]

The following section describes some of the principal ecosystem service benefits in more detail. It also provides example questions that could help you to identify the extent of these benefits in your local wetland. See checklist of ecosystem benefits in Appendix 2. More information on how to quantify the benefits is given in Appendix 3.

There are three principal categories of ecosystem services. These are commonly categorised as regulating, provisioning and cultural services. Note: 'Supporting Services' (e.g. habitat) can sometimes be listed as a category of ecosystem services but are now more commonly referred to as 'natural ecosystem processes and functions'.

1. Regulating Ecosystem Services are simply those which manage, or regulate, outputs from natural capital.

They include, for example:

a. Water retention

Wetlands provide a very important regulating service in that they store water, moderating the rate at which this recharges groundwater or flows downstream. This ensures a more constant water supply and reduces the risk of flooding or erosion downstream. Water levels rise and spread out across the wetlands.



Benefit:

By retaining water and attenuating flow, wetlands and bogs provide benefits to local people who depend on wells or abstraction from local watercourses, including private households and farmers, especially in times of drought. There are benefits too for households, landowners and farmers downstream who are vulnerable to flooding or erosion.



Things to consider:

To demonstrate the wetland's importance, consider how many people use, or depend on, these water supplies in your local area.



b. Water purification

Water from streams and rivers can collect in wetlands. This water can carry pollutants from farmland fertiliser and slurry, from septic tank outflows or poorly functioning wastewater treatment plants. The pollutants can add to weed or algal growth and degrade the environment for species such as salmon or freshwater pearl mussel. Many wetland plants and fauna are able to take up these pollutants, and some even also take up poisonous substances such as pesticides. Strong sunlight also destroys harmful bacteria when the water is exposed for a prolonged time.



Benefit:

By helping to purify water, wetlands benefit local people who abstract water from local watercourses, including farmers, and also anglers or anybody who values the natural environment and wildlife.



Things to consider:

How many people depend on these water supplies in your local area or take an active interest in rivers or fishing?



c. Sediment capture

Wetlands capture sediment too. Modern agricultural methods, including the use of machinery, forestry clear-fell and peat cutting, can result in considerable soil erosion. If not captured by wetland vegetation, this sediment will be deposited in sluggish sections of streams and rivers downstream, smothering fish spawning beds. Polluting nutrients also cling to sediment and encourage algal and weed growth.



Benefit:

Wetlands benefit anglers by keeping spawning beds clear of sediment. They also benefit anyone who values the natural environment, landscape and wildlife.



Things to consider:

How many people or visitors in your local area take an active interest in the landscape, wildlife or fishing?

d. Pollination

Pollination is a vital service for many agricultural crops. It is equally vital to many wild plants, including trees and hedgerow species such as hawthorn and blackberry. Some wetlands and peatlands may appear to have fewer flowering plants than a meadow or hedgerow, but they do possess a wide variety of uncommon plant species sometimes over expansive areas.



Benefit:

Wetlands and peatlands are therefore a major source of nectar throughout the year for Ireland's 97 species of bees, but also many other less familiar insects that pollinate crops, wild and garden plants. Many of these bee species are in serious decline, putting at risk the survival of native flowering plants and with consequences for many crops that depend on pollination.



Things to consider:

How many people in your local area grow fruit or have farms with oilseed, fruit crops or traditional grazing? All depend on pollination.

e. Carbon sequestration and storage

Peatlands play a significant role in combatting climate change. The living moss absorbs carbon dioxide (CO₂) from the atmosphere as it grows, mitigating the impact from human burning of fossil fuels. Sphagnum mosses sequester carbon very gradually at a rate of around 0.5 tonnes per hectare per year [1], but this CO₂ is stored as carbon in the form of peat, accumulating to depths of up to eight metres. Consequently, peatlands are a huge store of carbon.³ When peat is burned as fuel, the carbon is immediately released as CO₂. Further CO₂ is released as the bare peat is exposed and the bog dries out. Degraded peatlands contribute to approximately 10% of the national annual greenhouse gas emissions in Ireland.



Benefit:

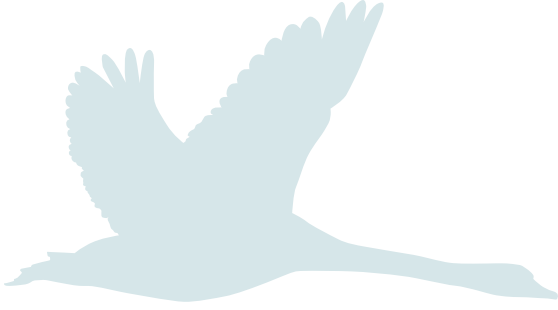
Climate change is a global challenge, but one which will have profound implications for our lives and those of future generations as well as for familiar landscapes, biodiversity and water supplies. The protection and restoration/rehabilitation of peatlands ensures that the store of carbon they contain remains in-situ and many of them can become carbon sinks.



Things to consider:

We all have an interest in avoiding climate change, particular our responsibility to future generations. It may seem that most of us have little influence on some activities contributing to climate change, e.g. deforestation in the tropics. The harvesting of peat or the neglect of degraded bogs is among Ireland's more significant contributions to climate change.

³ Intact peatlands release much less CO₂, but do release small amounts of methane (CH₄) a stronger greenhouse gas (GhG). However, the relative amounts are small and convert after a few years to CO₂



2. Provisioning ecosystem services supply food or products that are used or consumed by human beings.

a. Peat or turf

Peatlands are associated with the cutting of peat (or turf) for heating. While heat from burning peat is a benefit, the resource is lost entirely in the process and other benefits are lost and damage is created. This activity is not a sustainable ecosystem service as it doesn't replenish itself once it is used. Although peat can begin to accumulate once more under the right conditions, it will require thousands of years for the resource to replenish. Cutting by contractors also involves digging deep drainage ditches to assist the operation which dries out the bog and stops it from being 'active' – it can no longer grow or sequester carbon. The extraction of moss peat as mushroom or garden compost or for other horticultural purposes has the same adverse impact.



Benefit:

If peat cutting ceases there is an opportunity for peatlands to be restored and returned to a state where they can stop emitting greenhouse gases and even begin sequestering CO₂ again. At the very least, any harvesting should avoid surface cutting or minimise the effect of drainage in drying out uncut areas.



Things to consider:

How many households in your local area still depend on turf for heating? Relative to these individual benefits, how important are other less visible services (prevention of flooding, water purification, etc.)?

b. Water supply

Intact wetlands and peatlands supply high quality water for local aquifers, abstraction and amenity. By comparison, where peatlands have been cut, particularly to the *subsurface geology*, sediment such as silt can contaminate drinking water supplies.⁴



Things to consider:

How many people in your local area use or depend on these water supplies?

c. Food products and forestry

Cutaway peatlands (bare peat) can be used to grow a handful of commercial crops such as short rotation tree crops for biofuel. However, while peatlands were once extensively planted with conifers, the peat provides poor yields and the activity could only be sustained through state subsidies. Intact peatlands and deep peat areas are not suitable for these activities. Reeds from wetlands are often cut for thatch. Sphagnum moss has antiseptic properties and was used as wound dressings during WW1.



Things to consider:

In recent years, EU LIFE funding has been available for the removal of conifers planted on peatlands and for the restoration of former bogs.

4 The combination of carbon and chlorination can add trihalomethanes, potential carcinogens, to water supplies. However, this is a problem that arises with debris from vegetation, commonly in circumstances where the water is "peaty brown" due to worked or degraded, rather than intact, peatland.



3. Cultural ecosystem services enhance our quality of life.

Cultural ecosystem services provide benefits to people in the form of spiritual enrichment, cognitive development, reflection, recreation and a sense of place, all of which contribute to human well-being.⁵ Peatlands in particular feature in our history and culture as both untamed wilderness and sources of household fuel, and now increasingly as settings for public amenity. Such public benefits are freely accessible to everybody but can be difficult to quantify and measure in terms of the value they provide. They have no direct market value, but do have significant economic and social values. Cultural ecosystem services are also conduits for relational values, e.g. our interaction with nature at a personal and community level.

a. Biodiversity

Wetlands and peatlands are great places to enjoy and experience nature. Wildlife is part of our natural capital and the enjoyment and viewing of wildlife is itself an ecosystem service. Large numbers of wintering wildfowl and other birds can be viewed at some wetlands and their presence adds tremendously to any visit. Blanket bogs and uplands once resounded to the evocative call of the curlew whose numbers have declined precipitously in recent years. However, bogs are generally quiet places, but have a habit of offering the occasional rare sighting of a hen harrier, merlin or short-eared owl.



Things to consider:

How many people in your local area have a casual or active interest in wildlife? Do people also visit the area to see wildlife? Does this wildlife, contribute to sense of place? Do some people recall the sounds of corncrakes or curlews?

5 Millennium Ecosystem Assessment (MA), (2005). *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington D.C

b. Environmental education

Because wetlands can be great places to observe nature, they are also great places for education. What peatlands may sometimes lack in bird sightings, they can more than make up for with observations of insects such as dragonflies or amphibians (frogs and newts) - never a dull subject for school children or bog tours. Likewise, what child can resist the story of the carnivorous sundew or the bouncy sensation of walking on an intact bog? There is the fascinating topic of the formation of raised bogs from the lakes and depressions left behind by the retreating ice into the elevated domed features of today along with other commonly associated remnant landscape features such as eskers or drumlins.

It is also equally important for all generations to understand the role of peatlands in mitigating climate change. Finally, there is the extraordinary capacity of peatlands to preserve organic remains, from the wooden trackways that once connected ancient kingdoms, to the ritual killings behind the bog bodies from the Dark Ages displayed in the National Museum of Ireland.



Things to consider:

Do local people, or children in your local school, have an opportunity to view and learn about nature first hand?





c. Citizen science

For the more enthusiastic, wetlands and peatlands are an outdoor laboratory for citizen science.

Whereas once an interest in wildlife or plants was simply a personal pastime, an increasing number of organisations and universities are drawing on observations by amateur naturalists, especially through the use of smart phones. Follow the National Biodiversity Data Centre (NBDC) link below for more information. BirdWatch Ireland also offers a number of ways for people to get involved in protecting birds and biodiversity (see link to webpage below).



Things to consider:

Is this something that people in your community might have an interest in doing? Do you suspect there might be something special about your wetland or bog?

d. The cultural landscape /sense of place

Wetlands and peatlands are also cultural landscapes, having associations with the Dark and Golden Ages of Irish history; the summer hand-cutting of turf by past generations of rural families; and the role of peat in the production of electricity and the development of the Midlands in the early years of the Irish State. The aesthetic appreciation of these landscapes by both tourists and local people is another cultural ecosystem service.



Things to consider:

Is the local landscape something that people take pride in? Do many people regularly walk or cycle in the local area? Do visitors or tourists come to the area because of the landscape? Do local hotels, B&Bs, pubs or cafés benefit?

e. Health

As wetlands and peatlands are peaceful places, many people find that they are restorative places to relax or to enjoy personal or spiritual reflection. In this way, they contribute to many people's mental health and well-being. Some communities in Ireland have increased access to their wetlands and bogs by installing walkways or elevated boardwalks. This provides another cultural service by encouraging public awareness and physical exercise by larger numbers of users, both visitors and locals, many of whom become regular users. There are consequent benefits of better physical health and potential economic spin-offs for tourism.



Things to consider:

Is the local wetland or peatland currently accessible? Are there people who enjoy walking, cycling or just spending time in this landscape? Do local businesses benefit from these types of activities?

Further Information:

[NBDC Citizen Science Portal](#)

[BirdWatch Ireland Website](#)

[The call of the curlew](#)

Resources:

[Peatland Learning & Fun Resources](#)

[Wetlands to visit around Ireland](#)

[Map of Wetlands around Ireland](#)



5.2. Who benefits from Ecosystem Services?

Recipients of Ecosystem Service benefits

The nature of many environmental goods causes them to also be public goods with many benefits realised through ecosystem services. These goods are freely available, but have no market price. Their benefits are not confined to the local population, but are also valued highly at national or even international level.

The benefits of water retention are more likely to be realised locally or by towns and cities downstream where flooding is a potential risk. The benefits of wetlands and peatlands as habitats are realised at both local and national level in that this service is valued by both the local and wider population, and also by national and international agencies responsible for nature conservation. The contribution of climate change mitigation is realised at a global level because climate change is not confined by national borders.

The benefits for mental and physical well-being may be realised by the local population. Good water quality will be valued by everyone, but it might also be abstracted downstream or appreciated by local or visiting anglers. By comparison, the employment associated with commercially cut peatlands, or the cutting of peat for household fuel could be realised by a distinct proportion of the local population.

Estimates of the value of these public good benefits are given in Appendix 3 (Quantifying Benefits). These types of estimates could be useful to include in grant applications, depending on the type and size of wetland, and could form the basis of financial transfers in the future in return for wetland restoration.

Income or Payments for Ecosystem Services (PES)

There is potential for a proportion of the value of ecosystem services to be transferred to, or realised by, local communities.

The owners of turbary rights on peatlands designated for their ecological value are entitled to compensation from the Department Housing, Local Government and Heritage for withholding from peat cutting in recognition of peatlands' public good value. There could also be other returns in the future.



If policy in Ireland proceeds to seriously address climate change, then one day the owners of peatland or turbary rights may be compensated with carbon credits in return for protecting peatlands and the store of carbon they contain. These kinds of transfers are already occurring between the **Global North** and **Global South** under the Paris Climate Agreement. In Germany, industry can already avail of carbon credits sold by **MoorFutures** which uses the funds to invest in peatland re-wetting. These prospective opportunities will be lost if peatlands continue to be degraded by drainage and peat extraction.

In the UK, water companies are making payments to landowners to protect peatlands around reservoirs to reduce discolouration of water and the health risk from organic carbon in water supplies. In Ireland, the EPA is implementing river catchment management to protect water quality. Local projects often receive funding from the Local Authority Waters Programme. The **Office of Public Works (OPW)** is showing an interest in catchment management (including of wetlands) to mitigate local flood risk.



FarmPEAT

A recent project, **FarmPEAT** (Farm Payments for Ecological and Agricultural Transitions), launched in 2021 is developing a locally-led, innovative, results-based farm scheme for farmers who manage lands that surround some of Ireland's finest remaining raised bogs. Working with local farmers, the project will design and trial a programme especially adapted to the local landscape that will incentivise the delivery of enhanced environmental outcomes. The programme will reward farmers for improved management of habitats on peat soils along with other important landscape features such as eskers, field boundaries and watercourses. The programme will be results-based in that farmers will get paid depending on the scores they achieve, with higher scores, indicating higher environmental quality, getting higher payments.

6. Wetlands & Peatland Restoration

The continued ability of wetlands and peatlands to provide these ecosystem services and benefits depends on the quality of the environment, and whether they are intact and functioning ecosystems (Table 1).

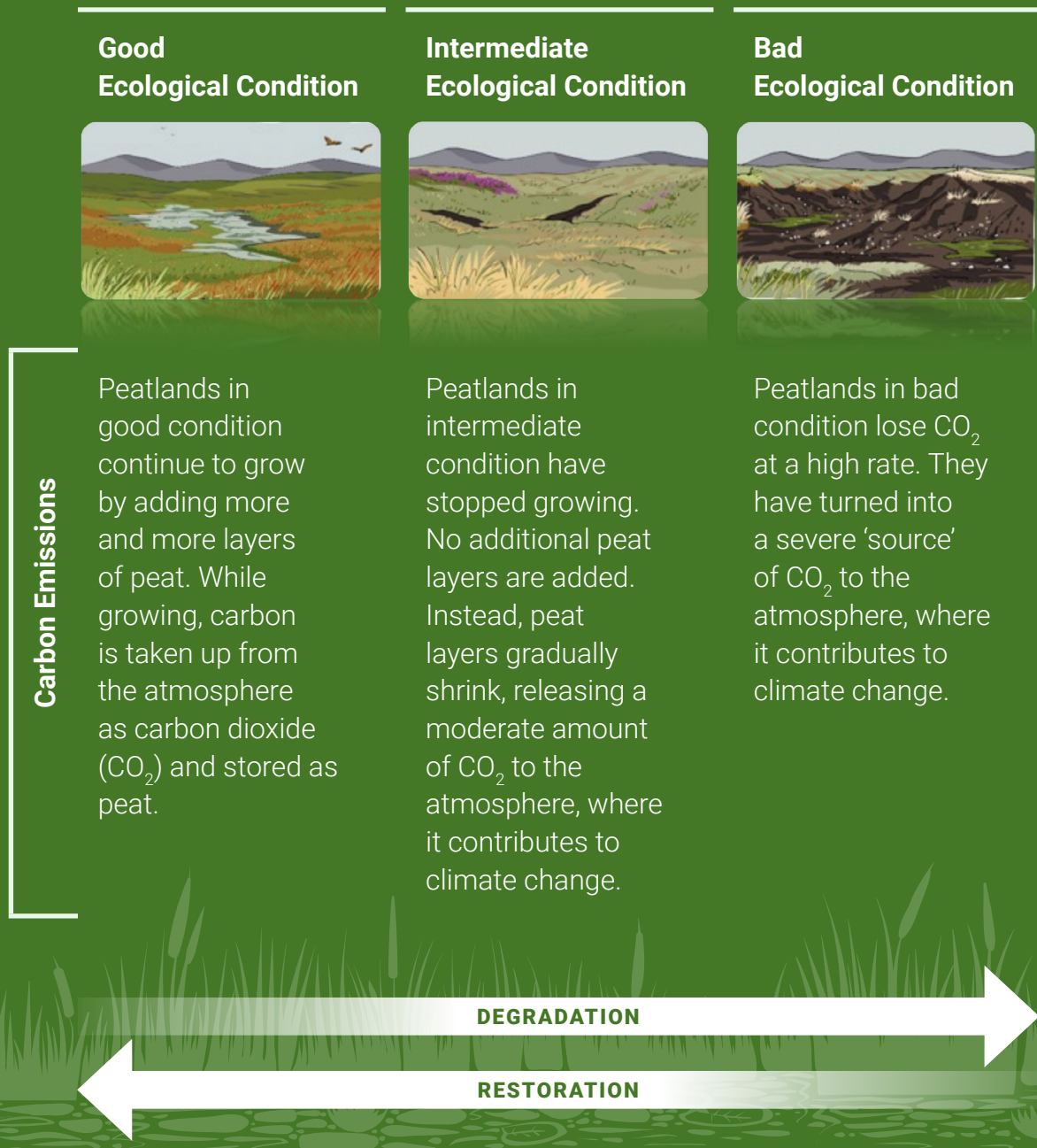


Table 1: Peatland Condition and Ecosystem Services Benefits

Good Ecological Condition

Intermediate Ecological Condition

Bad Ecological Condition

Water Quality

Water that flows from peatlands in good condition is usually clear and of good quality. This means less need for water treatment. The water quality is also good for fish living downstream, especially salmon and trout.

Water flowing from such peatlands can be of lower quality. Water can be slightly murky, especially after a heavy rainfall. This can affect the fish population downstream, including salmon and trout, and increase the need for water treatment.

Water that flows downstream is of bad quality. It is often murky and can be dark brown from soil components in the water, especially after heavy rainfall events. The bad water quality will affect fish downstream. It is not suitable for human consumption and therefore needs a lot of treatment.

Wildlife

Peatlands in good condition are home to various birds and wildlife species. This includes waterfowl and wading birds such as curlew, and predators such as hen harrier and red kite.

Peatlands in intermediate condition may still harbour some of the wildlife that is present in peatlands in good condition. However, it is less abundant and some of the wildlife may not be found any more. It is also more likely that you will see managed species such as deer, sheep and grouse.

Peatlands in this condition are home to little wildlife. Not many plant and animal species can be found.

DEGRADATION

RESTORATION

Source: Glenk, K., Martin-Ortega, J., Byg, A. (2017). Peatlands ecological conditions and associated benefits. Peatland Action Programme, Scottish Natural Heritage. Open access under the Creative Commons copyright. Images have been drawn by Ximena Maier.



Most wetlands, raised bogs, fens and many blanket bogs in Ireland are no longer intact and functioning:

- Huge areas of wetland were lost to drainage schemes in the 1980s and 1990s. The areas remaining are vulnerable to continued drainage and water abstraction.
- Many bogs have been severely degraded by peat cutting.
- Others have been damaged by commercial forestry, fire and grazing.

Sometimes what looks healthy from a distance is not healthy at all. Heather can make a bog appear colourful in the right season, but grows in abundance only on dried out peatlands. Likewise, birch and pine are also evidence of a peatland drying out. By contrast, a healthy raised bog should be 95% water, dominated by Sphagnum mosses, and wet and bouncy to walk on, if this is possible at all. It should have a domed profile and rise above the local landscape. By contrast, the presence of drains, subsidence and cracking, and an absence of pools, is evidence of a bog drying out and losing its capacity to regenerate. Restoring a bog means getting water, peat and vegetation right, typically a variety of Sphagnum mosses.

- Drains should be blocked from middle of the bog outwards.
- Dams can be made from plastic or lumber, or more economically, from humidified peat.
- Continuous wet conditions are needed for re-colonisation by Sphagnum.

The link to the Irish Peatland Conservation Council below provides information on how to restore bogs. In some locations, invasive plants such as Rhododendron may have become established and need to be removed. This typically requires much work over more than one season using targeted herbicide and cutting. This is physically demanding work (although enjoyed by some!). Restoration of industrial cutaway bog requires more complex methods and demands considerably more resources than bogs with deep peat and intact bog vegetation.

More information:

[IPCC Peatland Management and Restoration Toolkit](#)
[Best Practice in Raised Bog Restoration in Ireland](#)

7. Benefits for the Community

As well as the ecosystem service benefits, there are other tangible benefits where communities get together to protect or restore wetlands or peatlands.

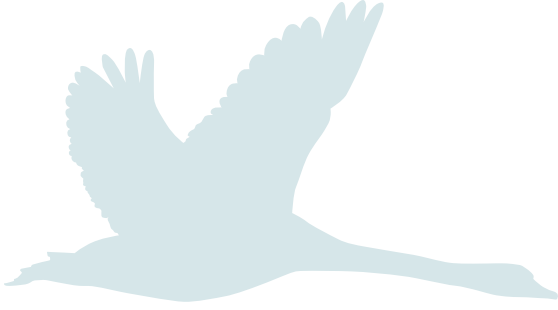
Volunteering, skill development and employment

Volunteering can be a way for anybody to pick up useful skills. There may be practical skills acquired from restoration works, for example carpentry skills from maintaining walkways or experience with the use of machinery for cutting invasive plants such as Rhododendron. Volunteer time is also a resource and has a value. This value is often included as a community contribution in kind in grant applications. Roughly, it is equivalent to how much you might be earning if not volunteering. Even if you would not otherwise be working, your time could still be considered as equivalent to the minimum wage, currently €10.20 per hour (2021).⁶

If a community environmental group needs to hire equipment or employ labour, this is a cost to the group, but it is also a tangible contribution to the local economy. It is quite possible that these services might be purchased from a contractor who was previously involved in wetland drainage and for whom this alternative income would help compensate for lost peat extraction works and strengthen the case for wetland restoration. Usually, the expenditure might be modest, but it could be regular and, in some cases, significant as with the construction of facilities such as a walkway.

Estimate the economic input of your volunteer time using the minimum wage or the average industrial wage

6 Citizens Information - https://www.citizensinformation.ie/en/employment/employment_rights_and_conditions/pay_and_employment/pay_inc_min_wage.html



Tourism benefits

If a restored wetland or peatland attracts visitors, or tourists, then these people are likely to spend money in the local area, helping to support cafés or shops. If the wetland has facilities, such as boardwalks, a visitor centre, or angling rivers that can attract more dedicated tourists, events or meetings, this expenditure could be significantly more and benefit accommodation providers too. There is a multiplier effect for the wider economy of around 1.76 times the original expenditure due to the knock-on purchase of inputs, services, wages, etc. The Lough Boora Discovery Park in County Offaly is a large and developed attraction compared with other local wetlands. Nevertheless, by way of illustration, it attracts 100,000 visitors per year who spend around €200,000 on the 2000-hectare site and possibly €3.2 million locally, based on Fáilte Ireland estimates of an average per day spend of €40 per adult visitor.

Typically, wetlands or peatlands on their own are a niche attraction, but they can become a more significant attraction as part of a sightseeing route or cycle/walking trail. Tourism benefits are especially possible where the wetland or peatland contributes to a particular theme of tourism activity in the county. Mayo, for example, has promoted its appeal to tourism on the basis of outdoor activity.

The wetland/peatland could be suitable for ecotourism or for activities related to health, well-being and the outdoors, such as a spa development or eco-retreat. There are various such destinations in Ireland, for example in the Burren, Connemara and the Border Region, all of which draw on the quality of the local natural environment, which, in Ireland, commonly includes wetlands, bogs and woodland.

Awareness and education benefits

As well as the tangible range of benefits, there are other less tangible benefits that can be stimulated by the activities of environmental groups. For Scohaboy Bog, these benefits were summed up by the workshop as “education, preservation and opportunity”, which was said to include raised awareness, new knowledge, the benefit of participating in the protection of local heritage and the opportunity to make new acquaintances. Personal fulfilment, public duty and a sense of belonging or engagement were described as being complementary. There are benefits in liaising with primary and secondary schools, including identifying projects for transition year students or for competitions such as Young Scientist or the Gaisce Awards.

Social capital

Another benefit that often begins with active community groups is social capital. This develops when individuals get to know one another by coming together in groups or in networks with other community groups. Individuals often find that they have complementary skills. They can also learn new skills to meet the needs of the community group itself, for example organisational skills, campaigning, public speaking, grant proposal writing, book-keeping and manual work skills. Trust and respect develop as group members get to know one another. This development can form bridges and break down former social barriers. But it can also be useful in underpinning activities or events and often result in a new sense of purpose, social dynamism and economic investment within a community. For example, one participant in our workshops made contacts that led to more self-employment work, while others collaborated on business opportunities, including the establishment of a high-quality bakery. Positive change is compelling and evidence of new activity can attract formal investment and tourism. Links are also made with other community groups with whom resources can be shared or who can collaborate in proposals for grants that meet more than just environmental objectives.

*List the variety of benefits provided by
your local wetland or peatland*



8. Strategies for establishing and sustaining community environmental groups

“There needs to be something there so there’s a sense of stewardship. It won’t work if you tell people you can’t do this or that. You have to give them a sense of... this is ours to look after in some way. If you don’t work with people you’ll get nowhere” (C. McGuinness)

Extract from an Oral History project carried out with people from the local area of Girley Bog.⁷

Getting things done through the formation of a community group is clearly easier than acting alone. Groups provide capacity through strength of numbers and networks of influence. They are sustained through shared experiences and the friendships and connections that develop between people of different backgrounds and ages, and for environmental groups, a common interest or love for nature and the outdoors.

7 Flood, K. Girley Bog Oral History Project, 2015





Community groups usually begin with much enthusiasm, often following the identification of a pressing local need which could, for example, be proposals that would destroy a special environment, as could have been the fate for Abbeyleix Bog, or alternatively a wish to reclaim a local wetland/peatland for community use. It is *sustaining* this enthusiasm that is more challenging.

Some important steps include:

1. Hatching a plan

a. Why: Purpose and Objectives

Advice from [The Wheel](#), the Irish network of community and voluntary groups, suggests that if you are thinking of setting up a new organisation for a particular purpose, it is important to first check if there is already an organisation with the same or similar purpose that it would be more effective to work with than starting from scratch. If, however, things can be achieved through the establishment of a new group, then it is important to draw up a set of objectives at an early stage. These can be supported by a group vision or mission statement. Agreed objectives can form the basis of a constitution. There is no urgency to deciding to seek formal status, but once established, a group may choose to become a limited company or a charity/ trust. Ultimately, there will be a need to adopt either a 'legal form' (e.g. a friendly society, company with limited guarantee, co-operative society, etc.) and 'charitable status'. In respect of the latter, and irrespective of your legal form, an organisation operating in Ireland which has an exclusive charitable purpose, and which provides a clear public benefit, will need to register with the [Charities Regulator](#).⁸ Formal status will be important for securing funding.

8 This should not be confused with registering with the Receiver of Revenue for 'charitable status' in respect of VAT. The Charities Regulator website has a good FAQ section and also provides charities with information on the Governance Code

b. How & What: A Plan with Actions Identified

Clear objectives will form the basis for an action or management plan. This lists the actions that the group propose to take to manage a site for conservation, restoration, education or recreation. These plans need to be attainable and fleshed out to a reasonable degree. They require a realistic time-scale or ordered by the level of ambition and/or funding they require.

Some intended actions within designated sites (SACs, SPAs or NHAs) will require consent from NPWS and, in some cases, a Natura Impact Statement and Appropriate Assessment, to prevent any impact on sensitive features (habitats or species). These assessments will generally need to be undertaken by a professional ecologist or hydrologist.

c. Who: Decide on Actions and Assign Tasks

The management actions should include the democratic process by which decisions are made, who acts as chair, who records minutes, who organises activities, who looks after members, and who manages the accounts. Many activities such as the chairing of meetings or minute taking can be rotated at each meeting or after a finite period of time. Who can contribute to decisions should be clearly set out, although this would likely be informal at first. Decisions will likely depend on a majority vote, but should respect, and have guidelines, by which to respond to any minority views.





Example actions:

- Develop the group
- Grow membership
- Develop partnerships
- Community engagement with wetlands
- Raise awareness of wetlands and bogs, and their natural and cultural heritage
- Build capacity
- Conservation and biodiversity enhancement
- Education & interpretation
- Sustainable site management, restoration and amenity
- Implementation, monitoring and evaluation

Community environmental groups benefit tremendously from good leadership or a champion. This is likely to be one person or a small group of committed individuals from the local community, but could also be a local heritage or conservation ranger. Natural leaders are hard to find, but they can be cultivated. Community groups are at their most effective when they have vision and enthusiasm and this is often provided by somebody who forms relationships easily, is hard working, has good management skills and is able to integrate activities on the wetland or bog with wider local community interests. Good leaders are not autocrats. They rely on good teams, and this means cultivating the mutual respect of group members and ensuring that everybody who is willing can participate fully in decision making.



2. Growing the group

a. Member input

An early action would be to identify others with similar interests able to contribute to the group.

- Creating a website or social media pages like Facebook/ Instagram page is a good start with information on the wetland or peatland and the group's objectives. There should be information on the benefits of joining accompanied by a membership form.
- The group should maintain an active database of members and all others who have expressed an interest in the group's objectives.
- It should ensure that regular feedback is provided to members through updates to social media or newsletters. If it is decided that there should be annual membership and/or a subscription, then this should be firmly acted on each year so that members are not lost by slipping out of communication.
- Having somebody willing and able to take responsibility for regular tweeting, maintenance of websites or social media pages is essential.

Effective leadership and management ensures that all opinions are received at meetings and that all can participate, including individuals who might be quiet or less confident in group settings.

An effective group should also:

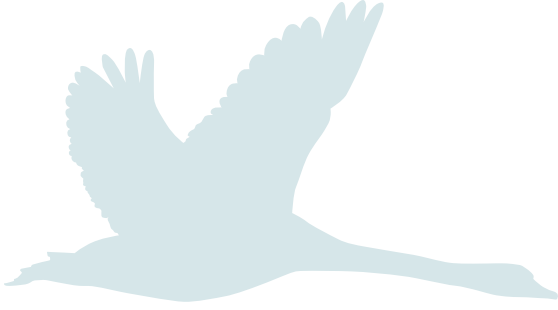
- Be aware of its members' skills and knowledge, identify people who can coordinate the group, organise events, prepare funding applications, recruit new members, or keep accounts, etc.
- For the administrative jobs, it is advisable to exchange these roles on a regular basis so that they never become a chore for the person responsible and so that the group is not entirely dependent on any one individual.
- It is also good to encourage those who would prefer to contribute in person or physically to events or activities (not least for those who might spend the rest of the week working at a desk).

The range of skills needed for successful and sustainable community groups to function is wide, including (but not limited to) management, administration, accountancy, legal, social media/PR, creative art & crafts/photography, archaeology/history, wildlife/ecology, carpentry, machinery use, etc. It is clearly advisable not to raise unreasonable expectations of people and especially important to avoid anybody feeling that they have become the dog's body for unpleasant tasks or all that needs to be done.

It is important to welcome everybody, including those who may be busy with work or family and have little free time. Most people have busy lives, but as time goes on, some people will find themselves with more time to get actively involved so long as they are not discouraged early on. Many groups are sustained by the enthusiasm of middle-aged and older people with more time to spare, but it goes without saying that encouraging the involvement of young people is highly valuable in terms of injecting energy and activity into a group, and hopefully maintaining momentum over time. Meeting in an accessible space, that is family-friendly and at family-friendly times can help to attract people with young families and young people to the group. Naturally, engaging schools in environmental education is very important, but attracting those same young people to participate in the group is even better. How to achieve this is something all groups find challenging, but young people may be especially energised by causes such as climate change and loss of biodiversity, not least because these developments are likely to affect them more than the rest of us.

- Create social presence (website, Facebook, etc.)
- Attract members
- Arrange meetings and provide regular stimulating content
- Welcome member participation and individual skills
- Liaise with primary and secondary schools, including Transition Year students, Young Scientist and Gaisce Awards
- Share information about meetings, events and activities on the online platforms of those in your network, e.g. Community Wetlands Forum's [Facebook](#), [Twitter](#) and [Instagram](#) pages

Information and resources on networking, media and training, see www.digitalcharitylab.org



b. Inclusiveness and capacity building

Many people who turn up at group meetings may think initially that they have little to offer or that they know little about wetlands or peatlands. It is important to be inclusive. Short film screenings, presentations and free ranging discussions on environmental issues or community needs remind members of why they joined and provide relief from the more tedious business of organisational matters or accounts. It is important for the meeting's chair to ensure that everybody is encouraged to get involved, irrespective of their initial level of knowledge. Volunteer days can be used to identify roles for new participants and to introduce people to new knowledge and skills. These activities can build capacity in the group and make it more resilient to set backs such as economic circumstances, the departure of other members or grant application failures.

3. Connecting the group

It is important to reach out to the wider community and to other community groups. Early on, it is a good idea to hold some kind of event at which the public can participate so as to inform people of the group's objectives, and to raise awareness of the wetland or bog. Educational events, demonstration days or open days, for example holding a BioBlitz event, can help to inform potential members about the benefits of wetlands and peatlands, and the benefits of participation. The objective is to provide local people with an awareness and sense of ownership of their local wetland and to ensure that the objectives of an environmental interest group are not misinterpreted. For wetland groups, this can be especially important where other people in the community may previously, or still, benefit from turf cutting or farming.

Likewise, it is useful to explore and form alliances with other organisations who can help promote awareness. Establishing contact with organisations such as the IFA, the ICSFA or Macra na Feirme can also be helpful for building bridges and communicating objectives. In this respect, it can be helpful to find common ground by bringing attention to the full range of ecosystem service benefits provided by the wetland or bog, including pollination, health and amenity.

At a practical level, it is also useful to cultivate connections with local businesses who might also be a source of fundraising, resources or sponsorship. Connections

with local educational institutions such as schools are always worthwhile for raising awareness and interest in the wildlife and ecology of the wetland or bog. Encouraging citizen science, for example, surveys or records of birds, animals, amphibians, insects and plants, is another great way to get local people involved. Scientific support can be found in colleges and universities where there is always a supply of students or researchers willing to undertake ecological studies or social surveys that can input to a restoration plan. Making connections with other community groups, for example community development groups, Tidy Towns, GAA/sports clubs, scouts, church groups, men's sheds, youth groups, angler clubs, arts groups, enterprise groups, etc., can be useful for the joint hosting of events, sharing of resources such as volunteers, machinery or vehicles, or fundraising and funding applications.

The offer of presentations to local groups or schools could be one means of contact. Everybody should be encouraged to attend, e.g. schools, local interest groups, farmers, people with disabilities, etc. Some people in the community may be deterred by their lack of knowledge of bogs or wildlife, so the holding of a simple walk without any ecological discussion may at least introduce people to the environment of the bog. Support and volunteers could also be available from related interest groups, such as a local branch of BirdWatch Ireland or a walking group.

A point made during the workshops held for this guide was that these connections can stimulate a little positive local competitiveness, spurred by a sense of pride within the local community.

In some cases, one group can act as an umbrella for other local groups, particularly if it has established a footing as a formal organisation, i.e. a registered charity or limited company, that could be in a better position to apply for funding. An example of this situation is the Cloughjordan Community Development Committee who manage Scohaboy Bog. The committee includes a social inclusion and economic remit, which attracts funding and partnerships with state bodies, for example for education and training (See Table 2 below for network partnerships developed). These connections could help support environmental activities which arguably have a lower political profile. Having a dedicated team at the centre of a network of community groups supports a cumulative level of activity and public events.

In addition, it is very useful to develop relationships with potential funders, including the local county Heritage Officer or Biodiversity Officer and the **Public Participation Network (PPN)**. For example, events run by the Girley Bog Meitheal are funded partly through grants from the County Heritage Office. Talks are sometimes welcomed by local authorities too, who, naturally, are a potential source of support and funding. Contacts with local councillors can help to build alliances or achieve traction with planners or decision makers, although it is advisable to avoid any appearance of political allegiance.

Contact should be made with Government Departments and Agencies. As discussed, these can be a source of funding, but also of initial and ongoing advice that can be important in situations where local activity could wax or wane over time depending on who is involved in a group. Employment and physical work input can be supported through national agencies such as the Rural Social Scheme. Tús, the Community Employment Scheme and Youth Support Employment Scheme, can assist with other work placements. Conservation Volunteers Ireland and Men's Shed may be able to provide additional voluntary input.

The Community Wetlands Forum, NPWS and IPCC can provide assistance in developing management objectives and plans even if the wetland or bog is not a protected site. Officials from the NPWS are very dedicated and can be invaluable in assisting with restoration or management plans. The IPCC have organised training on restoration, bird, bat and insect surveys, and the CWF have organised seminars on funding.

- Organise events to attract local people
- Reach out to other community organisations or local groups
- Develop relations with supporting bodies and potential funders
- Draw on resources or expertise available from CWF, local authority and Government agencies, including NPWS.



Connecting Communities with Peatlands (Just Transition Fund project)

Connecting Communities with Peatlands is a three-year project run by the Community Wetlands Forum and Irish Rural Link. The primary objective is to provide community transitioning supports to community-led groups in the Wider Midlands regions, which includes counties Kildare, Laois, Offaly, Longford, Westmeath, Roscommon, North Tipperary, and East Galway. The project aims to support proactive communications with affected communities and other stakeholders in the region, establish best practice sharing networks, and assist in developing local transition plans.

Community groups can avail of workshops and capacity-building training for groups who wish to establish projects on their local peatlands and the content of the workshops and training will be based on the groups' needs. Members of the Community Wetlands Forum will act as mentors to each other and new groups, as more established groups are linked with newer groups to exchange practical knowledge and experience. Capitalising on the collective knowledge, experience, and networks of both the CWF and Irish Rural Link, the project will lead to greater engagement and connection with peatlands by communities and result in long-term, sustainable and integrated environmental, social and economic benefits to the region, in line with the UN Sustainable Development Goals.

Groups in the Wider Midlands region are encouraged to engage with this project. You can find more information on the [Community Wetlands Forum website](#).

Information:

[Community Employment Scheme](#)

[Work Placement Experience Programme](#)



Local Community Level	<ul style="list-style-type: none"> • Schools - excursions to the bog • Cloughjordan Heritage Group • Cloughjordan Naturalist Field Club - workshops collect data about biodiversity • Scouts • GAA Parish network - Both schools under 1 team • The three churches • Schools • Tidy towns • Drama group • Cloughjordan community development group - umbrella group • Hinterland – parts of Cloughjordan RC parish • Cloughjordan Ecovillage • Museum / Library and other community venues • Community Co-op
Local Authority Level	<ul style="list-style-type: none"> • Tipperary County Council • Leader • RSS scheme • Heritage officer • Tús/ Community Employment scheme • Tidy towns funding • Local Water and Communities Office • Councillors • Nenagh municipal district • Foróige
National or Regional Level	<ul style="list-style-type: none"> • Environmental Protection Agency (EPA) • National Parks and Wildlife Service (NPWS) • Tipperary Education and Training Board (ETB) • BirdWatch Ireland • Irish Peatland Conservation Council (IPCC) • Coillte • Heritage Council • University students doing research • Irish Ramsar Wetlands Committee (IRWC)
EU Level	<ul style="list-style-type: none"> • LIFE Project • European Voluntary Service Overseas workers

Table 2: Network of Partnerships Developed in Cloughjordan



4. Evaluating progress

Community groups looking to conserve their local wetland or peatland are likely to face numerous challenges, not least doubts from others in the community of the benefits, or the concerns or suspicions of landowners or those with turbary rights. Explaining the ecosystem service benefits described in Section 5 may help in this respect. Obtaining the support of a landowner neighbouring the wetland or peatland would be a major step forward. Other challenges will include attracting new and diverse members, attracting a variety of age groups, balancing personalities and interests, finding useful skills, maintaining interest and vibrancy while also dealing with routine tasks, widening support and dealing with bureaucracy (funding and insurance we deal with below). The earlier discussion provides some ideas, but each group will need to identify its own way forward depending on the local context.

Key factors that can aid the development of successful community groups include:

- Leadership
- Vision or common cause
- Environmental champions or proactive individuals
- Commitment
- Social capital
- A group identity, recognition/visibility/legitimacy
- Integration with wider community economic, social and health benefits
- Fairness in participation or benefits
- Capacity building
- Effective communication



It is a good idea to identify some indicators whereby you can chart the success of the environmental group over time. Candidate indicators⁹ would include number of members, partnerships with other community groups or NGOs, number of events, people trained, etc. This information could be useful in supporting funding applications.

More information:

[The Wheel](#)

[Sustainable Communities Governance Handbook](#)

[Sustainable Communities Toolkit](#)

9 See page 26 of CWF Strategic Plan, for example of key indicators used by Abbeyleix Bog Project, available at <https://www.communitywetlandsforum.ie/wp-content/uploads/2017/05/CWF-Strategic-Plan-Baseline-Study-2017-2020-FINAL-17052017.pdf>

9. Access and Recreation

Including a trail beside or across a wetland or bog can greatly increase the number of visits and interest in the project. New users will include people out to walk their dog or exercise by walking or jogging. A clear health benefit applies to this new exercise which can be broadly quantified using the methods described in Appendix 3. However, community groups first need to be conscious of the legislation and the requirements around trails and trail infrastructure. Within protected sites such as SACs, SPAs and NHAs this might require a Natura Impact Statement, Appropriate Assessment, consent from NPWS or other authorities, or planning permission.

Balancing conservation need with recreation can be a further challenge. It should be remembered that while many members might have joined for reasons of recreation/walking, this could be a route to encourage an interest in ecology and conservation. Walkways can allow people to enjoy and learn about the bog or wetland and elevated boardwalks can minimise impacts. Ideally, the trail should allow users to experience a variety of habitats, including a part of the bog in good condition, but they do of course need to be kept away from those areas that are most sensitive to disturbance including habitats and species (e.g. ground-nesting birds). Whilst walkers tend to keep to the paths or waymarked trails, dogs, when not on a lead and free to roam, can cause very significant disturbance. The essential requirements set down by Sports Ireland include a map board with a clearly defined route, information on grading (difficulty), length, way marking signage, hazards, advice on use by dogs and the seven Leave No Trace principles, as well as contact details for emergencies or feedback.

Trails can take various forms. They could be a track or path, a boardwalk or a 'bog-bridge'. If the level of use demands it, a permanent track could require the application of gravel, planings, tarmacadam or rubber as a substrate.

- Planings are a secondary material, namely substrate resulting from the removal of the top layer of tarmacadam from roads before resurfacing and can be obtained from the local authority at no cost.
- A boardwalk is a raised walkway, constructed similar to garden decking from timber, composite plastic or metal material and ideally should be 1,200mm wide to allow for wheelchairs and buggies.
- A bog-bridge is raised above the bog itself using sleeper-sized timber connected lengthwise to each other 2-3 units wide. Bog-bridges are typically 420-780mm wide and suitable for walking only.



Figure 2: Bog-bridge (left), Boardwalk (right), Path with planings (bottom).
Source: Abbeyleix Bog Project



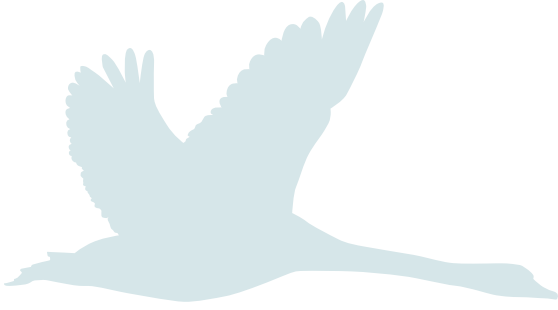
Trails can be established on existing trackways with foundations 200cm wide and cost €4,500/100m for a tar and chip surface or €8,000 per 100m for a tarmacadam surface. A raised boardwalk can cost from €7,500 to €20,000 per 100m for materials alone. The cost of material for a bog-bridge varies from €2,000 to €3,500 per 100m depending on width. It is useful to contact the recreation sections of either Coillte or NPWS for advice on scoping, designing and materials for all trails.

Having skilled volunteers to hand, or support through the Rural Social Scheme (RSS) or the Tús community work placement schemes, allows costs to be largely reduced to materials alone. The Abbeyleix boardwalk was built in just 2 months with this input. Management and maintenance of the trails and boardwalk will also be needed. A non-slip surface is advisable, as is adequate insurance cover.

The [National Walks Scheme](#) is funded by the Department of Rural and Community Development. It has an annual call for funding (usually in March) to support trail maintenance for community environmental groups, trail management committees and landholders. Applications must be in relation to Waymarked Ways and recognised Looped Walking Routes and be made via the Local Authority or Local Development Company. Qualifying trails must be open to the public, supported by all landowners and be of a suitable standard to be included in Sports Ireland's trail register.

Insurance for public liability and indemnity may be needed where any facilities are provided or larger events planned. A stand-alone policy can be taken out in the name of a community group, with discounts available where the group is a member of Irish Rural Link or The Wheel. Alternatively, existing insurance cover may be available in cases where the group is a sub-group of a wider organisation such as the local Tidy Towns or community development association. If the group operates within a designated area managed by Coillte then existing insurance cover may be available, but it would be necessary to confirm this locally.

For formal trails, insurance is available via the National Looped Walk scheme or [National Trails Office \(NTO\)](#) of the Irish Sports Council (ISC). This is blanket insurance provided for all looped walks provided regular maintenance is undertaken. [Various guides](#) are available including *Management Standards for Recreational Trails* and *A Guide to Planning and Developing Recreational Trails in Ireland* (NTO). The latter recommends that community environmental groups considering developing a trail, first familiarise themselves with the principles



of [Leave No Trace](#). It recommends consultation with the Forest Service, Inland Fisheries Ireland or NPWS in relation to possible impacts and that consideration be given to the need for car parking, and therefore, applications for planning permission. Consideration clearly needs to be given to safety, for example where there is any use or crossing of local roads or where there is a need to cross lands grazed by horses or cattle. Guidelines on trail surfacing are included in the [Sports Ireland pamphlet](#). Wooden boardwalks are by their nature often wet and consideration should be given to the use of studs, chicken wire or other methods/surfacing to minimise the risk of slipping. Plastic materials are argued by some to be superior from a safety perspective. For a trail to be registered by the National Trails Office it must meet certain standards of information, surfacing and management, including for funding, so it is advisable to check first. There is potential to provide some maintenance through the Rural Social Scheme (RSS) or Tús as discussed in Section 7 above.

The Occupiers Liability Act places certain standards of care on owners/occupiers of land used for recreation. Public and employers' liability insurance will be needed during trail construction, or must be held by those contracted to build the trail. Where the trail crosses private land, responsibility for maintenance falls to the trail management committee, for which a Permissive Access Agreement or Memorandum of Understanding will be necessary. The NTO/ISC in conjunction with the Local Authority can provide public liability insurance so long as the trail is inspected and approved on an annual basis.



Atlantic blanket bog (NPWS)

10. Funding

10.1. Preparing for Funding

To obtain funding the local environmental group will likely require the group to have a formal status, for example as a charity. It is possible for one group to act as an umbrella group for others in this respect. Fundraising is not for the faint-hearted as successes will depend on repeated applications. Ideally, groups will have made some strategic decisions and have decided what funding is likely to be most relevant to their needs. There are often requirements to spend grants received within a short period of time. Based on the more detailed guidance available from Irish Rural Link and the Wheel [8], a group will ideally have:

- a budget to cover fundraising,
- good governance, administrative and financial procedures in place,
- identified who within the group has the skills to put together a good application, e.g. logistics, writing, finance or accounting skills,
- working relationships with potential funders,
- awareness of upcoming calls and of their requirements and closing dates,
- identified local or national partners,
- drafted an outline or generic application,
- checked the need and source of matching funding and their ability to repay any short-term bridging finance,
- a project that is ready to go, for which they have prepared a conservation plan or feasibility study, even if modest at first,
- an application that meets all the required criteria,
- an application that stands out, that can be seen to make a difference, and which allows the funder to see what it is getting for its investment,
- an application that will have considered what exactly it needs, the challenges that it will face, what it is going to achieve and how it will do so,
- an application that defines the group's strengths and past achievements,
- an understanding of how the project will develop over the years and be able to demonstrate how the project is progressing (and succeeding),
- spent time on the project budget to remove guesstimates and have quotes for proposed works (subject to open tender).

Groups should establish links with the local Community Development Office and County Heritage or Biodiversity Officers as well as with other local community groups, environmental networks, schools, churches and councillors. They should become members of their county's Public Participation Network (PPN) and make regular enquiries of its resource worker. Membership of the PPN is free and provides a valuable source of information on funding. This is very helpful for knowing when funding calls are likely to open.

It is useful to list other bodies or community groups on an application either as partners or supporters of a funding application. These groups can also be a useful source of advice if they have themselves received funding previously. For environmental funding, it is also useful to include evidence of support or advice from the NPWS, County Council, environmental NGOs or research centres. Local organisations could include local businesses who might be a source of funds, skills or material inputs, as well as other community groups, particularly where they can provide for joint activities or be a potential source of volunteers and are active in complementary areas of rural sustainability, including community development, social inclusion, employment, education and rural tourism. The Department of Social Protection's Rural Social Scheme (RSS) and the Tús programme can provide employment placement for respectively lower income farmers or those who have been out of work for more than a year to contribute to environmental or cultural projects, including, for example, trail maintenance, although community organisations will be expected to make a contribution.

Matching funding may include other private funding or public funds. In some cases, evidence of volunteer time or materials might suffice. For many projects, matching funding may be expected to follow from a non-related source, i.e. not another EU scheme.

Many funders require evidence of existing work or planning permission being in place prior to providing funding. This generally requires local groups to provide some funding themselves and this can be a severe constraint for small groups with limited resources. In the short-term, bridging finance may be required once a grant has been agreed, but before funds are paid out. Some sources of community bridging finance are listed below. These entities charge interest, but this can be significantly less than that charged by the banks. Moreover, this expenditure can be recouped once grant funds are received.



In all cases when applying, it is valuable to have done research to ensure that a project meets county, national and/or EU policy objectives, for example in relation to the environment, sustainability, public participation, social inclusion or economic development. For wetland projects, applicants should check <https://www.npws.ie/maps-and-data> to see if a project is located within an SAC, SPA or NHA. An Appropriate Assessment may be needed in these cases if a project interferes in any way with protected habitats or species. The construction of amenity facilities/walking routes are an excellent means of getting people to visit wetlands and of raising awareness. If well-designed, boardwalks are a means of avoiding physical impacts on habitats, but there could be issues with facilitating public access if sensitive species are present. On the other hand, there are of course many opportunities for projects, particularly restoration projects, to have a positive impact on habitats. In all cases, an applicant must check with the Local Authority to see if planning permission is needed.

Project applications may be required to ensure that there are no deadweight costs. Deadweight occurs if a project is financed with public funds in cases where it might otherwise have gone ahead with alternative finance. Additionality occurs when this finance is available from another public body. Displacement occurs where a project competes, or impacts negatively, on another funded project. All projects should therefore demonstrate a clear need, possibly supported by a feasibility study that presents an argument for public funding in the absence of other finance, and to support the unique contribution of the particular project within the local area or region.

Listing benefits

To strengthen the case to potential funders it is worth listing and describing the benefits of the proposed project (see Table 3). Obviously different projects provide different benefits, for example conservation or amenity/tourism, so these benefits would need to be listed first and discussed in more detail. Similarly, different funding bodies will be looking for different things. The benefits with most traction at present are likely to be linked to economic/social benefits and cultural ecosystem service benefits. The earlier discussion of ecosystem services benefits (and the potential to quantify some benefits - see Appendices 2 & 3) is useful to underscore the contribution of a particular wetland or peatland.



Given the needs of river catchment management, the water quality requirements of the EU Water Framework Directive and Ireland’s obligations in relation to the mitigation of climate change, it is worth keeping an eye on current policies lest new funding initiatives emerge for pilot projects. Universities might be aware of possibilities if they arise and so these links could be useful. Again, Section 5 introduced the relevant ecosystem services and Appendix 3 describes these in more detail, including how they might be quantified.

Table 3: Linking Potential Funding to Benefits

Benefit	Description	Ecosystem
Wildlife Habitat	Habitat for birds, mammals, amphibians, plants (give examples of what habitat and what wildlife are present and how this habitat and wildlife will be protected or enhanced. Refer to examples of protected habitat and species using guides from NPWS, IRWC, etc. Funding possibly discuss with NPWS, HC, EU LIFE, local biodiversity or heritage officer.	Cultural services (wildlife viewing) Supporting services (habitat)
Environmental Education	Refer to how conservation and/or access will increase the public’s awareness of natural heritage and ecosystem services. Possibly discuss with NPWS, local biodiversity or heritage officer or LAWPRO, HC, EU LIFE.	Cultural services (Education)
Quality of Life	Refer to new access or recreation opportunities and infrastructure present or being sought. Possibly discuss with local authority, HC, LAWPRO	Cultural services (Amenity & Recreation)

Benefit	Description	Ecosystem
Quality of Life	Physical and mental health through exercise and time spent outdoors. Possibly discuss with local authority.	Cultural services (Health)
Community Development	Social inclusion, community interaction and pride of place. Links to social capital. Possibly discuss with Rethink Ireland, EU Interreg or Local Authority.	Cultural services (Indirectly)
Economic Development	Amenity, tourism, natural or cultural heritage. Possibly discuss with Local Authority or Fáilte Ireland.	Cultural services (Indirectly)
Water Retention	Possibly useful argument where there has been past local flooding. Discuss with local authority or OPW. Emphasise where there are local wells, abstraction, angling. Possibly discuss with Irish Water or anglers/IFI.	Regulating services
Carbon Storage	Worth keeping an eye on this as a future rationale for funding. Possibly discuss with BnM (if owner), DECC or EPA.	Regulating services

Key:

NPWS: National Parks & Wildlife Service (Peatland Community Engagement Scheme). IRWC: Irish Ramsar Wetlands Committee. LAWPRO: Education and Resources for Wildlife Conservation. Local Authority Waters Programme. Rethink Ireland: previously Social Innovation Fund Ireland. HC: Heritage Council. Local Authority: Local Agenda 21 or LEADER/ Development Company. IFI: Inland Fisheries Ireland. DECC: Dept. of the Environment, Climate and Communications. OPW: Office of Public Works (catchment management/ drainage). EPA: Environmental Protection Agency (catchment management/climate), BnM: Bord na Móna.



10.2. National Funding Opportunities

[The Wheel](#) provides a comprehensive list of both National and European funding opportunities. Groups can sign up to their funding newsletter to stay up to date on funding opportunities.

Community Environment Action Fund (Local Agenda 21)

The LA21 scheme has been renamed the [Community Environment Action Fund](#) from 2019 onwards. It is a long-running EU programme that supports sustainable development through local small-scale community projects. The fund is administered through Local Authorities who provide equivalent funding to that provided by the Department of Environment, Climate and Communication. Projects should focus on environmental awareness and actions. Over €450,000 was distributed in 2017 to 854 projects. The Department website lists contact points within individual Local Authorities.

Local Authority Waters Programme

The [Community Water Development Fund](#) has €380,000 available annually to promote community engagement with the water quality objectives of the River Basin Management Plan and EU Water Framework Directive. Small (c €5,000), medium (c €10,000) and large (c €25,000) grants are available. The programme is directly relevant to rivers, lakes and wetlands. Funds are available for capital projects, public awareness and general amenity. Habitat restoration measures or provision of facilities for amenity would be deemed a capital project. There is competition for funding and the fund was over-subscribed in 2021. Projects must meet five criteria, including restoration of the landscape and pride of place. It is useful to demonstrate buy-in from other local community groups.

Peatland Community Engagement Scheme

The [Peatland Community Engagement Scheme](#) is funded through the National Parks and Wildlife Service (NPWS) to support events, awareness or restoration of raised bogs that are designated as SACs under the EU Habitats Directive, nationally as NHAs or other raised bogs of natural heritage value. In recent years, a fund of



between €160,000 and €200,000 has been available to support projects of between €1,000 and €25,000. A contribution of 75% is available where projects are not further funded by Government Departments or Agencies. Applicants must have legal status and demonstrate a capacity to deliver works which must be paid for upfront and then recouped on receipt of vouched expenditure.

Rethink Ireland

[Rethink Ireland](#) is a Government funded initiative to financially support non-profit bodies, charities and social enterprises. A contribution of 50% in funding is available through the Department of Rural and Community Development using the Dormant Account Fund. A total of €800,000 is available. Grants are available for between €10,000 and €50,000 with onward funding possible for projects that demonstrate success. A relationship with the natural environment would be indirect through the fund's focus on community resilience (stability), social enterprise, jobs, health, and children and youth. Projects must be up and running and have some form of traded income. They must address critical social issues, be innovative and have the potential to be replicated elsewhere in Ireland. Mentoring is available through an Accelerator Programme.

Heritage Council Community Heritage Grants Scheme

The Heritage Council runs the [Community Heritage Grants Scheme](#) to support bottom-up initiatives that encourage community engagement with cultural and natural heritage. The scheme had €150,000 in funds in 2018 to support 150 projects. Grants of 75% were available up to a maximum of €8,000. The scheme has been a very useful source of funding in the past.

Inland Fisheries Ireland (IFI)

[IFI](#) provides funding under the National Strategy for Angling Development to support the Salmon Conservation Development Fund (€500,000) and Midland Fisheries Fund (€50,000) for projects that provide angling facilities, including access and fishing stands, and for the enhancement of fish spawning tributaries. Applicants need to demonstrate local funding and are likely to need to have planning permissions, supplemented by an Appropriate Assessment screening if an area is protected under the EU Habitats or Birds Directives. They will also need to demonstrate actions before funding can be granted.



10.3. European Funding Opportunities

EU Funding overview

Research carried out by [The Wheel, Accessing EU Funds - 2015 to 2020](#), provides an overview of the policy context for EU funding and identifies the EU funding programmes with the best potential for community groups to access.

LEADER

[LEADER](#) has the objective of supporting community-led initiatives that support local businesses, jobs and the rural economy. Our Rural Future, the government's five-year rural policy 2021-2025, will guide the priorities of LEADER funding. Priorities potentially relevant to wetlands include: Transitioning to a Climate Neutral Society, Enhancing Participation, Leadership and Resilience in Rural Communities, Revitalising Rural Towns and Villages, Supporting Employment and Careers in Rural Areas. Other priorities include digital connectivity, and supporting sustainable agriculture, marine and forestry. Cross-cutting initiatives to be aware of are innovation, environment and climate change.

Although LEADER relies on an EU funding stream, it is administered by the Department of Rural and Community Development with the support of Pobal. The current programme runs from 2021-2022 and has a budget of €90million. For communities, funding of between €1,250 and €200,000 is available at up to 75%. An Expression of Interest must first be submitted to one of 29 Local Action Groups (LAGs) operating within each county and including representatives from the community, public and private sectors. If an application is good and meets with the priorities of the Local Development Strategy then the LAG may request a full application. The LAG must consider, amongst other factors, the availability of funding from other public schemes, financial viability and sustainability, the capacity of the applicant to deliver, evidence of legal status and reasonableness of costs.

[LEADER Local Action Groups Contact Information](#)

LIFE Programme

The LIFE Programme provides funding for projects that implement EU policy in relation to the environment, biodiversity, resource efficiency and climate. There is a call for proposals each year and €3.5 billion is available for environmental NGOs, private organisations and public bodies. The application process is very competitive, but has the lure of very significant funding. The two stage application process commences with a concept note of just 10 pages. If the application passes the first round, the second stage requires more work, but also greatly increases the prospect of success.

It is useful to put together a consortium including, for example, an NGO, a business, university or state agency. It is also possible to partner on applications from others, including other Member States. As well as presenting a project that meets the requirements of the call, applications must also demonstrate how the project is consistent with EU environmental or climate policy and the added value it brings. The Commission will be on the lookout for innovative projects that can demonstrate working international partnerships, results, value for money, new approaches to problem solving and dissemination plans.

Local environmental groups interested, for example, in restoring wetlands, could join forces and seek to realise their goals by working with one of these entities. This was the case for Scohaboy which became a demonstration site for Coillte's raised bog restoration programme. Projects can also work on their own or join forces with other partners in Ireland or elsewhere in the EU. Hitherto, there has been a 75%/25% split for environment and climate projects (although this could change). The former includes biodiversity and habitats as a major theme and provides grants for best practice, pilot and demonstration programmes in line with the EU 2020 Biodiversity Strategy. Projects receive co-financing of up to 60%, but up to 75% if directed to improving the conservation status of priority habitats. Funding of up to 55% is also available under an environment governance theme for projects that raise awareness, provide capacity building, training and public participation in the area of sustainability and the environment.

Calls for funding proposals are based on the LIFE multiannual work programme. It is advisable to register the group on the Partner Funding Portal and also to make EU connections in advance, if possible, for which grants may be available from National Contact Points to attend events or workshops. Further information can be obtained from these Contact Points at <https://ec.europa.eu/easme/en/section/life/life-national-contact-points>.

INTERREG

The [Interreg Programme](#) aims for cross border or transnational cooperation between partners in neighbouring Member States. The programme is in its fifth period of funding. Interreg V is not directed at community groups, but groups can become involved as stakeholder groups through Local Authorities, agencies, non-profit organisations and research centres/universities. The current focus is on economy and innovation, but four actions are supported, including environment and resource efficiency, which Interreg will support with co-financing of up to 85%. As with LIFE, local groups would be secondary partners in an application, but the average project budget of between €1-2 million does allow for significant funding. Like LIFE, it is often useful to make EU connections in advance for which grants may be available. Examples of successful past projects are given on the website. Some relevant to wetlands include [BIOGOV](#) on extending stakeholder participation in biodiversity protection, [LAND-SEA](#) on ecotourism and [IMPACT](#) on innovative models for ecological Protected Areas. Irish project partners are involved in the following Interreg projects directly related to wetlands or peatlands: [Care-Peat](#) and [CANN Project](#).

10.4. Loans and Bridging Finance

Western Development Commission (WDC)

The [WDC](#) runs an Investment Fund for the Western Region (i.e. Counties Donegal, Sligo, Leitrim, Roscommon, Mayo, Galway and Clare). Loans of between €10,000 and €100,000 are available for 3-10 years under its Community Loan Fund, repayable monthly at a fixed interest rate of 3% (2021). Applicants must prepare a business plan that demonstrates positive social impact, legal status and repayment ability. Once grant funds are confirmed by a Grant Mandate, bridging finance can be made available at a rate of just 1% per annum charged on a monthly basis until the grant aid is approved.



Community Finance Ireland (CFI)

[CFI](#) is supported by the Social Finance Network and provides loans and bridging finance of between €30,000 and €500,000 without any arrangement fee for periods of between 12-18 months, although early payment is permitted. The lending rate is variable (rate was 6% in 2019). Evidence of grant funds is required. Shovel-ready projects are preferred, but loans can be confirmed within as little as five days.

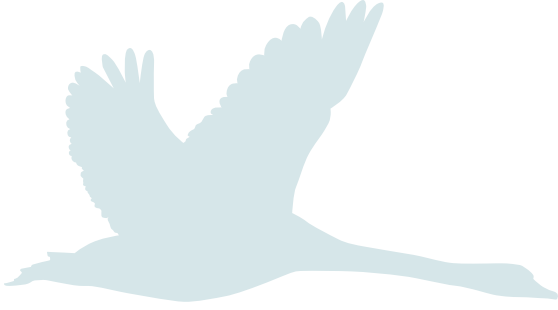
Clann Credo

[Clann Credo](#) is a not-for-profit social investment fund which provides low cost loans of less than €30,000 to community groups who have confirmed grant funding, for example under LEADER. Low cost loans with minimal or zero arrangement fees are available without personal guarantees. Clann Credo targets social and employment projects in rural areas. The Community Loan Finance has €50 million available to support community and voluntary groups and social enterprises. The Community LEADER loan fund has €25 million available to assist with bridging and matching funding in advance of receipt of a LEADER grant.

10.5. Networking and Information

Irish Rural Link

[Irish Rural Link](#) (IRL) is a non-profit organisation which represents a network of 600 community groups, organisations and individuals campaigning for sustainable rural development and social inclusion. IRL is especially focused on disadvantaged or marginalised rural areas. It aims to articulate the needs of rural communities, to share experience and to provide direct support and guidance to member groups.



Community Wetlands Forum (CWF)

The [CWF](#) is a Special Interest Group of IRL. It provides a support network for community groups interested in protecting local peatlands and wetlands.

The Wheel

[The Wheel](#) is Ireland's national association of community and voluntary organisations. It acts as a one-stop-shop for the charity and non-profit sector and aims to build their capacity and capabilities in areas of advocacy, networking, training and skills, information services and funding.

Make Ireland Sustainable for All

[Make Ireland Sustainable for All](#) is a 3-year EU funded project initiative to support awareness and mobilise action on sustainable development. Actions are directed at the 17 Sustainable Development Goals (SDGs) for 2030 reconfirmed by the Rio +20 Conference in 2012. These include addressing poverty, education, human rights, food security, clean energy, climate, peace, sustainable consumption and urbanisation. In Ireland, the project is managed by World Vision Ireland, the Irish Environmental Network, UNESCO and Social Justice Ireland.

Connecting Communities with Peatlands

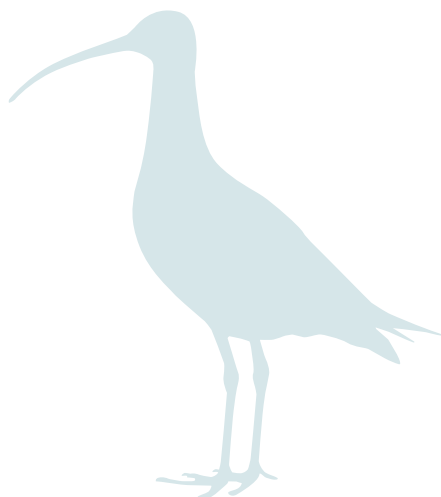
[Connecting Communities with Peatlands](#) is a community group capacity-building project funded by the Just Transition Fund and run in partnership with IRL and CWF. The project aims to provide community environmental groups with transitioning supports to connect local people with peatlands. Community groups can avail of workshops and capacity-building training for groups who wish to establish projects on their local peatlands. A mentorship programme will connect community groups across the country together to share knowledge, skills and best practice.

11. Summary

We hope that you have found these guidelines useful. They have provided an introduction to the ecosystem service benefits of wetlands and peatlands and demonstrated that the rewards to communities of working together to conserve and protect these environments are not confined to conservation and wildlife alone.

In addition, we hope that the guidelines have provided some assistance with the challenge of setting up and sustaining a community environmental group and with obtaining funding for tangible actions to promote, protect or restore wetlands and peatlands. Although the process of establishing a local group to protect these precious places is no doubt daunting at first, experience is rapidly accumulated and our workshop participants all reported positive returns in terms of their knowledge and abilities to become positively engaged, as well as the additional rewards of gaining new skills and working together with new acquaintances to achieve a common goal.

If you need more support, please contact us at the [Community Wetlands Forum](#), or contact your local heritage officer or organisations involved in peatland protection such as the [Irish Peatland Conservation Council](#).



Appendix 1: Definitions and Acronyms

Biodiversity	A short form of the phrase ‘biological diversity’, which means the variety of life on this planet and how it interacts within habitats and ecosystems. Biodiversity covers all plants, animals and micro-organisms on land and in water.
Blanket Bog page 8	An area of peatland that forms where vegetation rots very slowly due to the cool and wet conditions. Usually formed in upland and Atlantic coastal areas.
Callows	A seasonally flooded grassland ecosystem found on low-lying river floodplains.
Carbon sequestration	The long-term removal or capture of carbon dioxide from the atmosphere to slow or reverse atmospheric carbon dioxide pollution and to mitigate or reverse climate change. Carbon dioxide (CO ₂) is naturally captured from the atmosphere through biological, chemical, and physical processes.
Conifer	A tree that bears cones and needle-like or scale-like leaves that are typically evergreen.
Conservation	Preserving or protecting animals and resources such as minerals, water and plants through planned action (such as breeding endangered species) or non-action (such as not letting taps run unnecessarily).
Ecosystems	An ecosystem consists of living things (plants and animals) and the physical environment with which they interact
Ecosystem services	Ecosystem services are the many and varied benefits to humans provided by the natural environment (natural capital) and from healthy ecosystems
Ecotourism	Ecotourism is a form of tourism involving responsible travel to natural areas, conserving the environment, and improving the well-being of the local people.
Fauna	Fauna is all of the animal life present in a particular region or time.

<u>Fen</u>	A fen is a type of peat-accumulating wetland fed by mineral-rich ground or surface water
<u>Flora</u>	Flora is all the plant life present in a particular region or time, generally the naturally occurring native plants.
<u>Fossil Fuels</u>	such as coal, gas, peat and oil – that are formed in the ground over a long time from dead plants and animals and are used up once they are burned for energy
<u>Global North / Global South</u>	The concept of Global North and Global South is used to describe a grouping of countries along socio-economic and political characteristics. The Global South is a term often used to identify lower-income countries on one side of the so-called divide, the other side being the countries of the Global North (often equated with developed countries). As such, the term does not inherently refer to a geographical south; for example, most of the Global South is geographically within the Northern Hemisphere.
<u>Just Transition</u>	Just Transition is a framework developed by the trade union movement to encompass a range of social interventions needed to secure workers' rights and livelihoods when economies are shifting to sustainable production, primarily combating climate change and protecting biodiversity.
<u>Marsh</u>	A marsh is a wetland that is dominated by herbaceous rather than woody plant species. Marshes can often be found at the edges of lakes and streams, where they form a transition between the aquatic and terrestrial ecosystems.
<u>Natural capital</u>	Natural capital can be defined as the world's stocks of natural assets which include geology, soil, air, water and all living organisms.
<u>Natural Heritage Areas</u>	Areas considered important for the habitats present or which hold species of plants and animals whose habitat needs protection.

Peatland(s)	Peatlands are a type of wetlands. The term ‘peatland’ refers to the peat soil and the wetland habitat growing on its surface. In these areas, year-round waterlogged conditions slow the process of plant decomposition to such an extent that dead plants accumulate to form peat. Over millennia this material builds up and becomes several metres thick.
Raised bog page 8	An area of peatland that forms from the build-up of woody and rotting vegetation in depressions and lakes left behind by the retreating glaciers of the Ice Age. Mainly found in lowland areas.
Ramsar Convention	The Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat is an international treaty for the conservation and sustainable use of wetlands.
Riparian	relating to or living or located on the bank of a natural watercourse (such as a river) or sometimes of a lake or a tidewater
Special Areas of Conservation	These are prime wildlife conservation areas in the country, considered to be important on a European as well as Irish level and designed under the EU Habitats Directive (92/43/EEC).
Special Protection Areas	Ireland is required under the terms of the EU Birds Directive (2009/147/EC) to designate Special Protection Areas (SPAs) for the protection of rare and vulnerable bird species, migratory birds, and wetlands of international importance.
Sphagnum moss	A species of moss, commonly known as “peat moss” that typically lives on the surface of peatlands.
Subsurface geology	Subsurface geology is the study of the physical properties and location of rock and soil found below the ground surface.
Sustainable Development Goals	The Sustainable Development Goals or Global Goals are a collection of 17 interlinked global goals designed to be a “blueprint to achieve a better and more sustainable future for all”. The SDGs were set up in 2015 by the United Nations General Assembly and are intended to be achieved by the year 2030.

The Living Bog	The largest single raised bog restoration project ever undertaken in Ireland.
Turbarry	The legal right to cut turf or peat for fuel on common ground or on another person's ground.
Turlough	A type of disappearing lake found mostly in limestone areas of Ireland, west of the River Shannon.
Wetland(s)	An area of land that is saturated with water either permanently or seasonally, and where the water table is near or at the surface.

You can find the NALA Plain English Guide to Environmental Terms [here](#).

ABP	Abbeyleix Bog Project
BnM	Bord na Móna
CCDC	Cloughjordan Community Development Committee
CICES	Common International Classification of Ecosystem Services
CFI	Community Finance Ireland
CWF	Community Wetlands Forum
EPA	Environmental Protection Agency
ETB	Education and Training Board
ICSFA	Irish Cattle and Sheep Farmers Association
IFA	Irish Farmers Association
IFI	Inland Fisheries Ireland
IPCC	Irish Peatland Conservation Council
IRL	Irish Rural Link
IRWC	Irish Ramsar Wetlands Committee

<u>ISC</u>	Irish Sports Council
<u>LAG</u>	Local Action Group (re. Pobal)
<u>LAWPRO</u>	Local Authority Waters Programme
<u>NALA</u>	National Adult Literacy Agency (plain English guidelines)
<u>NBDC</u>	National Biodiversity Data Centre
<u>NHA</u>	Natural Heritage Area
<u>NGO</u>	Non-Governmental Organisation
<u>NPWS</u>	National Parks and Wildlife Service
<u>NTO</u>	National Trails Office
<u>NWT</u>	Native Woodland Trust
<u>OPW</u>	Office of Public Works
<u>PES</u>	Payments for Ecosystem Services
<u>PPN</u>	Public Participation Network
<u>RSS</u>	Rural Social Scheme
<u>SAC</u>	Special Area of Conservation
<u>SPA</u>	Special Protection Area
<u>SDGs</u>	Sustainable Development Goals (UN)
<u>UNDP</u>	United Nations Development Programme
<u>WDC</u>	Western Development Commission

Appendix 2: Checklist of Ecosystem Services

Ecosystem services type	Ecosystem service benefit	Measurement
Regulating	Water retention (all wetlands)	Number of people/businesses depending on abstraction or ground water in aquifers around the wetland
	Water quality (all wetlands)	As above, plus number of anglers or local people who value water-based wildlife and places.
	Sediment capture (marshes/ floodplains)	Farmers beside rivers, numbers of anglers. Evidence of unwanted deposition of silt.
	Pollination (all wetlands)	Number of farmers with pollination dependent crops.
	Carbon sequestration (peatlands)	Proportion of healthy intact bog or that which could potentially be restored.
Provisioning	Turf (though not truly an ES)	Number of turbary owners still harvesting peat. Number of active contractors.
	Water supply (all wetlands)	See 'Water retention' above
Cultural	Biodiversity (all wetlands)	Numbers of species (rare and other). Number of people who take an active interest in wildlife.
	Environmental education (all wetlands)	Number of school or study visits. Citizen science activities
	Landscape (all wetlands)	Contribution of the wetland or peatland within the landscape to local / numbers of tourists / tourist spending.
	Health & Well-being (all wetlands)	Number of active visitors, presence of paths/board walks.

Appendix 3: Quantifying the Public Good Benefits

A quantification of ecosystem service benefits, direct or indirect, could assist with making the case for protecting bogs and wetlands and with applications for support or funding.

a. Health benefits

Within the workshops that we have held with community environmental groups, the contribution to health has often been discussed. Some participants are convinced that being able to visit wetlands and peatlands, along with the opportunity this provides for peace and quiet, reflection or spiritual well-being, contributes enormously to their well-being and has sometimes helped to overcome diagnosed medical conditions. The examples are very convincing and there is consensus among medics and researchers that these benefits are real. Many studies describe the restorative benefits [9], [10], [11], [12], [13], although these are very difficult to quantify in economic terms.

The mental health benefits are clearly multiplied where access is made available and more people are able to visit the wetland or bog. At this stage, physical benefits also begin to be realised, most especially in communities where there is little safe off-road access to the countryside. Ireland compares very poorly with other EU States in this regard and, consequently, there is enormous latent demand for greater access as demonstrated by the success of the few projects which exist.

Around 60% of adults take insufficient physical activity [14] and 16% are classed as inactive [15]. Only 51% of boys and 38% of girls are believed to take the amounts of exercise recommended by the Health Service Executive. Regular exercise is known to reduce the risk of cardio-vascular disease, strokes, type-2 diabetes, breast cancer, colon cancer and to lower obesity, the incidence of which has been rising rapidly.¹⁰

These risks can be minimised by maintaining a moderate level of activity for 30 minutes each day [16], [17], [18]. Physical exercise is good for everybody of course, but most especially for those who are older or might previously have been less fit, but who now engage in daily walking, speed walking or cycling.

10 As recommended by the Irish Heart Foundation (http://www.irishheart.ie/iopen24/physical-activity-t-7_19_73.html).

For both individuals and society, there are benefits in terms of savings on healthcare expenditure [19]. One way to illustrate the economic benefit of reducing premature deaths due to additional exercise is provided by the WHO Health Economic Assessment Tool (HEAT) <https://www.heatwalkingcycling.org/tool/>. This tool is simple to use on-line and allows the user to adjust for walking or cycling, distance, age group, amount of new exercise or other factors, although the results are more convincing where there is a large change in habits. As an example, the following benefits were estimated over a period of ten years in three hypothetical cases where a previously inactive population takes up walking.

Table 1: Application example for HEAT Tool

4 km walk/day by 10 people	Equivalent 1 km walk/day by 50 people	
20-74 age group	20-74 age group	45-74 age group
€81 400	€407 000	€761 000
0.08 premature deaths avoided	0.01 premature deaths avoided	

These results are, however, very dependent on an estimate of what is called a Value of Statistical Life (VsL).¹¹ This figure is used by policy makers when, for example, estimating the benefit of new road facilities in reducing traffic accidents. It is useful to bear in mind that this estimate is based on the average value that an individual perceives from reducing their own risk of illness and premature death and the cost this involves in terms of their own health expenditure and suffering.

However, the estimate of VsL used by the HEAT tool does not capture the cost to the state of hospital care, or to society of lost productivity. Arguably, it should as these are the costs that are more relevant to the kind of bodies to which community groups might apply to for grants. Greater physical activity saves the State money. For example, it has been estimated in the UK that public healthcare savings of €2,900 per additional active person per year could be realised by reducing inactivity [20].

11 The default estimate of VsL used by HEAT for Ireland is €5.08m. However, some researchers argue that this figure could be more applicable to those people in work with dependents. If a more modest estimate of €1.5m is used, then the respective HEAT estimates are €24,000, €120,000 and €225,000.

In addition, the benefits of improved productivity at work and reduced absenteeism have been estimated at gross salary savings averaging 0.4 days for each employee taking up exercise of 30+ minutes per day [21].¹²

Specific benefits of social interaction, general well-being and physical activity have been identified for people at risk of depression [22]. Likewise, there are particular benefits for older people for whom opportunities for outdoor activity can often be limited [18], [23], [24]. Similarly, the health benefits of outdoor play and recreation have been described for children, extending also into later life. There is general comment that children's lifestyles have become more sedentary in recent years in response to the availability of electronic media [25], [26], [27], [28]. Similar benefits have been observed for adolescents and, in particular, the relationship with wild or natural places [29], [30]. For some further information see <http://www.ecohealth.ie/>

b) Carbon sequestration and storage

Peatlands accumulate carbon at a rate of about 0.27 tonnes per hectare per year [31], equal to around 0.06 million tonnes of carbon per year for Ireland's remaining intact peatlands. By comparison, peat extraction works can release 2.3 tonnes of carbon per hectare as the peatland dries out, even before consideration of the losses to subsequent combustion for heat or electricity. The sequestration of carbon by Ireland's intact peatlands is therefore very slight in relation to emissions. Nevertheless, the benefit (or cost avoided) of transforming peatlands from emitters to sequesters of CO₂ through successful re-wetting could be worth €338 per hectare [32], [33].

The more significant benefit is carbon storage. This storage has been estimated at 1.08 billion tonnes. Assuming that around 60% of compressed peat is carbon, a 2m deep blanket bog stores around 8,000 tonnes of carbon per hectare.¹³ A hectare of raised bog, at an average of 6m depth, would therefore store around 24,000 tonnes of carbon. Therefore, at up to 840 hectares, Clara Bog could contain 20 million tonnes of peat and each tonne of carbon equates to 3.67 tonnes of CO₂. A hectare of raised bog would, in principle, be worth €1.76 million at the current €20 per tonne price of CO₂ on

12 13 Using estimates by van Amelsvoort (2006) of savings of 4.7 days per year due to increased exercise, these savings would be around €750 per person assuming an average wage of €36,000.

13 <http://www.ipcc.ie/a-to-z-peatlands/>

the European Emissions Trading Scheme (ETS) or €4.40 million at the estimated cost of abatement (cost of switching from fossil fuels).¹⁴ It is not possible to extrapolate this current value to all the peat contained in the nation's bogs, but it could be used to price the imminent extraction/or protection of a few hectares of peatland. As climate change worsens, it is likely that this value will increase.

c) Water retention

Flood plains and wetlands hold water from rivers temporarily in times of high rainfall, slowing the rate at which this water flows downstream and moderating the risk and cost of flooding. Peatlands achieve the same result for rainwater by soaking up this water like a sponge. It is not really possible to estimate the value of this ecosystem service as it depends firstly, on the nature of the bog, and secondly, on the market value of property and infrastructure downstream. A pristine bog is already saturated, but most bogs in Ireland have experienced some drainage and, having dried out to an extent, will retain some additional water. If, however, drains are still in place and clear of debris, then water will be rapidly channelled to the local river where this additional water could cause flooding [34], [35], [36]. Likewise, very degraded bogs would release water quickly. As an indication of the ecosystem service benefit, the UK Environment Agency is investing in the restoration of degraded blanket bog above Carlisle where flooding in 2015 affected 1,930 homes for which the average insurance claim could be £50,000 (losses to businesses and infrastructure would be additional). [37]

d) Water quality

Dissolved organic carbon from degraded bogs tends to make water discoloured and silty and difficult to treat for drinking. For example, the Bamford Water Treatment Works in the UK Pennines which services a population of over 1 million, spent up to £4,000 per week in 2011 on removing such sediment.¹⁵ Carbon particulates in the water from degraded peatlands also present a risk of carcinogens when subjected to chlorination and consequently potentially significant health costs. UK water companies, including Northern Ireland Water, have been contributing to peatland restoration, e.g. in the Antrim Glens, to mitigate this problem.

14 15 UK DECC (2009)

15 https://www.moorsforthefuture.org.uk/_data/assets/pdf_file/0027/92457/BAMF-PTDP-Report.pdf

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