Crops
Environment
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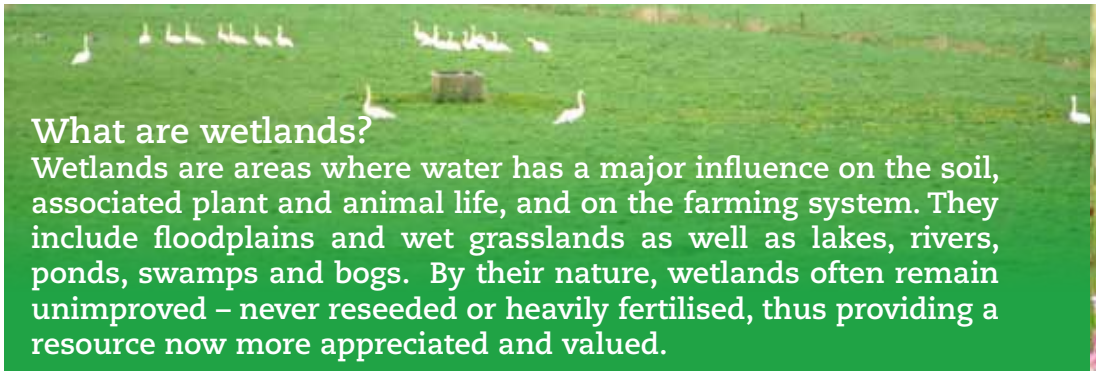
Programme

Farming and Wetlands

teagasc
Agriculture and Food Development Authority

Irish Ramsar
Wetland Committee



What are wetlands?

Wetlands are areas where water has a major influence on the soil, associated plant and animal life, and on the farming system. They include floodplains and wet grasslands as well as lakes, rivers, ponds, swamps and bogs. By their nature, wetlands often remain unimproved – never reseeded or heavily fertilised, thus providing a resource now more appreciated and valued.

The Ramsar Convention

Wetlands are so important that a United Nations-supported convention on wetlands was held as far back as 1971 in Ramsar, Iran. Its key theme is "Wise use of wetlands", as a natural resource for everyone – at international, national and local level. Being guardians of so many of these special habitats, farmers have a key role in the "wise use" of wetlands

Why are wetlands important?

- They act as a giant sponge regulating water flow and reducing flooding
- Filter out or trap nutrients - N and P
- Can store Carbon – reducing greenhouse gas emissions
- Provide habitat diversity and areas rich in biodiversity
- Act as refuges for predators used in biological control of pests
- Provide pollinator food source
- Provide landscape amenity and recreational value

Wetlands on farms

Turloughs

Turloughs are unique grazing areas that flood up to six months a year. They occur where pure limestone rock is near the surface. The annual flooding with lime-rich groundwater helps maintain soil fertility. They are especially vulnerable to drainage. Excessive nutrients from run-off into the basin or the groundwater can alter the plant and insect communities.


Turlough in Winter


Turlough in Summer

Turloughs act as temporary holding basins during high flooding. The vegetation is adapted to the varying flood durations, occurring in concentric zones around the basin. As a farmed habitat, fields radiate out from the central basin belonging to different farms, giving stock access to water when wet. Variations in farm stocking rates and times enhance the diversity of plants and invertebrates.

Fens and Swamps

Fens are wet peat-forming systems fed by alkaline groundwater. Fens support a wealth of species, such as orchids and rare mosses, especially near springs. As they are peat-forming, like bogs, they are important for storing carbon and act as giant sponges to reduce flooding. The specialist plant communities are negatively affected by drainage work, fertiliser and herbicide usage.


Fens

Swamps are often found on lake-shores and other low-lying areas with fluctuating water-levels. They have tall vegetation including reeds-and yellow flag or iris. These are susceptible to drainage and fertilizer application, both of which reduce species richness and threaten water quality.


Swamp

Callows

Callows are flood-meadows alongside large rivers, especially the Shannon. Annual winter flooding provides nutrients. In summer, they are used for pasture or cut for hay. The richness of species provides excellent hay quality. Heavy fertilizer or herbicide usage can reduce plant species diversity, especially herbs, and therefore the hay quality. Corncrakes (now very rare) and breeding waders use these meadows. These ground nesting birds need to be left undisturbed during the breeding season – conditions which are provided by the late cutting of these wet meadows.


Callows

Salt marshes

Salt marshes are coastal flood-meadows that provide valuable grazing especially in the west of Ireland, where the adjacent land may be poor. They provide essential minerals and both cattle and sheep thrive on the grazing. The salt water environment can reduce the threat from certain pests such as liver fluke. They are important for storing carbon and act as important flood defences.


Salt Marsh

Wet grasslands

Wet grasslands support a range of specialist plants and animals. Colourful flowers such as ragged robin or buttercups provide nectar for pollinating insects, including honey-making bees. The moist habitat suits frogs, which feed on slugs. Rushes may be plentiful and regular cutting of these enhances plant diversity, fodder quality and the habitat. Excessive fertilizer or herbicide usage reduces the diversity that is important for a balanced system.


Wet grasslands

Ponds

Ponds of all sizes can provide temporary or more permanent habitats for wildlife. They are excellent habitats for frogs, newts and dragonflies. Breeding waders such as redshank and snipe use these areas where access is suitable via a shallow slope. Ponds can be created where a suitable supply of water is identified.


Ponds

Watercourses – drains, rivers and streams

Small drains (or "ditches") run into larger ones, finally forming streams and rivers. What happens in the smallest drain can have knock-on effects on our larger rivers. Thus chemical run-off into drains may affect fish in a nearby river. Drains can harbour high numbers of specialist plant and invertebrate species.

The Ramsar Convention and Wise Use of Wetlands: what can farmers do?

- ✓ Identify wetland areas and types on your farm
- ✓ Avoid drainage that affects wetlands
- ✓ Restrict nutrient and herbicide use near wet areas
- ✓ Create buffer zones around wetland areas
- ✓ Manage neglected ponds to let in light
- ✓ Graze wetland areas at a low stocking rate
- ✓ Avoid overgrazing especially on upland peatlands
- ✓ Activities in designated NATURA wetland sites may require consent from NPWS

Wetlands and legislation

Wetlands are important habitats on farms, providing habitat diversity and ecosystem services and as such should be retained (some are protected under the Birds Directive; Habitats Directives).

Drainage or reclamation of wetlands is controlled under the Planning and Development Regulations. Planning permission is required from your Local Authority for proposals to drain wetland areas in excess of 0.1 hectares, or below that where they would have a significant effect on the environment. Planning permission is also required for constructed wetlands.

It should be noted that all ground works in the vicinity of a known archaeological monuments require Ministerial consent under the National Monuments Acts. See www.archaeology.ie

	Planning Application required	Planning Application (with EIS) required
Drainage or Reclamation of wetlands	• Above 0.1 hectare • Works may have significant effect on the environment	Above 2 hectares

Further information:

"Minding our watercourses" Countryside Management Series No. 8, Teagasc and Inland Fisheries Ireland

Environmental Impact Assessment (Agriculture) Regulations 2011: Guide for Farmers. DAFM www.agriculture.gov.ie

www.teagasc.ie www.irishwetlands.ie

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