



Submission to the Citizens' Assembly on Biodiversity Loss

by

The Dublin Naturalists' Field Club

Executive Summary

Conserving what remains of our authentic, natural habitats is of primary importance. Many native species — of high biogeographical significance — have declined sharply in both extent and population size due to loss of habitat. Sites of high nature conservation value must be protected against loss and damage as a matter of the utmost urgency, by enforcing existing legislation, preparing and implementing evidence-based management plans and adopting other appropriate measures on a site-by-site basis, to ensure that wherever natural habitats of scientific interest still remain, they are adequately protected. Sites which have been damaged but still have potential for partial restoration should be managed sensitively to allow natural regeneration and ensure that damaging practices cease.

All sectors, including the general public, need to work co-operatively to achieve this objective. This will require a restructured National Parks and Wildlife Service (NPWS) with an enforceable mandate; Local Authorities having expertise to produce and implement informed Biodiversity Action Plans; and effective development control by both Local Authorities and An Bord Pleanála.

An increased understanding and accurate assessment by Teagasc of the negative effects on biodiversity of some agricultural policies and the appropriate amelioration measures is needed.

Native woodlands are under serious threat from pathogenic pests and all plant species are threatened by the introduction of non-native genetic stock. The strengthening, implementation and enforcement of phytosanitary regulations and genetic screening by authorities is urgently required.

The agro-forestry strategy needs to be reviewed and requires an additional approach beyond the present provision of initial planting and maintenance grants

The lack of political and administrative commitment in enforcing EU legislation on peat extraction in a significant number of SACs is a major affront to biodiversity which must be remedied.

Habitats, flora and fauna must be respected for their own sake and not used as lures for tourism and the consequential negative impacts. Nature-based solutions and “green infrastructure” must not be allowed undermine indigenous habitats.

Effective strategies are required to remove and prevent further importation of invasive species, including the importation of bees, to minimize the risk of introducing invasive pathogens.

There is an urgent need to provide training in fieldcraft for science students to ensure detailed knowledge of habitats and species is handed on: this is a deficit we ignore at our peril.

A complete overhaul of environmental law is required as at present access to information on enforcement of the law is difficult and sanctions are too low to prevent reoffending.

1. Introduction

“Ireland is a delightful country for the pursuit of work in the field. Enclosed or preserved ground is but seldom met with, and the country is free and open. Few rivers but can be forded; few marshes or bogs but can be crossed; few precipices but yield their treasures to the mountaineer; few spots are so remote but they may be visited in a good day’s walking from the nearest stopping-place.”

Robert Lloyd Praeger¹
President DNFC 1898–99 & 1937–38

Since Praeger made this statement in 1901, the nature and pace of habitat destruction has overwhelmed most of the indigenous, semi-wild components of the Irish landscape, the habitats and their species. The Dublin Naturalists’ Field Club (DNFC) calls on the Citizens’ Assembly on Biodiversity to address nature conservation in an urgent and comprehensive way to ensure that biodiversity loss is halted and that we conserve and restore what remains of our natural habitats.

2. Biodiversity

What is biodiversity and why does it matter?

The complex, indigenous communities of plants, animals and microbes in natural (or semi-natural) habitats, which have arisen in response to the particular environmental conditions in each place, constitute the unique and irreplaceable biodiversity of Ireland. Conserving what remains of authentic, natural, in situ habitats is of primary importance. These are of intrinsic value — important for their own sake — not simply for ‘ecosystem services’, where nature is sadly put to merely utilitarian purposes or valued in terms of what it can do for us.

Influenced by its climate and its geological history, the island of Ireland possesses a unique land and marine biodiversity and is the stronghold for a number of habitat types (and their included species) which are scarce or in decline in the rest of Europe, such as raised and blanket bogs, turloughs and machair. Many sites have been degraded due to human activities; yet, much remains that is of value.

In this submission, the DNFC focuses primarily on suggestions for halting biodiversity loss in our terrestrial ecosystems.

Decline and loss

Many species have declined sharply in geographical extent and population size, especially due to loss of habitat. Addressing biodiversity loss must focus in the first instance on halting this decline. In order to do this, we must understand the nature of the decline and what has driven it to this point, including the failure of the state to protect designated sites, as well as other comparable undesignated (often smaller) sites of scientific interest, which are afforded no legal protection. These small areas have become more important as the surviving remnants of the former natural landscape, since other sites have been destroyed.

In our experience, our indigenous biodiversity, including its distinct genetic component, is already under severe threat in Ireland. The overwhelming body of evidence referenced in publications such

¹ Irish Topographical Botany, Proceedings of the Royal Irish Academy, 1901.

as the BSBI atlas², the BBS rare and threatened bryophytes volume³ testifies to the magnitude of the destruction of these significant western European habitats at national level. The natural heritage value of these habitats and sites has been progressively reduced to the point where immediate and relevant actions are necessary to forestall further loss.

The evidence for biodiversity loss arises from the recording of organisms in the field, and the creation of baseline data against which future changes can be measured. The Dublin Naturalists' Field Club has an unparalleled record of documenting the changes to the flora (higher plants and bryophytes) and invertebrate fauna (butterflies, molluscs and terrestrial isopods) over the past 136 years. Many of Ireland's premier conservation and recording schemes stem from the pioneering work that was carried out over many decades by members of DNFC.

Stark evidence of the loss of biodiversity in Ireland is to be found in the periodic reports by the Irish Government to the European Union on the 'Status of EU Protected Habitats and Species in Ireland'. The third such report was published in 2019. In summary, it reported that only 15% of the 59 Habitats Directive Annex I habitat types included were in a favourable condition; 46% were judged to be inadequate; and 39% were deemed to be in a bad condition. In addition, of the 60 Habitats Directive Annex II-listed species assessed, 57% were claimed to be in a favourable condition; 15% inadequate; 15% were in a bad condition while the status of 13% was unknown. These reports relate solely to our national failure to protect legally designated Natura 2000 habitats and species, but current field evidence indicates that the general decline in biodiversity is far in excess of these figures.

The principal reasons for biodiversity loss in Ireland arise from human activities. These include agricultural intensification, arterial and field drainage, afforestation, resource extraction and commercial, industrial, recreational and residential development, and poorly-informed landscape management.

Conservation of natural habitats, flora and fauna

Conservation of natural habitats and their indigenous flora and fauna is paramount in addressing biodiversity loss. Yet, they have suffered widespread destruction and damage. There has been a failure to enforce conservation legislation for sites of high nature value. The provisions of the legislation in some cases are inadequate, and many sites of high nature conservation value are not legally recognised or designated for conservation. This has led to the destruction and degradation of many parts of the countryside which were formerly rich in biodiversity and of ecological and scientific importance. Many species which were once widespread in Ireland are now rare due to loss of habitat, and they are threatened with extinction, locally or regionally. The distribution of these rare and declining native plant and animal species follows biogeographical patterns and depends on particular combinations of environmental conditions, such as geology, soil type, climate and water quality. Changes to these conditions — such as drainage or pollution — disrupts the ecological support systems of these species so that they can no longer survive. Thus, to ensure there is no further loss of vulnerable species, we must safeguard their habitats.

Many sites which have been damaged in the past have the potential to be restored. If the underlying environmental conditions still exist and if damaging practices cease, natural regeneration

² Online version available at <https://plantatlas.brc.ac.uk>. Print version due 2023

³ Lockhart, N., Hodgetts, N. & Holyoak, D. (2012) *Rare and threatened bryophytes of Ireland*. National Museums Northern Ireland.

may occur, especially where viable seed banks still remain in the soil. Thus, it may be possible to rescue some damaged sites with careful management.

Misconceptions

The term ‘biodiversity’ in everyday usage is generally ill-defined and it is often associated with concepts and actions which are irrelevant or even damaging to the conservation of native species. The recent trend for sowing so-called ‘wildflower’ seed mixtures in the expectation that this will be of benefit to certain insects illustrates the point. In reality, insects have more complex needs than this simplistic approach assumes and introducing swathes of short-lived ‘wildflowers’ onto roadsides and so-called waste ground is at best cosmetic and palliative; at worst, it is destructive. It distracts from recognition of the real problems facing our native flora and fauna. The introduction of non-local plant species into areas where they have never naturally occurred displaces native species, contaminates the genetic integrity of the species which are truly native to the area and disregards (and often destroys) the pre-existing biogeographical evidence and ecological significance of the site into which the seeds have been sown (for further reading, see our position paper ‘The case against wildflower seed mixtures’, www.dnfc.net).

The term ‘green infrastructure’ is also problematic. It is used to encompass everything from newly designed green spaces (such as urban parks) to legally designated nature conservation areas of scientific interest, with the assumption that both are of benefit to ‘biodiversity’. This poses a serious threat to some of our most significant natural habitats by failing to recognise the different roles and significance of various types of open spaces. At one end of the spectrum, are landscaped green spaces. These horticultural interventions in the landscape — which are essentially forms of gardening, however eco-friendly and welcome on that level — simply impose our designs on the landscape. At the other end of the spectrum are natural (or semi-natural) habitats which have evolved independently of our actions in response to complex biotic and abiotic factors, are of scientific interest and of high nature conservation value, containing highly specialised communities of plants and animals that are in decline locally and globally due to human activities. Failing to acknowledge this distinction, for example in County Development Plans, and lumping all into one category is posing one of the most serious threats to our natural environment and far from addressing biodiversity loss, it is driving and compounding the problem.

Habitats which have taken thousands of years to take form can be wiped out overnight, by landscaping and other so-called nature-based solutions. Tree-planting, the use of ‘wildflower’ seed mixtures and other forms of ‘habitat creation’ threaten pre-existing plant and animal communities and divert attention away from the real issues. This type of action may suit some common species and enable them to expand in range or population size. Such species have broad ecological ranges and adapt easily to urban environments: they are not under threat. These measures, therefore, are largely irrelevant to the rare and threatened species, whose needs are much more complex.

3. Principal reasons for the loss

Agriculture

Irish agriculture has changed dramatically over the period since Ireland joined the EU, with farmers encouraged to invest in a modern, intensive approach and to increase the farm output required to sustain a thriving processing industry and export sector. The consequences of this intensification, and the associated increase in stocking rates, include: the drainage of previously wet areas; the reseeded of high nature value pastures; the increased use of nitrogenous fertilisers and pesticides; the removal and inappropriate management of hedgerows; the over-grazing of hill and mountain

pastures and commonages; and the abandonment of land no longer considered viable to farm. All of these actions have had a negative impact on the biodiversity of a once rich and diverse agricultural landscape.

Peatlands

As a result of the fuel emergency experienced in Ireland during the Second World War, the Government of the day decided to develop part of Ireland's peat resources for energy using mechanised techniques. This not only destroyed the biodiversity associated with the living peatland habitat, but it also had an enormous impact on the surrounding hydrology. Drains and outfalls created to remove the water held in the peatlands, and progressively deepened over several decades, also facilitated the drainage of bordering farmlands. The adjacent landowners capitalised, with State encouragement, on this peatland drainage to drain their own lands. All of this had an enormous impact on the plants that could no longer survive in the new, drier habitats and on the other organisms that depended upon them.

Forestry

Conifer plantations comprise dense, even-aged monocultures which eliminate the pre-existing indigenous biodiversity. Fertilisers and often herbicides are applied at planting, and pesticides may be used before the plot matures. The subsequent clear-felling causes surface runoff with consequent damage to our rivers and streams. The naturally-occurring, ecologically sensitive species never return.

Hedgerows

Our hedgerows are currently suffering from under-management, from over-management, from complete removal or from continued illegal cutting in the closed season. The accelerated demise of our hedgerows began with the advent of post-and-wire fencing as a stock-proofing measure and, in more recent years, with the expansion of inappropriate hedge-cutting measures. The biodiversity benefits that were once evident in rotational hedgerow management through the coppicing and laying within farms are now rarely achieved.

The current widely promoted style of hedgerow management fails to address the complexity of our hedgerow network, with its tree, shrub and ground flora layers and attendant soil fungi, microorganisms and dependent invertebrates. Additionally, the importance of some of our townland boundary hedges as remnant woodland fragments, and therefore as potential refugia for rarer species, is seldom understood or acknowledged.

Policy failures

In May 2019, the Dáil voted upon and declared both a National Climate and a Biodiversity Emergency. This can be seen as the result of both EU and National policy failures over the preceding decades and the lack of an integrated environmental approach. These policy failures continue today and an urgent choice will have to be made on whether we value short-term, subsidy-driven, economic growth, which plunders our environment, or sustainable practices to reduce our dependence on fossil fuels, restore degraded ecosystems and prevent additional development from further eroding our native biodiversity. It is unfortunate that, in the eyes of the public, actions taken for climate change often tend to be considered as synonymous with actions for biodiversity.

Ireland has had three National Biodiversity Actions Plans, the first in 2002 and the most recent for the period 2017–2021. These plans have been theoretically incorporated into various Local Biodiversity Action Plans. Collectively, they have failed to understand or address the drivers of

biodiversity decline (species, habitats and ecosystems). How has this situation come about? The Dublin Naturalists' Field Club has identified a number of reasons:

A lack of political awareness or a lack of will?

It is clearly evident that at both local and national level the term "biodiversity" is considered to be an abstract concept, whose true nature has not been fully appreciated or understood. While acknowledging the extreme urgency of action to ameliorate the progressive impact of climate change, we can and must simultaneously take decisive action to protect our biodiversity (genetic, species and habitat/ecosystem) in all its aspects. Climate change strongly influences the integrity and authenticity of our natural biodiversity which is now being seriously challenged by the spread of invasive species. However, before the impact of these changes becomes fully evident, we are acutely aware that significant habitats and species are being lost from Ireland as a result of other more immediate pressures whose effects can be offset by actions which are within our control.

A lack of political focus

Since 2019, much more political attention has been given to Ireland's stubbornly high greenhouse gas emissions than has been accorded to the issue of biodiversity loss. In reality, political inertia is presently very high. Unfortunately, there have been very few political dividends for politicians, both local and national, prepared to advocate for biodiversity. Strong public pressure is needed to stimulate well-informed policy and action.

An agri-environmental mismatch

Agriculture has been one of our most economically successful industries. However, it is difficult to understand why the agricultural industry, as the major contributor to both biodiversity loss and climate change, has never been part of the remit of an "environmental" Department of State. In DNFC's view, both of the strategy/vision reports '*Food Harvest 2020*', and '*Food Wise 2025*' avoid completely the environmental destruction consequential to increasing agricultural output and exports, rather than seeking to acknowledge, address and quantify detrimental impact. The current strategy set out in '*Food Vision 2030 — A World Leader in Sustainable Food Systems*' has sought to advance further along this trajectory.

For 50 years farmers have been encouraged and incentivised by the organs of the State, by its advisory services and also by the primary driver — the EU Common Agricultural Policy — to intensify agricultural production without consideration of the biodiversity impact. Farmers should now be supported to adopt enduring practices which are of direct benefit to the native significant and declining species, and not financially penalised by any sudden policy reversal which is attempting to ameliorate the serious damage it has caused to our biodiversity.

An inadequate Common Agriculture Policy (CAP) Strategic Plan

Support mechanisms have been a feature of Irish agriculture for many years. Subsequent to joining the EEC (EU) in 1973, the level of price support increased. The effect of these subsidies was to decouple farming from the influences of the market, with the result that today, processors, distributors and supermarkets receive the greatest proportion of the profits. These subsidies have had detrimental effects on the Irish environment, for example, the destruction of our uplands and commonages in the 1980s through the introduction of headage payments for sheep. In more recent years the central subsidy, or the single farm payment, was paid on a per hectare basis, but to get the full amount the land had to be 'agricultural land', which left no space for nature. The mechanism by which these subsidies are periodically revised are the CAP Strategic Plans.

Ireland's draft CAP Strategic Plan for the period 2023–27 was submitted to the European Commission at the end of 2021. The Commission responded in March this year expressing doubts about the effective contribution of the Strategic Plan to strengthen environmental protection in Ireland. In strong language, it considered that further improvements and more ambition were required. In August, a revised CAP Strategic Plan⁴ was accepted by the Commission. It is the view of the DNFC that this revised CAP will have limited, if any, success in halting or reversing biodiversity loss across the majority of farm habitats or in our aquatic environments.

While the introduction of results-based payments is to be welcomed, it is important to note that a top-down, one-size fits all approach will not achieve the intended results, i.e. to protect and improve the current conservation status of important sites. Much more expertise is required — including the knowledge of locally efficient farmers, already producing in harmony with nature. Agricultural advisers who have operated within the intensive farming system do not have the knowledge or practical experience to guide these actions. Neither do desk-top ecologists who are simply copying and pasting generic 'biodiversity' actions to fill up prescribed percentages of 'spaces for nature'. For example, creating 'semi-natural grassland' on heavily enriched soils, or native woodlands (or hedges) of non-native provenance or origin, or planting birdseed mixtures of dubious origin. These actions will do little to mitigate the effects of intensive practices on the remaining land of these farms, in terms of soil microorganisms, air and water quality, habitat diversity or species richness.

Water Policy Failure

The EU Water Framework Directive (2000/60/EC) requires Member States to protect and improve water quality in all waters so that they achieve good ecological status by 2015, or by 2027 at the latest. Water quality indicators for 2020, published by the EPA, show that only 57% of rivers and 56% of lakes have good biological status. This means that the remaining water bodies are not likely to be supporting the species which should naturally occur there. High nutrient levels from agriculture and from wastewater were identified as the predominant sources of nutrients leading to the poor quality of our water. The continued policy of derogation from the Nitrate Directive is difficult to comprehend and defend.

Ireland's CAP Strategic Plan included a request that an unknown number of water bodies be exempt from the requirement to reach 'good ecological status' because of agricultural pressures. The Commission rightfully requested more specific information on how many water bodies Ireland wished to exempt. Why should any be exempt? Additionally, there has also been a reprehensible tardiness in upgrading the nation's sewage treatment plants, with a marked absence of tertiary treatment and the discharge of untreated sewage following heavy precipitation.

4. The way forward

A multifaceted approach is needed in order to attempt to salvage Ireland's damaged biodiversity. Ideally all sectors, agencies, interests and the general public should co-operate and have a common vision and common objectives for what needs to be done.

An Empowered National Parks and Wildlife Service (NPWS)

In order to ensure that biodiversity loss in Ireland is first arrested and then reversed, we need the NPWS to operate in a fully effective manner. A recent review of the NPWS⁵ concluded that there

⁴ <https://www.gov.ie/en/publication/76026-common-agricultural-policy-cap-post-2020/?referrer=http://www.gov.ie/cap/>

⁵ <https://www.gov.ie/en/publication/fbb81-national-parks-and-wildlife-service-strategic-action-plan-and-review/>

were major strategic, structural, capacity and resource issues, and that it was not capable of meeting its current demands or delivering on its mandate. The NPWS needs to have the ability to scrutinise the proposed actions of both the public and private sectors and to audit the outcomes of actions initiated by them. Currently the NPWS appears to be very constricted in its enforcement power and has not developed a constructive relationship with the expert biological community. DNFC supports a restructured NPWS, as an empowered, efficient and effective organisation with an enforceable mandate. Increased resources alone will not ensure success. Recent history has shown that moneys can be made available for high profile single species initiatives. We advocate the creation of an effective, independent, oversight body with executive legal powers that would audit and evaluate the performance of the NPWS in fulfilling its remit and make recommendations to enhance its performance.

Local Authorities and An Bord Pleanála

Our Local Authorities have various responsibilities which directly impact on the environment, including the preparation of County Development Plans, adjudicating on planning applications, monitoring and enforcement of water related responsibilities, enforcement of the regulations under the Nitrates Directive in their areas, development of Local Biodiversity Action Plans and Native Woodland planting schemes, along with protecting and educating on local heritage and biodiversity. In more recent years, Local Authorities have been given responsibility for the conduct and scrutiny of Appropriate Assessments (AAs — assessments of the potential adverse effects of a plan or project on SACs and SPAs) and Environmental Impact Assessments (EIAs — assessments of projects and plans that are likely to have a significant effect on the natural environment). All of the above place a large responsibility on Local Authorities to ensure that their actions achieve the best possible outcome for the conservation and protection of biodiversity. These are very complex areas of responsibility to be serviced and overseen.

The DNFC does not believe that the Local Authorities are adequately resourced or structured to manage and deliver on all of their statutory habitat protection obligations. Central Government and its agencies should provide all relevant local biodiversity information to the Local Authorities in an intelligible and readily accessible format. Similarly, we do not believe that An Bord Pleanála, as the body which ultimately decides on development applications, has the scientific or ecological competence to effectively adjudicate on the impacts of planned developments on biodiversity. Substantial additional specialist in-house staff, with the necessary expertise, are urgently required in both Local Authorities and An Bord Pleanála to understand and evaluate the quality, accuracy and comprehensiveness of all the components of ecological assessments, to ensure that biodiversity matters are adequately considered in the decision-making process. It is essential to verify the quality, veracity and comprehensiveness of ecological assessments submitted as part of planning applications and that the associated field work is carried out in season.

The DNFC considers that many of the actions contained in recently published costly Local Biodiversity Action Plans for urban areas amount to little more than ‘gardening’ of the landscape and are often little more than generic copy-and-paste exercises and not tailored to the locality. Such horticultural activities are unlikely to have any measurable beneficial impact on authentic biodiversity. The Biodiversity Crisis is not one of urban gardens or roundabouts, but has arisen from the destruction of our original habitats. (For our position on the improper use of ‘wildflower’ seed mixtures, see www.dnfc.net.) This acceptance and tolerance by the Local Authorities has led to high levels of confusion as to what actions might have a positive impact on biodiversity. The DNFC believes that biodiversity conservation requires informed scientific assessment, detailed protection plans, and a competent independent audit and evaluation to ensure the conservation of the existing

biodiversity. We therefore call upon this Citizen's Assembly to require that Local Authorities prepare realistic and well-informed Biodiversity Action Plans that ensure the protection of natural habitats of high conservation value, and address any threats to these habitats, within their boundaries.

Agriculture

The agricultural industry which manages 68% of Ireland's landscape⁶ comprises the largest sector and has been, perhaps unwittingly, the primary influencer of our biodiversity losses through its management practices. Since joining the EU (EEC) farmers have been assisted and incentivised through the Common Agricultural Policy (CAP) to focus on intensification, efficiency and volume output and exports without due attention to the deleterious effects of high fertiliser inputs and reseeded together with land drainage and 'reclamation'. One of the larger habitat losses has been the disappearance of our limestone species-rich grassland in the Central Plain. Both intensification and total abandonment are disastrous for habitat quality. The revision of price support mechanisms of CAP 4 must be fully informed by the knowledge of the consequence of the policies of the past fifty years. This may require an informed mechanism of compensation / rewards to facilitate the de-intensification of agriculture in order to ensure the survival of our residual biodiversity.

Some of the currently favoured fixes such as multispecies swards, hedge planting and its eccentric management, planting for pollinators and the erection of fashionable artificial shelters for wildlife (e.g. bee hotels), are simply short-term diversionary measures. They will do little for biodiversity and merely deceive landowners and their funding agents into believing that they are benefitting biodiversity when in fact they are designed to copper-fasten the existing unsatisfactory state of affairs. There is still the potential and opportunity to reorient agricultural financial support in order to de-intensify land use and to assist habitat recovery. One very helpful additional measure would entail drainage reversal in wet land, an area and habitat which has suffered major loss of species.

Teagasc (The Agricultural and Food Development Authority) is both a statutory body and a registered charity with an advisory and instruction/education role. It is viewed by some as an independent body despite the composition of its Board. It is far from clear that the organisation has the will, or understanding, or the capacity to take on board expert independent opinion on the biodiversity consequences of the implementation of its advice and direction to its clients who have the aspiration to maximise their CAP funding via the Department of Agriculture, Food and the Marine (DAFM). Indeed, it is our view that Teagasc has not engaged in any meaningful, statutory or informal dialogue with the biological recording community. Advice emanating from Teagasc suggests that either there is a large deficit at policy development level in its understanding of the importance of biodiversity issues, or else that any latent biodiversity concern has been totally eclipsed by the objective of maintaining the levels of intensity of food production.

Forestry and Native Woodland

Ireland has approximately 10% of its land mass covered by trees⁷ with much of our forests planted as monocultural "crops" and managed on a rotational /clear fell regime. Afforestation has inflicted much irredeemable damage to natural habitats of high nature value. Agricultural "marginal" lands that have been drained and fertilized are now covered with a dense light excluding canopy of non-native conifers. The occasional remaining habitat fragments are a sober reminder of what was.

Our existing tree stock is under threat from disease introduced by pathogen-infected imports. Ash Dieback disease arrived on imported ash stock in 2012 and has spread nationwide devastating these

⁶ Corine 2018 (<https://gis.epa.ie/GetData/Download>)

⁷ Corine 2018 (<https://gis.epa.ie/GetData/Download>)

trees in our woods and hedgerows. Furthermore, we have recently seen the advent and spread of new pathogens and diseases which include sudden oak death, horse chestnut bleeding canker, mountain ash disease and sudden larch death. Other pests are certainly on the way. The spread of these diseases testifies to the need for the strengthening and implementation of phytosanitary regulations and the necessity for other physical checks at all ports. Inspection of paperwork alone does not suffice. These measures are essential to prevent the arrival of disease-carrying material — plants, seeds and wood — in commercial consignments, or by passengers in their personal luggage.

A great deal of emphasis has recently been placed on the creation of “native woodland”. However, any notion that native and ancient woodland can simply be “created” ignores the fact that native and ancient woodlands have taken thousands of years to reach their present state. Complex species/habitat interactions occur in such multi-aged environments. Tree planting in itself cannot create biodiverse habitat although it may result in the arrival of some mobile species of vertebrates — birds and small mammals. These actions will not significantly augment and consolidate the populations of sedentary species of the soil/leaf litter interface e.g. bryophytes, molluscs and soil invertebrates.

It is evident that adequate genetic screening of stock is neither demanded nor implemented in such planting schemes and that characters such as stem straightness or speed of growth are considered desirable traits irrespective of the consequences of their being planted on significant semi-natural habitat (e.g. The Irish Birch and Alder Improvement Programme. Teagasc 2017). This initiative disrupts biogeographical patterns and may militate against resilience to disease and climate change.

With a new commercial forestry programme being launched for the period 2023–27, farmers and landowners will undoubtedly be encouraged to plant more trees. DNFC wishes to draw attention to the evident knowledge deficit at management level within the relevant state bodies. We believe that a broader vision for forestry and greater leadership will be required, far beyond the simple provision of initial planting and maintenance grants. In particular, expertise is urgently required within both the DAFM and within Teagasc to guide and inform continuous cover practices and agri-forestry. The planting of non-native species of broad-leaved trees requires very careful evaluation. Additionally, adequate and timely advice needs to be given to landowners when difficulties arise with tree pests, pathogens and diseases. It is our view that these activities should be subjected to rigorous ecological audit in order to calculate the net species and habitat benefits as set against proposed expenditure.

Rather than attempting to plant woodlands, an alternative approach would be to let nature take its course and allow forests to develop and evolve naturally. This can be achieved by employing ecologically important measures, e.g. by reduced grazing levels. This would allow existing woods to expand their range, to occupy their former position in the landscape and to become recolonized by species of plants and invertebrates from adjacent ground. This would also enable the reconnection of some of our remaining ancient and isolated boundary hedgerows to existing aboriginal and natural woodlands. The above measures would help to protect the genetic integrity of the local species pool and harmonise the interdependent relationship between the locally occurring species (plant and animal) and their habitat.

Peatlands

The devastation of our bogs is probably the most publicised habitat loss in Ireland. An outsider might conclude it has all been part of a grand conspiracy to destroy our bogs and leave behind a wasteland. Formerly, there was a gradual extraction of peat for domestic heating, this was then followed in the 20th Century by industrial semi-state extraction for both fuel and electricity

generation and large-scale exploitation for horticultural purposes. Furthermore, drainage has facilitated “reclamation” of bog for agriculture and unsuccessful afforestation.

The precarious state of our network of Protected Peatlands is illustrated by the fact that the original area covered by raised and blanket bog was one million hectares. But in 2015 only 0.1% (1210 ha) of the Protected Near Intact Bogs was still significantly growing⁸. Only the most optimistic of us can have the confidence that even this small portion of our raised and blanket bogs will be protected - let alone that our residual non-SAC sites can be truly rehabilitated. Efforts are currently being made to salvage part of our residual peatlands with aspirational policies laid out in official documents such as the *National Peatlands Strategy* and *The National Raised Bog SAC Management Plan*. We note intentions to put in place long-term management plans for rewetting and augmenting the network of raised bog NHAs. Accountable Action Plans are clearly needed but the dismal implementation record is illustrated in many official reports. Despite legislation and enforcement efforts, peat extraction is still taking place in a significant number of SACs — a clear illustration of political and administrative failure because of a lack of commitment.

In September 2022, with reference to extraction of peat in raised and blanket bogs in SACs, the European Union Commission said that, after a “long dialogue” with the State, it was issuing an additional reasoned opinion to Ireland as “cutting activities are still on-going and enforcement action appears to have stalled”⁹. We are aware that Ireland has been given two months to take action with the implicit intention of bringing the matter to the European Court if it fails to take the required actions.

The rewetting of bogs whose original vegetation, flora and fauna has been totally altered or destroyed by peat extraction, does not equate to rehabilitation and/or restoration. The special biodiversity of such peatlands sites which have grown and matured over thousands of years is gone forever and is already being replaced by very different vegetation types. The rewetting of cutaway bog on the edge of residual portions of raised bog, which is *de facto* primarily a (research) project for carbon sequestration, is a huge challenge with the possible outcome of a limited biodiversity bonus.

It is also noted that there is a complete absence of an extensive programme to encourage, incentivise and educate the owners of private peatland to raise water tables by restricting drainage and to wean them off the use of peat as an energy source.

Tourism and Recreation

Tourism organisations together with food and horticultural bodies have joined forces to promote their respective interest in providing “experiences” for national and international tourists. The development of Greenways and Blueways and other tourism initiatives has meant that infrastructural developments and increased footfall are placing additional pressures on our natural and semi-natural habitats. Habitats and their flora and fauna are being treated as lures for tourism rather than being respected for their own intrinsic value. Nature should not be treated as an expendable commodity or a form of outdoor entertainment. The resilience of sites, species and infrastructure, and the impact of footfall in relation to biodiversity, should be part of the evaluation of success and not solely a census of bed-nights and tourist expenditure.

Green Infrastructure

Increasingly, green infrastructure and nature-based solutions (e.g. Sustainable Urban Drainage Systems (SuDs), tree and hedgerow planting etc.) are featured in Development Plans. The term

⁸ NPWS 2015. National Peatlands Strategy. www.npws.ie/peatlands-and-turf-cutting/management-plans

⁹ https://ec.europa.eu/commission/presscorner/detail/en/inf_22_5402

'green infrastructure' lacks a standard definition and any such actions which lack the appropriate expert ecological guidance have the potential to undermine our native biodiversity by inserting invasive and other species into areas where they do not naturally belong. Failure to understand that biodiversity has a genetic component may result in inappropriate green infrastructure 'enhancement' practices. The importation and planting of species of non-Irish origin but which are native to Ireland, dilutes the genetic profile of our island-adapted native stock, destroys biogeographical evidence and also risks the introduction of pests and diseases. In addition, the application of green infrastructure principles within urban areas will contribute little to the conservation of rare or threatened species or habitats. The creation of, for example, green roofs planted with *Sedum* (Stonecrop) is potentially damaging to native biodiversity. The DNFC recommends that any nature-based or green infrastructure solutions should be under the explicit direction of a suitably experienced botanist or ecologist.

Invasive species

Invasive species have become much more significant in recent years because of increased transnational travel, commerce and the fact that our changing climate with more frost-free nights facilitates the spread of a large number of alien species. Both our terrestrial and aquatic habitats are under attack and threat. The State has not yet managed to control *Rhododendron* in our internationally recognised National Parks. More recent damaging aquatic arrivals include Zebra Mussel (*Dreissena polymorpha*) and Curly-leaved Waterweed (*Lagarosiphon major*) which have invaded aquatic habitats.

Government Departments (especially Housing and Agriculture) need to have workable strategies. Sound and operable plans need to be put in place in all Local Authorities, and by the NPWS in National Parks, to tackle existing invasive plant and animal species. Local Authorities should cease spreading alien/invasive species such as Japanese Knotweed through the movement of soil and the planting of alien seed mixtures. Additionally, there should be increased awareness of, and strategies to prevent, the importation of invasive microorganisms nationally. Given the national concerns for 'pollinators', restrictions on the rising importation of honeybees for honey production, and bumblebees for pollination, is warranted, to minimise the risk of the introduction of potentially invasive organisms including microparasites and pathogens. Rigorous inspections at ports are needed, along with increased scientific capacity in specialist areas such as plant pathology, entomology, mycology and taxonomy. Support for home produced plants, fruits and vegetables will also help to minimise this risk and there is a need to anticipate the arrival of threats already in neighbouring and trading partners.

Field Biologists

The concern for biodiversity loss is driving an industry of desktop ecologists with scant knowledge of the biogeography of Ireland, in terms of what species or habitats are rare and threatened versus what is common and not in need of protection. More recently, 'biodiversity ambassadors', with little relevant knowledge and understanding of the issues, are being employed by landscaping firms to draw up Biodiversity Plans that are essentially landscape planting proposals. This is all too readily facilitated by access to the internet facilitating the copying pasting of text and images in order to produce what appears to be an informed text, to the un-informed eye.

Ultimately, there is an urgent need to train more field biologists, who have a detailed knowledge of habitats and species. Our Higher Education Institutions, for a variety of reasons, have failed in this aspect of biology in which formerly they excelled. This is largely because they have felt compelled to follow the research funding route, with more emphasis on research than on teaching basic

identification skills, and consequently the innate skills of students have not been encouraged. We are all too aware that nationally this expertise now resides, for the most part, in an ageing population. Knowledge of the requirements of rarer species, their habitats, and the necessary requirements to ensure population viability and connectivity, takes time to accumulate. The Department of Higher Education together with the Higher Education Authority should address this problem. The DNFC suggests to the Assembly that this is a deficit that we ignore at our peril.

Access to Environmental Information and Legal Redress

A new all-Ireland research project, funded by the Irish Research Council, entitled ‘Finding Common Ground’, has revealed failures in implementing the Aarhus Convention’s key environmental democracy rights¹⁰. This Convention was implemented in Ireland in 2013 and includes the right to access environmental information, the right to public participation, and the right to access justice in relation to the environment. The Convention has noted that while over 60 pieces of legislation have been used to implement the Aarhus Convention in the Republic, key findings include failures to protect environmental defenders (particularly in the Republic), poor frameworks for access to information and poor governance in both jurisdictions.

Despite a vast body of environmental law in Ireland, habitats are routinely destroyed, rivers polluted, mature trees cut down, hedgerows cut out of season or simply eliminated, roadside verges regularly sprayed with herbicide and wildlife persecuted during the closed season — all with no or minimal consequences for the perpetrators. The Climate Bar Association, a specialist association of the Bar of Ireland, has found that access to information on enforcement of environmental law is difficult for members of the public; sanctions, if imposed, are often too low to deter perpetrators; and the environment is routinely harmed.

It calls for a complete overhaul of environmental law, which should be unified and simplified through a ‘model environmental code’ embracing all relevant law in one accessible document. They advocate that a dedicated environmental court should also be created. The DNFC strongly agrees with these sentiments especially in relation to the on-going destruction of designated and non-designated sites of high nature value. In particular, we draw attention to the unending difficulty which conservationists and concerned citizens experience when attempting to access information relating to the presence of endangered species and habitats.

5. In conclusion

The DNFC urges this Citizen’s Assembly to be ambitious, to demand that all sectors of our society act to protect and preserve our threatened and vulnerable habitats — and, where necessary, reverse damage and allow natural regeneration of damaged sites of scientific interest — to safeguard the unique biodiversity that they encompass.

Sunniva Hanley

President,
The Dublin Naturalists’ Field Club

¹⁰ <https://aarhus.osce.org/about/aarhus-convention>

About the Dublin Naturalists' Field Club

Promoting nature in Ireland since 1886

The Dublin Naturalists' Field Club promotes the study and conservation of the natural environment, its species, habitats, underlying geology and landscape. It provides opportunities to learn about and share information on all aspects of natural history and it encourages and seeks to assist in the conservation and protection of sites of ecological interest.

Activities

Outdoor field meetings and indoor workshops and presentations are held throughout the year, mostly in the greater Dublin region. Many of our events are conducted by leading Irish and visiting naturalists. They cover natural history topics from the wild plants, birds and insects, to the geology and ecology that make their lives possible.

Principal aims

The principal aims of the Field Club are:

- to provide opportunities for people to share their interests in all aspects of natural history
- to offer activities that raise awareness of and promote interest in our natural heritage
- to train and educate naturalists of all ages and experience
- to protect rare and endangered plants, animals and habitats
- to promote the conservation of sites of natural history interest
- to carry out specialist surveys of flora and fauna
- to provide input to local and national authorities on nature conservation matters

History

The Dublin Naturalists' Field Club was founded in 1886 and early members included Nathaniel Colgan (1851–1919) author of *A Flora of County Dublin* and Robert Lloyd Praeger (1865–1953) whose publications included *Irish Topographical Botany* and *The Way that I Went*. Many other significant publications have since been produced.

Conservation

In view of the continuing loss of natural habitat, we felt obliged to form a Conservation Subcommittee in 2018 to review, prepare and disseminate evidence-based commentaries on the current conservation status of species, sites and habitats; to consider the content and effectiveness of various local and national biodiversity plans; and to convey its opinions, through discussion and written submission, to parties concerned with the implementation of these plans.