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Samhain 2022

Joint Committee on Environment and Climate Action

Report on Biodiversity

November 2022

Membership of the Joint Committee on Environment and Climate Action



Richard Bruton TD
Fine Gael



Réada Cronin
Sinn Féin



Cormac Devlin TD
Fianna Fáil



Alan Farrell TD
Fine Gael



Brian Leddin TD (Cathaoirleach)
Green Party



Darren O'Rourke TD
Sinn Féin



Christopher O'Sullivan TD
Fianna Fáil



Bríd Smith TD
Solidarity-People Before Profit



Jennifer Whitmore TD
Social Democrats



Senator Lynn Boylan
Sinn Féin



Senator Timmy Dooley
Fianna Fáil



Senator Alice-Mary Higgins
Independent



Senator John McGahon
Fine Gael



Senator Pauline O'Reilly
Green Party

Cathaoirleach's Foreword



This report points the way towards how we restore biodiversity in nature and how to best reap the co-benefits associated with diverse ecosystems in order to mitigate climate change.

The report sets out 75 recommendations and highlights the need for prioritising the designation of Marine Protected Areas (MPAs) as well as the immediate development and implementation of management plans for existing and future designated MPAs to restore biodiversity and prevent further damage.

In addition, a key element in restoring biodiversity on land is the implementation of a robust agri-environment scheme would provide farmers with greater incentives to protect and create areas of biodiversity on their land. There should be greater engagement with landowners to provide tailored solutions to peatland restoration.

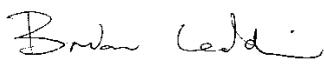
In terms of forestry, the Committee recommends pursuing a policy of forestry diversification to increase the resilience of our forests and improve biodiversity. The implementation of the Continuous Cover Forestry system on a broader basis would provide for greater sustainable forest management.

Given the lack of consistent data and research into biodiversity in Ireland, the Committee recommends increased resources for research, monitoring and data gathering projects for biodiversity in Ireland to inform future Government policy.

The Committee recommends the introduction of legislative provisions to protect and promote biodiversity on a statutory basis to set out roles and obligations across all Departments and public bodies in respect of biodiversity. Biodiversity Officers/Units should be established within Government Departments, local authorities and other public bodies where appropriate to coordinate and promote biodiversity measures. Finally, the Committee are of the view that consideration should be given to the

establishment of a Joint Committee on Biodiversity to oversee developments with regard to biodiversity in all environments.

I would like to express my appreciation to all the witnesses for their valuable contributions and to the members of the Committee for their dedicated work in this collaborative process.



Brian Leddin T.D.

Cathaoirleach

Joint Committee on Environment and Climate Action

November 2022

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Introduction

In February 2021, as part of its Work Programme, the Joint Committee on Climate Action agreed to conduct a sector-by-sector analysis of how Ireland will meet its target of a 51% reduction in emissions by 2030 and net zero emissions by 2050. In 2017, Ireland had the third highest level of greenhouse gas emissions *per capita* in the EU, with Ireland's emissions being 51% higher than the EU average.¹

The Department of the Environment, Climate and Communications published Ireland's [Climate Action Plan](#) in 2019. The Plan outlines Ireland's roadmap to becoming a climate neutral economy by 2050 and sets out 183 actions to tackle the climate crisis across all sectors. The [Interim Climate Actions 2021](#) follows on with 250 actions intended to continue the delivery of climate action across all sectors.

The new Programme for Government published in June 2020 committed to the ambitious target of an average 7% reduction in emissions per year to 2030. The [Climate Action and Low Carbon Development \(Amendment\) Bill 2021](#) was published in March 2021 and sets out the framework for Ireland's transition to net zero emissions by 2050, making the Government legally accountable for this target. The Bill was signed into law on the 23 July 2021.²

Ireland's [Climate Action Plan 2021](#) was published in November 2021 following the publication of the renewed [National Development Plan](#) (NDP). Together the NDP and Climate Action Plan set out Ireland's path to achieving net-zero emissions by 2050.

¹ [CSO - Greenhouse gases and climate change – Environmental Indicators 2019](#)

² <https://www.gov.ie/en/press-release/9336b-irelands-ambitious-climate-act-signed-into-law/>

Relevant Legislation

The Government's [Climate Action and Low Carbon Development \(Amendment\) Bill 2021](#) - which amends the Climate Action and Low Carbon Development Act 2015 - was signed into law on 23 July 2021 and is key to supporting Ireland's transition to a climate neutral economy by 2050. Key elements of the Bill are -

- placing on a statutory basis a national climate objective of a climate resilient, biodiversity-rich, environmentally-sustainable and climate-neutral economy by 2050;
- an interim target of a 51% reduction in CO2 emissions by 2030 in line with the Programme for Government commitment;
- a framework for the development of enabling plans and strategies to reach the 2030 and 2050 targets as follows:
 - annual climate action plans with actions for each sector,
 - five-yearly national long-term climate action strategies,
 - five-yearly carbon budgets,
 - sectoral emission ceilings, and
 - national adaptation framework.
- changes to the Climate Change Advisory Council including to its functions and membership;
- The requirement that all local authorities must make individual local climate action plans to be updated every five years; and
- Climate reporting by Government Ministers to a parliamentary Committee.

In addition, the Bill also amends the Planning and Development Act 2000 and the National Oil Reserves Agency (NORA) Act 2007 by expanding the types of projects eligible for support under the Climate Action Fund (established on a statutory basis in 2020 and to be part-funded by the Nora levy) and providing for local authorities to take account of their climate action plans when creating Development Plans.

On 25 October 2021, the Climate Change Advisory Council published its proposed [Carbon Budgets](#) which were referred to the joint Committee for consideration on 07 December 2021. The Committee reported back on 07 February 2022 as per the statutory deadline. The proposed Carbon Budgets were approved by the Oireachtas

in April 2022, allowing the Government to work on progressing the approval of sectoral emissions ceilings which were approved on 28 July 2022.

The [Wildlife \(Amendment\) Bill 2021](#) was introduced in May 2021 by Deputy Jennifer Whitmore and is currently at third stage before Dáil Éireann.

The [Maritime Area Planning Act 2021](#) was presented in August 2021 and signed into law on 23 December 2021. The Act will regulate the maritime area through a National Marine Planning Framework and the establishment of the Marine Area Regulatory Authority (MARA).

Stakeholder Engagements

The Committee held a series of engagements with stakeholders which provided evidence from a broad perspective. These engagements took place as follows:

Date	Organisation	Witness
04 May 2021	National Biodiversity Centre	Dr Liam Lysaght
	Trinity College Dublin	Professor Jane Stout
	Irish Wildlife Trust	Mr Padraic Fogarty
11 May 2021	Irish Whale & Dolphin Group	Dr Simon Berrow
	NORRI	Professor Anamarija Frankić
	NORRI	Mr Stephen Kavanagh
	Sustainable Water Network	Ms Ellen MacMahon
	Atlantic Salmon Trust	Professor Ken Whelan
18 May 2021	Trinity College Dublin	Dr Catherine Farrell
	Pro Silva Ireland	Mr Paddy Purser
	Birdwatch Ireland	Dr Anita Donaghy Ms Oonagh Duggan
15 June 2021	Trinity College Dublin	Professor Alan Matthews
	Stop Climate Chaos	Ms Sadhbh O'Neill
22 June 2021	University College Cork	Dr Oliver Moore

Macra na Feirme

Mr John Keane, President
 Mr Denis Duggan, CEO
 Mr Derrie Dillon, Head of
 Advocacy, Membership & Policy
 Ms Gillian Richardson,
 Agricultural and Rural Officer
 Mr Shane Fitzgerald

[02 November
 2021](#)

Burrenbeo

Dr Brendan Dunford

GMIT

Dr James Moran

The Apple Farm

Con Traas

BRIDE Project

Donal Sheehan

[14 June 2022](#)

Department of Housing, Local
 Government and Heritage

Dr Deirdre Lynn, Scientific
 Officer, National Parks and
 Wildlife Service

Key Themes

Throughout the course of Committee engagements, a number of key issues emerged which highlighted the poor state of biodiversity on a global level as well as the issues that are specific to Ireland.

The key themes as set out in the body of this report are as follows:

- ❖ Biodiversity and climate – the benefits of diverse ecosystems
- ❖ Biodiversity loss in Ireland – how the degradation of biodiversity happened
- ❖ Marine Biodiversity – the loss of biodiversity in marine environments and the future potential for these areas
- ❖ Agriculture and land use
- ❖ Restoration of biodiversity – how to change the downward trend through:
 - Monitoring and research
 - Peatlands
 - Forestry
 - Policy and legislative change

Biodiversity and Climate

1. Throughout the Committee's examination, it was made clear that biodiversity and climate are inextricably linked, and that biodiversity and healthy ecosystems and habitats play a significant role in tackling carbon emissions and slowing climate change. In evidence provided to the Committee, stakeholders emphasised that diversity in ecosystems and landscapes provide greater resilience to extreme climate events. The Committee noted that the more species there are, the more adaptable an ecosystem is in the face of change and severe events, and agreed with the stakeholder evidence that in order to adapt to climate change in the future, diversity in environments will be essential. Professor Jane Stout highlighted that biodiversity is variety and that:

“without a variety of different creatures in soils, hedgerows, woodlands, bogs and heaths, we would not be able to produce food, timber and other raw materials. Without a variety of creatures and habitats in the landscape, we would not have protection against natural hazards such as sea-surges, floods and droughts. Without a rich and diverse landscape, our culture and recreational opportunities would be diminished.”

2. In terms of land, stakeholders highlighted that well-managed forests and peatlands function as excellent carbon sinks and if managed effectively help to regulate the climate. Peatlands are particularly effective for carbon storage and the Committee noted that Ireland is a “global hotspot” for peatlands, with 20% of national territory covered by peat soil or peatland. As well as providing habitats for plant and animals, Dr Catherine Farrell, TCD, stated the importance of healthy peatlands in climate regulation and biodiversity as well as the control of water flows and purification. Dr Farrell further highlighted that:

“It is the complex web of relationships between water, biodiversity and peat that creates the peatland, maintains it and allows it to store vast volumes of carbon while also acting as a sink for carbon dioxide. Peatlands have been regulating

our climate for millennia and although globally they cover only 3% of the Earth's land surface, they store almost double the amount of carbon as is stored in all forests, which cover a ten times greater area.

3. The Committee noted, however, that forests offer great potential as excellent carbon sinks and that diversity of species within forests can have a very positive effect on climate. Mr Paddy Purser outlined that effective forest management provides multiple benefits including recreation, the production of timber for domestic and industrial use, while also improving the landscape, purifying water, improving soils and enriching biodiversity. When managed effectively, forests are more resilient and can contribute to climate change mitigation and the reduction of emissions.
4. In noting the potential climate benefits that a diverse landscape provides, the Committee also acknowledged that there are similar co-benefits to be found in coastal areas and seas with marine biodiversity. Along with tourism and recreation, Ms Ellen McMahon highlighted that the marine environment plays a key role in carbon regulation and storage and that:

“Our ocean is the planet's largest carbon sink. It has absorbed 93% of the heat generated by industrial-era carbon dioxide emissions and it captures nearly 30% of the carbon dioxide released into the atmosphere every year.”

5. The Committee agreed that in order to reap the benefits from biodiversity in both land and the marine environment, it is essential to understand the science of how these systems function. Professor Anamarija Frankic stated that:

“Carbon dioxide in science is not pollution in nature for any species or organisms. They thrive on it and we need to start understanding that. On the land, we are trying to restore the soil with micro-organisms, fungi and bacteria. We are now understanding how important that is for carbon sinks and

nutrient replenishing. It is the same in the ocean. We need to start understanding how oceans and coastal systems work.”

While the benefits of diverse lands and oceans were clearly set out by stakeholders, the Committee agreed that the loss of biodiversity is presenting a real and significant challenge for ecosystems in the face of climate change both on a global and national level.

Biodiversity loss in Ireland

6. Throughout the course of engagements and the wider submissions, stakeholders referred to the ongoing “*climate and biodiversity emergency*” noting that Ireland is following the same global trend of increased and consistent biodiversity loss. While many factors have led to such extreme levels of biodiversity loss in Ireland, Ms Oonagh Duggan highlighted that:

“the failure to enforce environmental laws, inadequate environmental assessment of projects and plans and poor mitigation measures are, on their own and cumulatively, leading to this poor outcome.”

7. Stakeholders cautioned that in addition to climate change, habitat loss due to the over-exploitation of lands for agricultural use, overfishing, inadequate protection of hedgerows, invasive species, pollution, as well as unmanaged recreation, are all factors that are negatively impacting ecosystems and leading to significant biodiversity loss. In highlighting the impact of this loss, Mr Pádraic Fogarty, Irish Wildlife Trust stated that Ireland’s woodlands and peatlands have been heavily deforested:

“Having once been 80% deciduous oak woodland, our native forests have been reduced to no more than 2% of our land area. What wasn’t forest was wetlands and bogs but these too have been remorselessly exploited so that today less than 1% of midlands bogs are still growing, while across the

uplands and west of Ireland, less than one third of these peatlands remain 'suitable for conservation'."

8. The Committee acknowledged that the impact of such biodiversity loss on various species has been substantial and noted the use of a traffic light assessment system called BoCCI which indicates the conservation status of bird species in Ireland. The BoCCI offers the most up-to-date information available in relation to bird species and Dr Anita Donaghy, Birdwatch Ireland highlighted that *"more birds than ever are now red-listed in Ireland which is the highest status of concern for their population"*.
9. The Committee noted that 63% of Irish bird species are on a list of concern, with 37% on the amber list and 26% on the red list and that the main groups of birds effected are those of wetlands and peatlands, farmland and marine environments. Members also noted that following the inclusion of a species on a red list, there is often no policy follow-up to offer protections for these species. These are areas that are suffering the greatest loss of biodiversity from human activity and Members agreed that such figures provide stark evidence of the state of biodiversity in Ireland.
10. Stakeholders highlighted that agricultural land in recent decades has been transformed and the Committee noted that the draining of peatlands and peat soils for agriculture alters the peatlands natural absorption of carbon dioxide and instead leads to emissions in carbon dioxide and nitrous oxide. The Committee agreed that while successive Governments committed to the protection of biodiversity, much of the current policy and legislation is incompatible not only with restoring biodiversity but also with retaining it. As a result, inaction in this area will lead to further degradation of biodiversity. Stakeholders pointed to one example of this with the Arterial Drainage Act 1945 which was enacted to *"reclaim farmland from river floodplains and that function of the Act has not changed since."*
11. The Act has resulted in thousands of kilometres of rivers being altered and having their trees and vegetation removed, very often simply to maintain

farmland. As a result, flooding in towns and villages is a major issue and the landscape is not diverse enough to adapt to extreme weather. Members agreed that nature-based solutions to flooding are being obstructed as a result of the Act which should be reviewed to address this and bring the legislation in line with biodiversity restoration and climate goals. Stakeholders emphasised that in order to address the loss of biodiversity, it is essential to review the legislation and the Government policy that is driving this loss.

12. Members noted that in the 40s and 50s, peatland research centres were established to understand peatlands and how to gain the best value and benefits from them. Over time, Government policy in other areas took precedence, conflicting with nature conservation policy. Dr Farrell pointed to the continued degradation of peatlands, including special areas of conservation (SACs), as a major failure over recent decades:

“Some of those examples that we designated as SACs are of a lower quality than areas that exist outside of the SAC network. We need to get back to assessing what is there and looking at the inventory, but it is not just about conservation. It is about reducing the risk of devastating events such as bogslides, fires etc. We have to combine these conservation aims with reducing the risks relating to degraded peatlands.”

13. The Committee agreed that while intensive farming in Ireland and the drainage of land for agricultural use has played a major role in the loss of biodiversity in landscapes in Ireland, the loss of diversity due to the mismanagement of forests must also be acknowledged. Mr Paddy Purser, ProSilva Ireland, highlighted that the planting of “monocultures” is a concern as the lack of diversity in these plantations do not deliver the *“wider long-term social and environmental benefits of forestry”*. Mr Purser emphasised that while society wants to reap the multiple benefits that well-managed forests can provide i.e. timber, recreation, flood prevention etc, very few of these benefits offer any monetary value aside from timber sales. As a result, the Committee noted that the “timber production

function” has been and is currently the highest priority in the forestry industry due to the revenue drawn from timber sales.

14. The Committee also acknowledged that the issue of overgrazing by deer, especially non-native species, in Ireland is impacting the diversity of forests and must be addressed. Forests in many parts of the country are being negatively impacted by the specific broadleaf diet of certain invasive non-native deer species which is proving to exacerbate the issue of monocultural forests. Mr Purser outlined that invasive deer is “*the single greatest constraint*” when diversifying the forestry sector. In addition, the Committee noted that the sustainability and resilience of monocultural forests is impacted further by climate change which is making them more vulnerable to destruction from pests. Mr. Purser warned of the negative impact that this destruction can have from a climate perspective stating that:

“Once those monocultural forests are dying, they are no longer storing or locking up carbon, but releasing it. For this reason, we must make our forests resilient and we do that by diversifying them.”

Marine biodiversity

15. The Committee noted that biodiversity loss is not exclusive to land in Ireland, and Members acknowledged that the marine environment is also being heavily impacted with extensive pollution of waterways and the loss of coastal habitats and marine biodiversity. The Committee noted that the ocean is the planet’s largest carbon sink, capturing nearly 30% of the carbon dioxide released into the atmosphere every year and playing a key role in the regulation of climate.
16. Dr Ken Whelan stated that aquatic systems are changing rapidly and that the “*changes in oceans are forcing unprecedented shifts in climate patterns*”. This is having a significant impact on the marine environment and the Committee noted the appearance of new fish and animal species off Ireland’s coasts and in freshwater areas. Professor Anamarija Frankic highlighted that the role of marine habitats as a hugely important carbon store cannot be underestimated. The

Committee agreed however, that knowledge and understanding of the marine environment is lacking and acknowledged the need for extensive monitoring and research of coastal systems, habitats and the marine environment.

17. The Committee noted that Ireland is, geographically, an ideal place to study the marine environment and directly monitor changes in the ocean from climate change impacts. Dr Whelan emphasised the need to focus on monitoring changes and responding to those changes with marine biodiversity in mind. The Committee acknowledged that Atlantic salmon are “*an ideal bio-monitor to track and trace climate change from remote mountain streams to distant zones in the Arctic seas*” and agreed that the monitoring of such species could inform future policy development for marine biodiversity.
18. It was made abundantly clear that marine biodiversity, much like that on land, has been and is experiencing severe degradation. The Committee noted that around two thirds of the marine environment has been altered by human action. Overfishing has played a major role in the decline of species within the marine environment, including iconic seabirds such as puffins. Members acknowledged the sheer size of the marine environment and noted that 13% of the seabed which is disturbed by bottom fishing activity is almost equivalent in size to the island of Ireland. Outlining that bottom trawling is prohibited in only 3 out of 90 marine special areas of conservation (SACs), Ms Ellen McMahon stated that:

“Bottom trawling is one of the most damaging activities in our marine environment. It involved dragging heavy weighted nets across the sea floor in an effort to catch fish and churns up seabed sediments which are the planet’s largest carbon stores. Bottom trawling is a major emitter of carbon with some studies showing that it emits as much carbon as the entire aviation industry.”

19. The Committee noted that only 2% of Ireland’s seas are designated as Marine Protected Areas, MPAs. Such areas are geographically defined and protect and restore the natural area through specific objectives. Ms McMahon pointed out

that Ireland has *“failed to meet the UN’s biological diversity target of protecting 10% of our marine area by 2020”* though the Committee noted the current programme for Government commits to meeting this target as soon as is practicable, as well as a further target of 30% by 2030.

20. Ms McMahon also highlighted how the enforcement of existing Marine Protected Areas is a huge concern with the European Court of Justice taking Ireland to court over our failure to implement management plans across all of our current designated sites. Ms McMahon indicated *“management plans must be implemented for the sites we have, we need to get on with designating Marine Protected Areas and address the disparity between the national marine planning framework and the marine spatial planning directive or we will exacerbate the issues that exist.”*

21. Dr Deirdre Lynn, National Parks and Wildlife Services, noted both in respect of marine protected areas and protection of terrestrial land that *“Ireland is 90% marine, which is very important to remember. I think and hope that that is where our contribution will be, proportionately higher than a lot of the other EU countries are in the marine sphere.”*

22. Noting the failure to meet EU and international targets, the Committee acknowledged the importance of MPAs not only for restoring marine biodiversity but also for preventing further damage from the expansion of offshore renewable energy. Ms McMahon emphasised that while renewable energy will help to tackle carbon emissions from one perspective, it is important to recognise the role for MPAs in helping to regulate the climate and the importance of having MPAs designated before the construction and implementation of offshore renewable energy.

23. The Committee agreed that the protection and restoration of the marine environment must be considered within the measures being taken to meet climate targets but acknowledged that the lack of past investment in this will prove to be a challenge. Dr Whelan emphasised the need for an integrated approach to managing marine protected zones stressing that the:

“integration of coastal zone management with the MPAs, with a clear focus on biodiversity is really urgent. For too long, our science has been in silos and we need to start integrating this in a very real sense. The ultimate goal here is marine resilience and we have to make sure MPAs have an integrated resilience to face the issues we are facing as a result of climate change”.

24. In order to implement a more integrated approach to MPAs, stakeholders also highlighted the need for better engagement with the fishing industry. Dr Berrow stated that currently the fishing industry is fearful of the future with marine protected areas and offshore wind farms as the industry is not consulted and therefore do not know what the industry will look like in the future. The Committee agreed that greater consultation with the fishing industry must be facilitated in order to provide better planning around MPAs and wind farms.
25. The Committee noted the lack of inclusion of MPAs in the heads of the Maritime Area Planning Bill 2021 and acknowledged stakeholder concerns that the designation of MPAs is currently not on any legislative footing. Stakeholders highlighted that the lack of legislation around MPAs is currently the biggest issue and that the designation of MPAs along with “sensitivity mapping” is essential to ensure that the development of offshore renewable energy is steered away from more sensitive areas of the marine environment.
26. The marine renewable energy industry in Ireland is expanding rapidly, and Dr Berrow highlighted that while coastal areas provide great opportunity for renewable energy, appropriate planning is needed *“to mitigate negative impacts on marine species and habitats”* and that this could also be an opportunity to restore and enhance biodiversity. The Committee agreed that biodiversity should lead future planning and projects and that projects should be carefully assessed to best avoid any negative environmental impacts such as what occurred following the incorrect placement of wind farms on peatlands in Donegal.

27. The Committee noted that the lack of cohesive approach to data gathering and monitoring of the marine environment is conflicting with the increased level of interest from wind farm companies. Dr Berrow stated that a strategy that can achieve objectives that would be in the interest of everyone, including the marine environment, would be worth considering and highlighted the illogical nature of the current system used for surveying sites for wind farms:

“One company will go out one day and on the following day, the same team of observers on the same vessel will go and survey the site next door to it. There is significant duplication of effort and significant increase in disturbance. I appreciate that there is commercial competition, so they need all their own data. Where does the State obligation begin and end and where does that of the private companies begin and end? We suggest that if there were some data sets that were common to all and could be shared, one would not need to go and do it again.”

28. The Committee agreed that while the marine renewables sector is an essential aspect of Ireland’s climate measures and future emissions targets, it is important that the correct approach be taken with construction to ensure the least negative impact for marine environments. Dr Berrow stated that the best way to mitigate the environmental impact is to ensure *“appropriate site selection using the best available data”*. To do this, Dr Berrow highlighted the need for tight environmental regulation along with up-to-date and consistent data gathering and research, something which is currently not in place:

“We are not giving guidance or putting baselines down. We are not building capacity in our research community, not only to roll out pilot studies such as the oyster restoration project, but we are also not building capacity to monitor the effects. The wind farm companies want to harness the wind, get on the grid and make money. The opportunity is there to work together to make sure it is a win-win situation.”

29. The Committee agreed that the expansion of the marine renewables industry in Ireland must be led in a climate friendly manner and that the provision of best practice guidelines supported by legislation would ensure robust and consistent site assessments and risk analyses. Stakeholders cautioned that Government policy is lagging behind in this area and the Committee agreed that a knowledge base that will inform policies must be built with urgency to counter the fast-approaching applications from industries for wind farm development. Dr Berrow pointed to many different approaches to conducting assessments in Europe, including the UK and Germany, stating that Ireland could learn from the practices of such jurisdictions. The Committee agreed that such research would also be helpful for informing the design potential for floating offshore wind, an area which stakeholders stated was very much unknown. Dr Berrow stated that:

“The members, as decision-makers need to have a knowledge-based decision-making process. We need to have that empirical data, the research, the monitoring and the baseline reference values, so that we can say with a certain level of confidence that if we do something, we think something might or will happen. The Members can then make an informed decision. At the moment, the research is not there for informed decisions.”

30. The Committee acknowledged that more robust policy that encourages higher levels of research around renewable energy practices would be very welcome and would assist in mitigating the loss of biodiversity in the surrounding marine environment. In addition, companies seeking to invest in renewable energy ventures would also benefit from the certainty that monitoring and assessments would provide including the assurance of working to improve and retain the biodiversity of the marine environment.

Agriculture and land use

31. The Committee noted that agricultural emissions make up 35% of total emissions in Ireland excluding the significant emissions from the land use, land-use change,

and forestry (LULUCF) sector. The Committee heard extensive evidence that the interactions between agriculture and land use and the environment are not working in a sustainable way. Stakeholders highlighted that 85% of EU protected habitats are in inadequate condition with just under half of these on a declining trend with deteriorating water quality and agricultural emissions per hectare continuing to rise.

32. While stakeholders were positive that better management of land use through the implementation of mitigating measures along with extensive policy changes would change this downward trajectory, the Committee noted the view that if action in the sector is any further delayed, the targets for 2030 and beyond simply will not be met and the more incremental approach to mitigation measures will no longer be possible.

Emissions from agriculture and land use

33. Throughout Committee engagements and across the wider submissions, evidence showed that agricultural emissions have been increasing in recent years and are expected to continue on this upward trajectory. Professor Alan Matthews highlighted that agricultural emissions account for 35% of total emissions and have increased from 18.5 million tonnes of carbon dioxide equivalent in 2011 to 21.2 million tonnes in 2019.

34. In an engagement with the Committee on 26 June 2021, the EPA outlined two potential scenarios that informed their emissions projections to 2040, one being with existing policy measures (WEM) and one with additional measures (WAM). The Committee noted that emissions are projected to rise to 40% in the agriculture sector by 2030 under the WAM scenario. The Committee further noted the view that increased emissions in the sector are driven by increasing dairy cattle numbers and associated nitrogen inputs; agricultural emissions consist primarily of methane and nitrous oxide from livestock farming and chemical fertiliser use. In Ireland, methane is responsible for almost 60% of agricultural emissions due to the high levels of cattle and sheep in Irish farming. The Committee noted that in 2019, Ireland's methane emissions had risen by 17% since 2011.

35. Members agreed that the agriculture sector in Ireland is unique in its share of emissions and that this presents a particular challenge. Professor Matthews emphasised that in order to facilitate an adequate reduction in emissions in the agriculture sector, it is essential that farmers measure and monitor the level of emissions and removals on individual farms to allow for better management of emissions levels.
36. The Committee agreed that *“all farmers need to know what their greenhouse gas emissions are and how these are affected when they change their farm output and farming practices.”* and acknowledged that if emissions *“cannot be measured, [they] cannot be improved”*. However, stakeholders highlighted that while gathering data around emissions levels on farms is necessary, it should not delay immediate action for change.
37. Stakeholders highlighted that increased intensive production in the agriculture sector has been a favoured approach in recent years with little value placed on nature and the environment. Dr Deirdre Lynn, National Parks and Wildlife Service, stated that:
- “On supporting biodiversity and making sure it is also considered to be a common benefit, we are trying to have a biodiversity score and to work on that...if a bog is restored. It is about linking all of those together and making sure that when we report back we can say what sort of emissions have been reduced, how biodiversity has improved and, where relevant, how much water has been stored”*.
38. Dr Deirdre Lynn, National Parks and Wildlife service further noted that some current economic measurements, particularly Gross Domestic Product (GDP), are inadequate when it comes to measuring the impact and value to society of biodiversity protection and restoration. Dr Lynn stated that:

“We should be measuring progress by our common good. Various indices are worked on, for example, the happiness

index. There should be a different one rather than having only straightforward GDP because it is not a good measure of how the general population are feeling.”

39. Stakeholders suggested that the lack of value placed on nature has been driven by EU and national Government policy. Ms Sadhbh O’Neill emphasised that the expansion of dairy farming and growth in the national herd in Ireland has encouraged a steady growth in emissions since 2011, with the dairy sector contributing to half of all agricultural greenhouse gas emissions:

“Recent Central Statistics Office, CSO, data show that there was a 41% increase in the number of dairy cows between 2010 and 2019, making Ireland an outlier in comparison to other EU member states.”

The Committee noted that the Teagasc dairy strategy to 2027 sets out further growth in herd numbers and acknowledged the view that such a growth would be incompatible with climate policy and would lead to increase in greenhouse gas emissions regardless of the implementation of “*on-farm efficiencies*”.

40. While the [Ag Climatise roadmap](#) was published by the Department of Agriculture, Food and the Marine at the end of 2020, Ms. O’Neill stated that the strategy “*fails to adequately address the underlying drivers of emissions: cattle numbers and nitrogen inputs in the form of fertilisers and animal feed.*” The Committee noted that the roadmap sets out ambitions for stabilising rather than reducing emissions and several Members agreed that such ambition is not consistent with the Programme for Government.

41. Mr Donal Sheehan also highlighted that current agricultural model not only incurs significant damage on habitats, biodiversity and water quality, but is also leading to a decline in smaller family farms that cannot compete. Mr Sheehan highlighted that the dairy expansion in particular has pushed more intensive farming throughout Ireland while offering little protection to biodiversity and smaller farmers:

“The minimum milk collection policy in my area has increased from 250 litres per collection to 400 litres – this is another nail in the coffin of small milk producers. As this model is totally production focused and with no incentive to look after biodiversity or any other ecosystem service, farmers are sent the signal to produce more and more to fuel the relentless drive for a commodity product that can be sourced cheaply. Inevitably more fertilised is used, more sprays, wetlands are drained, hedgerows are removed, woodland and forestry are converted to grassland, with a devastating impact on the environment.”

42. The Committee agreed that Government policy has proved to exacerbate the rising emissions in the agriculture sector over recent decades and acknowledged the need to “reshape” agriculture. Stakeholders further highlighted that without substantial and sustained reductions in agricultural methane over the next decade, it will not be possible to meet current national and EU climate targets.

Agri/Environmental Schemes and other measures

43. Stakeholders agreed that a “business as usual” approach to the agriculture sector does not align with the climate ambitions of the EU or Ireland’s national policies. The Committee acknowledged that there is buy-in from farmers to better manage land and improve biodiversity within their farming system. Members also agreed that climate obligations for the sector must allow farming to remain viable and the socioeconomic benefits of agriculture in Ireland protected.

44. The Committee noted the view that greater investment is needed in farming and local communities to drive farmers to deliver more than just food from their land, improving and delivering better air quality and water quality as well as natural recreational spaces. Professor Matthews emphasised that in order to manage agricultural emissions, it is essential to:

“understand the contribution in our soils, wetlands and peatlands as well as agroforestry, hedgerows and forests

can make to offset agricultural emissions. We have to invest much more in potential alternative land uses that are suited to Irish agri-ecological conditions and attractive to farmers. Existing efforts looking at the potential for renewable energy and biomass, as well as conventional and unconventional land uses, have to be stepped up.”

45. The Committee noted that agri-environment climate schemes such as the green low-carbon, agri-environment scheme (GLAS) benefit biodiversity. However, some stakeholders stated that such schemes do not have a strong impact on emissions and as such, Members agreed that policy should focus on reducing the level of net emissions in agriculture, encouraging stronger measures and removing incentives that allow for unsustainable farming while providing the co-benefit of improving biodiversity.
46. Professor Matthews highlighted that while reducing emissions in the sector will be a challenge, there are many measures which have yet to be adopted and pointed to measures that have not been put in place with regard to nitrous oxide and the need to incentivise to encourage greater adoption of measures. The Committee noted that Ireland is one of only four countries left with a nitrate directive derogation in Europe, with two of the remaining four currently phasing it out.
47. While some Members noted the potential opportunity to cease seeking derogations in respect of the nitrates directive, stakeholders emphasised that the rules farmers must operate by under the derogation are more strict and better and farms therefore perform better. As such, stakeholders highlighted an alternative whereby dairy farmers who avail of it, and, as such, are afforded more intensive production, should be asked to do more in respect of climate and water quality.
48. Members noted that while there are some technical management solutions that could help to decrease emissions resulting from nitrogen fertiliser, there are few options available for reducing methane emissions. The Committee acknowledged the latest technologies and interventions being progressed by farmers for climate

change mitigation with Mr John Keane, Macra na Feirme, highlighting the ongoing work of the Irish Cattle Breeding Federation, IBF who are progressing improvements in the herd through genetics to reduce the methane produced.

49. Stakeholders also highlighted the potential for food additives to reduce the methane emissions associated with livestock. However, the Committee noted that such a solution would not be as useful to Irish farmers where livestock is primarily grass-fed. As such, the Committee agreed that greater investment is required to expand the measures that can be made available to farmers to assist a reduction in emissions.
50. However, stakeholders emphasised that the most immediate solution to reducing methane emissions is a reduction in animal numbers and the Committee noted that dairy cows have a larger emissions footprint to beef. Stakeholders outlined the lack of CAP incentives to reduce livestock numbers and again emphasised that agricultural emissions have not decreased in recent years.
51. The Committee noted the near-term proposed reduction targets from the Climate Change Commission in New Zealand (as a similar country to Ireland) with methane emissions reduction of 8% by 2025 and 17% by 2035. Stakeholders also referred to New Zealand's acknowledgement that a potential reduction of dairy cattle by 8% by 2030 may be needed.
52. The Committee agreed that livestock farming (i.e. dairy and beef) has been the predominant form of land use in Ireland in recent decades exacerbating the biodiversity crisis. Mr Con Traas highlighted that a land-use change from dairy farming to orchards has a double benefit of reducing emissions while also increasing sequestration, though the Committee agreed that the potential for land-use change to apples is somewhat limited. However, stakeholders emphasised that Ireland has the capacity for an array of alternative land uses that would provide multiple benefits. Dr Moran outlined that:

“We live in a country with a diverse mix of landscapes, characterised by differences in geology, topography, soils, climatic variation and land cover, with a wide range in land

use capacity. One size certainly does not fit all, and different land types are advantaged to provide a set of particular services, for example, high quantities of food and fibre, carbon storage, flood alleviation, space for nature or amenity and recreational value. We need to create a system where it is possible for different areas to capitalise on their natural advantages.”

53. The Committee noted the potential for carbon farming as a new business model for farming, whereby farmers would be incentivised to protect and increase carbon sinks on their land through re-wetting land, increasing forestation and improving hedgerows. Mr Keane, Macra na Feirme highlighted the agricultural sustainability support and advice programme (ASSAP) as a potential model for a programme to be established that covers farm sequestration in terms of carbon, soils and nutrient practices that coincide with management practices. While the Committee acknowledged that such a programme has potential, some members of the Committee expressed concern that a carbon farming framework and measurement based solely on carbon units could leave out key indicators in respect of ecological care. The Committee agreed that while ecological care is slightly harder to measure but it is of fundamental importance to protecting and enhancing biodiversity.

54. However, there were mixed views as to whether carbon sequestration would offset emissions to the extent which is needed due to the changing nature of the landscape and the much higher levels of carbon emissions versus storage. Professor Matthews highlighted that the LULUCF sector is currently a net emitter due to decades of draining the organic soils and thus cannot be used as a sink for the removal of carbon. Stakeholders agreed therefore that there may be better opportunity in incentivising and paying farmers for any reduction of methane emissions.

55. The Committee agreed that while beef and dairy farming will largely remain within the agriculture sector, it is important to target the emissions and ensure that farmers are incentivised to both produce food and reduce the environmental

impacts associated with this production. Mr Donal Sheehan outlined that the current system rewards farmers on their production of food – the more food produced, the more money that is made. As such, the Committee noted, no value is placed on the habitats or ecosystems. Stakeholders agreed that putting a price on negative environmental outcomes would signal to farmers that emissions must be taken into account.

56. The Committee acknowledged the need for monitoring and measuring of emissions across all farms and stakeholders highlighted the importance of incentivising action and innovation to implement the changes necessary to meet targets. Professor Matthews stated that putting a price on emissions and removals and paying farmers for performance is a clear incentive for farmers:

“We know that farmers respond to incentives. The European Commission in its far to fork strategy has introduced the idea of carbon farming as a new business model for farmers. The intention is to create direct incentives for land managers and farmers to increase and protect carbon sinks in the land sector. A similar model should also be applied to agricultural emissions consisting of methane and nitrous oxide.”

57. The Committee agreed that significant funding can be made available through the Common Agricultural Policy (CAP) and through funds from the carbon tax to encourage and incentivise more sustainable farming. Dr Brendan Dunford, Burrenbeo Trust, highlighted that farming is a business which relies on profit from the production of food and outlined a CAP-funded “performance payment system” implemented in the Burren, whereby farmers were incentivised to address biodiversity and water quality challenges on their farms through the use of a scorecard that would be linked to a payment:

“In most cases, the farmer is paid for one of the ecosystem services generated – food – and often at the expense of others such as biodiversity, water quality and carbon, for which there is a demand but not a market. In

the Burren, we addressed this by developing a simple scorecard to capture these services at field level on a scale of one to ten, and linking these scores to payments, thereby putting a price on biodiversity and water quality.”

58. Stakeholders highlighted additional schemes such as the biodiversity regeneration in a dairying environment (BRIDE) project as other potential options for improving biodiversity through farming initiatives. Mr Sheehan outlined the 10% “space for nature” certification concept within the BRIDE project whereby farmers take 10% of their total farm area out of food production and prioritise it for the delivery of ecosystem services that alternative land uses can provide such as clean water, flood prevention, biodiversity and carbon sequestration. A results-based environmental payment is then made to the farmer to incentivise the ongoing delivery of these services.
59. The Committee agreed that the expansion of such programmes has the potential to provide a far more sustainable agricultural system whereby farmers are incentivised and paid to deliver while also providing data on the benefits of the programme on biodiversity. Dr Moran emphasised that rather than focussing on one particular area such as biogenic methane, these programmes focus on net emissions within the farm’s area with farmers incentivised to concentrate on and work towards an overall greenhouse gas balance.
60. Furthermore, Dr Moran outlined that in order to upscale eco schemes and projects such as the Burrenbeo Trust and BRIDE project beyond the local level, it is essential to examine the capacity within the diverse landscapes in Ireland to produce different things and therefore maximise the associated co-benefits for the environment. Highlighting that *“biodiversity underpins our food supply, but it is undervalued in our agriculture production system and policy framework”*, Dr Moran stated that policy must facilitate and assist farmers in the transition to more sustainable farming that will also have a positive impact on biodiversity.
61. Dr Oliver Moore outlined a number of approaches that have the potential to have a significant impact on climate change mitigation, biodiversity and public goods

including organic farming. The Committee noted that the latest organic regulation states that:

“organic farming is an overall system of farm management and food production that combines best environmental and climate practices, a high level of biodiversity, the preservation of natural resources, the application of high animal welfare standards”.

62. The Committee noted the evidence that Ireland is very suited to organic farming and that such farms can be more viable as well as providing increased employment. Organic farms perform better in terms of absolute emissions per hectare with the core difference being that no mineral fertilisers are used on organic farms.
63. In spite of this, Dr Moore highlighted that Ireland has one of the lowest shares of organic farmland in the EU with very little Government investment being directed to organic farming. The Committee noted that a payment of €500 per hectare would be required for organic farming to make it comparable to basic agri-environmental schemes in Ireland. Dr Moore highlighted that many agri-environmental schemes pay farmers more than organic schemes and that in order to encourage farmers to transition, they must be paid appropriately.
64. However, Mr Shane Fitzgerald, Macra na Feirme cautioned that organic farming is labour intensive and highlighted the difficulties facing the agriculture sector in relation to the hiring of workers. Members acknowledged that while there is the opportunity for increased employment in organic farming, there are also barriers and practicalities around farmers obtaining the skilled labour required to manage a functioning organic farm.
65. As such, the Committee agreed that a comprehensive organic action plan is needed to set out a path to more sustainable farming and noted the view that better payment rates - equal to if not higher than those for non-organic farming - is required to encourage immediate progression in this area. Moreover, the Committee agreed that leadership both on a local and national level to enable

better engagement around and implementation of policy and partnerships among farming communities is needed.

Restoration of biodiversity for climate mitigation

66. The Committee noted the widespread evidence that restoring biodiversity and ensuring healthy ecosystems is a key solution to the climate crisis. While there has been significant biodiversity loss in Ireland and on a global level, there are ways in which the diversity of species in ecosystems can be restored. Professor Stout emphasised that “*most of our ecosystems are not in good health*” and that restoring biodiversity was a matter of urgency. In light of the climate related benefits of biodiversity, the Committee agreed that such restoration must play a role in the reduction of emissions in Ireland and long-term climate change mitigation.

67. Members noted that while nature reserves and protected areas have been a primary tool used for nature conservation, they have not been effective in Ireland. The Committee noted that there is currently no legislation in place to support national parks and stakeholders stated that while national parks can engage local people, they have not proved successful for restoring biodiversity and prioritising nature and that “*in some instances biodiversity is worse inside the reserves than outside them.*”

68. With an increase in the movement of non-native species around the world and the Committee recognises that Invasive non-native species are a threat to our biodiversity and ecosystem functions. The Committee notes that in January 2019, the European Commission urged Ireland to protect its environment against alien species through implementation of the EU Regulation on Invasive Alien Species.

69. The Committee noted that around 13% of land and 2% of the sea area in Ireland is designated, with a target of 30% of EU land and sea protection by 2030. Dr Lynn further noted that in addition to legally binding targets we also have we can have other systems and effective conservation measures in addition to the legally binding targets. Dr Lynn stated that:

“The EU is due to publish legislation for legally binding restoration targets under the nature restoration law, which will include actions that will need to be implemented across many sectors, particularly agriculture, forestry and fisheries. The stark reality is that we need to restore thousands of square kilometres of terrestrial land.”

Some Members questioned whether targets should be made on a national level rather than an EU level to ensure a consistent level of protected areas across all Member States. Members agreed that in order to meet such targets, designation and conservation must be approached differently to recent decades.

Monitoring and Research

70. Dr Liam Lysaght, National Biodiversity Data Centre highlighted that biodiversity is an evidence-based issue that can be measured by the functioning of efficient ecosystems with the number and diversity of species in an area being a good indication of the health of the environment/ecosystem. However, the lack of environmental data in this area has left Ireland at a significant disadvantage when assessing the status of biodiversity. Dr Lysaght outlined that the functions of biodiversity are primarily delivered by smaller creatures - such as insects and algae - that account for 86% of species in Ireland and that:

“Other than the Irish butterfly monitoring scheme which shows a 1.3% decline in butterfly populations since 2008 and the all-Ireland bumblebee monitoring scheme which shows a 4.8% decline each year in bumblebee populations since 2012, we know very little about how these less conspicuous elements of biodiversity and biodiversity function are performing. This is an impediment to the prioritisation, implementation, tracking and reviewing of the effectiveness of biodiversity policy in Ireland.”

71. The Committee agreed that evidence-based solutions can be transformative but acknowledged that while biodiversity is an area in which evidence can support

policy reform, inadequate funding and resources due to a lack of consistent Government interest has also exacerbated the research gap and has proved to further the degradation of biodiversity in Ireland. However, the Committee agreed that the data that has been gathered over recent decades, while incomplete, will prove to be useful and that increased resourcing for the research and monitoring of ecosystems and habitats will be a vital tool for restoring biodiversity.

72. Stakeholders emphasised that in order to ensure the appropriate policy is implemented, it is essential to track biodiversity to assess improvements or degradation. While the National Biodiversity Data Centre is currently gathering this evidence base, Members agreed that the centre should be placed on a more secure footing with the necessary resources required to monitor biodiversity and assess the potential for future schemes, including agri-environment schemes. Professor Stout pointed to a system currently being developed through the National Capital Ireland forum which allows *“all of the biodiversity and ecosystem functions and the benefits derived from those ecosystems to be identified and recognised.”* The Committee noted that this system is already established and agreed that greater environmental monitoring such as this could facilitate a more informed process for identifying the co-benefits or trade-offs associated with future policies or measures.

73. The Committee acknowledged the importance of the work provided by the National Parks and Wildlife Service (NPWS) in terms of environmental research, conservation and the implementation of policy. However, stakeholders stated that the NPWS is *“chronically under-resourced”*. Mr Fogarty highlighted that the NPWS has over the years shifted from Department to Department and Minister to Minister and *“has therefore been subjected to the varying levels of interest of those Ministers”* and that *“the NPWS is probably the most important piece of the jigsaw in terms of pulling all of the different strands together, getting it right and setting us for the next decade”*. Some stakeholders are of the opinion that a total restructuring of the NPWS should be undertaken to create an independent agency that can focus on a consistent and efficient approach to the restoration of biodiversity.

74. The Committee noted that a review of the NPWS was underway in 2021 and acknowledged that the Strategic Action Plan for the NPWS was published on 04 May 2022. Dr Lynn highlighted that the Plan provides the NPWS with the additional funding of €55 million along with 60 additional staff who will backfill positions lost since 2008. The Committee agreed that such additional resources will provide significant benefits for biodiversity in the longer term.

Peatlands

75. In recognition of the vast potential climate benefits to be found within healthy peatlands, Dr Farrell pointed to peatland restoration as a potential “number one” solution to the biodiversity crisis in Ireland. The Committee agreed that it is necessary to improve and rewet peatlands. The Committee recognised that there is a current shortage of horticultural peat available to the horticultural industry but noted that there are larger volumes of peat being exported from Ireland. The Committee acknowledged the stakeholder view that horticultural peat use cannot continue and that an alternative must be found and agreed that further research of more climate friendly approaches must be facilitated.

76. The Committee noted the *ad hoc* levels of research to date and the resulting data gaps that are impacting peatland restoration such as a lack of national peatland ecosystem mapping and data on the depth of peatlands and acknowledged a need for greater levels of research to ensure the adequate restoration of peatlands. Dr Farrell outlined that:

“In the 1940s and 50s there were peatland research centres across Ireland because value was seen in understanding our peatlands and how we could use them to the best effect. For us to focus our research, time and energy now, it would be on what the services are, what values and benefits we can receive from restoring our peatlands, how they work and how we can restore the peatland system to work with freshwater systems.”

77. The Committee agreed that a peatland ‘inventory’ would allow for better data collection to inform the policy changes required to improve and restore biodiversity. Members also noted the stakeholder suggestion of establishing a national peatlands unit that would work as a cross-sectoral agency in order to guide the restoration and support of peatlands. Dr Farrell highlighted that such an agency could follow a similar model to the EPA catchments unit which works across different sectors and groups across Ireland and with the Department of Agriculture, Food and the Marine.

78. In order to restore the biodiversity within peatlands, stakeholders emphasised the need to prevent further degradation. The Committee noted that to do this, a change of approach from farmers including reducing grazing and grazing animals from uplands to allow wetland and peatland restoration will be needed. To facilitate this, the Committee agreed that engagement with farmers is essential to explore the potential approaches that can be taken for different types of land. In addition, Members agreed that incentives to encourage and support the improvement of biodiversity in peatlands will be required. Ms Duggan, highlighted that:

“Farmers have not been found wanting in responding to results-base agri-environment schemes, where results can be seen on the ground. They should be rewarded for those activities. There is great scope for increasing CAP funds in the strategic plan to help farmers not only to restore peatlands but to undertake landscape scale restoration for biodiversity, and that is about restoring habitats, as well as supporting or restoring semi-natural grasslands and wetlands all over the country.”

79. The Committee agreed that tailored solutions are needed and noted the Greifswald wetlands group in Germany that works with landowners to drive policy changes through the CAP to support wet farming practices. Members agreed that such international examples should be examined for implementation in Ireland.

Forestry

80. To combat the intense deforestation of the past decades, Mr Purser highlighted an alternative forest management system that thins trees periodically to allow the forests to grow and develop: continuous cover forestry (CCF). The Committee noted the multiple benefits of CCF with regard to climate change mitigation and the timber industry. Mr Purser stated that CCF is an:

“efficient means of optimising carbon storage in forests as it avoids the large-scale release of soil carbon and the loss of biodiversity that occurs when plantations are clear-felled.”

In addition, the Committee noted that the facilitation of CCF also produces more high-quality, long-life timber products and that less timber goes into short-term products such as pulp and pallet manufacturing. Members agreed that such a system provides a strong balance between delivering for industry and improving biodiversity, thus providing an opportunity for climate change mitigation and economic production.

81. Mr Purser also highlighted that new planting must be robustly mixed with greater utilisation of diverse conifers and native species and that we should cease planting monocultures, the predominance of which is deeply concerning. Even aged monocultural plantations are not good at delivering the wider long-term social and environmental benefits of forestry. Concerns about the sustainability of monocultures are not new, and currently, in central Europe, bark beetles are destroying large areas of monocultural spruce plantations that are suffering from drought stress. In Ireland, ash dieback is devastating monocultural ash plantations. Once those monocultural forests are dying, they are no longer storing or locking up carbon, but releasing it. Forests must be diversified to make them resilient.

82. In respect of the role of forestry in wider EU targets, Dr Deirdre Lynn, National Parks and Wildlife Service, stated that:

“We really need to sit down and think about where we should target to increase some of that terrestrial area. We

certainly should make sure we have captured any of our remaining old oak forests in that as well as, perhaps, some more of our wetlands and fens.”

83. The Committee noted that mature native woodlands are far less vulnerable to fire. In fact, they are almost repellent to fire as it sweeps through the landscape. They are far more diverse and have a higher moisture content at ground level. They tend to be bypassed by fire or stop fire in the landscape in Ireland.

84. In order for a CCF management system to be effective, the Committee agreed that other aspects of biodiversity loss must be addressed. Mr Purser cautioned that while forests can be improved for carbon storage through thinning, retention and diversification, in many cases this is not possible because the forest has grown too mature without intervention. A mixture of felling, redesigning and replanting will lead the future management of such forests. In addition, Mr Purser referred to policy initiatives that have enabled the planting of diverse species on the edges of monocultural or industrial plantations:

“While we are pushing for greater levels of diverse planting, what happens is that a lot of it becomes compartmentalised, so we end up with smaller monocultures. All of the diverse species go into one field and all of the broadleaves go into another, but the largest part is the commercial, monoculture space. It is diversification of sorts but it’s not real. It does not allow for future transformation of management to continuous cover forestry.”

85. Dr Lynn, NPWS, highlighted that an examination of where to focus efforts should be undertaken within the land use review process referred to in the Programme for Government:

“I refer to alluvium woodlands. Many alluvial soils in this context would benefit from being wooded. We need to protect our older oak woodlands and tackle invasive species. We must expand our complement of native woodlands.

Equally, regarding the monoculture of Sitka spruce plantations, I appreciate that it is a crop that we need for wood products, but these plantations must be sited in appropriate areas and certainly not on peatlands.”

86. The Committee noted that in addressing the issues with forestry, it is essential that correct decisions are made around such practices to avoid further legacy issues for the future. In addition, stakeholders emphasised that such biodiversity growth in forests takes time and long-term planning. This is especially true in relation to forest research and the gathering of data to inform future long-term policy and forestry projects.

Other key legislative and policy measures

87. The Committee agreed that the lack of robust Government policy around biodiversity and the protection of nature has been and is a key issue. Stakeholders criticised the sectoral policies and plans that are undermining legal obligations and policies that protect nature and emphasised the challenge facing Government to reverse trends and halt the loss of biodiversity as a result of this. The Committee noted that the conflicting policies continue as Mr Fogarty pointed to a draft of an agri-food strategy that will be in place until 2030 that:

“foresees more growth, more productivity and getting more out of the land when we know that nature is already suffering as a result of our current levels of productivity.”

88. Stakeholders referred to the need for an alignment of policy and significant legislative reform that would place biodiversity on a legal footing and emphasised that “*subsidies which promote the destruction of nature*” must be removed and replaced with incentives or schemes that work to protect and enhance biodiversity. This is especially relevant to farmland and payment schemes where policy is currently centred on productivity and agricultural output from lands.

89. The Committee heard substantial evidence that much of the legislation around biodiversity is out of date and no longer fit for purpose. Members noted that

changes to the Heritage Act created a situation that led to the loss of hedgerows in Ireland and, in turn, the loss of bird species. Stakeholders emphasised that the management of hedgerows is a low-hanging fruit in relation to the restoration of biodiversity. Dr Lysaght stated that there are 600,000km of hedgerows in Ireland that could be better managed with enormous benefit to climate and wildlife.

Members agreed that a review of the Act for the betterment of hedgerows in Ireland should be considered. In addition, Mr Fogarty suggested the Committee consider the introduction of a Biodiversity Act that would bring together all national wildlife legislation and update it to include provisions for European obligations and structural accountability for implementing biodiversity measures.

90. While stakeholders pointed to the National Biodiversity Plan as a key measure for implementing policy, Dr Lynn expressed the need for the Plan to be placed under a legislative statutory footing which would provide the necessary impetus to move forward while also providing space for improving governance and oversight. The Committee acknowledged that many aspects of biodiversity are undertaken by various Government departments and, as such, it would be beneficial to have better political oversight of the implementation of measures within the Plan.

91. The Committee agreed that there are multiple benefits to be gained from climate-led farming in Ireland and that farmers should not be penalised for unused lands but rather rewarded for building and enhancing biodiversity within them. Professor Stout emphasised the need to work with nature and empower local communities and farmers to work together to bring diversity back to their lands and surroundings:

“Let us not penalise farmers for having uncultivable land and pay them for actions that have no positive effect. We must work with them and pay them to restore biodiversity on all parts of their farms. We must look to the success of initiatives like the all-Ireland pollinator plan, which has brought together local communities, local authorities, schools and businesses. Working together for pollinators has brought additional benefits for other wildlife. It has got commercial

companies investing in nature and has brought people together with a common purpose.”

92. Similarly, with regard to the marine environment, stakeholders emphasised the importance of local communities for regenerating and restoring biodiversity. The Committee agreed that local communities are no longer as connected with nature as they may once have been when there was greater reliance on it for survival. Mr Stephen Kavanagh expressed the need for greater engagement with local communities to raise awareness of and help people reconnect with the marine and coastal environments in order to encourage restoration at local levels:

“Governments can certainly help with legislation and the laws regarding trawling and so on, which could destroy local habitats, but ultimately the local communities, when they have pride in and knowledge of what is out there, will protect it and it will self-sustain from there.”

The Committee noted that public appetite has increased for implementing local initiatives to restore biodiversity and agreed that mechanisms to allow and encourage further local input and responsibility for the restoration of biodiversity should be considered.

93. Dr Lynn outlined the work being done with the Community Foundation for Ireland whereby communities are being linked up with ecologists to develop local community plans for biodiversity. The Committee noted that 117 of these community plans are being drafted and acknowledged that funding would be needed to implement the measures within the plans.

94. The Committee acknowledged that to restore and protect nature and biodiversity, it was necessary to ensure that future Government land use policy and decisions are developed with biodiversity at the heart. Stakeholders stated that the past failures around policy and a continuation of this into the future will only prove to continue the trend of biodiversity loss in Ireland. Ms Duggan stated that while nature-based solutions for climate action can help, *“preventing catastrophic decline and extinctions will require a significant, co-ordinated and sustained effort*

of targeted and resourced measures” including the enforcement of existing environmental legislation and the enhancement of Government policy to ensure the management of this.

95. In addition, the Committee agreed with the stakeholder opinion that better engagement with communities to encourage local conservation and local restoration of biodiversity was essential and noted the concept of a biodiversity “champion” to inform and lead the public and local communities in relation to biodiversity measures. Following the successful work of biodiversity officers in some County Councils, Members agreed that the addition of biodiversity officers to all local authorities would be very welcome to encourage more biodiverse open spaces in urban areas and greater engagement on a local level. This would help to inform planning and development from a biodiversity/environmental perspective.

96. While community and local buy-in is greatly needed to encourage individual behavioural changes, the Committee also agreed that a collaborative approach to biodiversity is required from Departments and relevant agencies. Dr Lysaght pointed to areas of great potential for biodiversity restoration, such as the motorway network. While some local authorities are working well through the all-Ireland pollinator plan, transport corridors could be managed more effectively with stronger commitment from Transport Infrastructure Ireland and local authorities to consider biodiversity in the management of these areas.

97. In respect of pollinators more widely, the Committee agreed that a joined-up approach to protecting and establishing pollinator corridors in both urban and rural environments is essential. Dr Lynn explained that:

“Pollination corridors are important in an urban setting and equally so across the country. We need this green architecture across agricultural systems as well and it is important that we maintain our hedgerows. We have a heterogenous landscape. We are a farming nation, which I understand, and we need to produce food but we also

need to make space for nature and to allow species to be able to move across the landscape.”

98. The Committee acknowledged the importance of restoring biodiversity in urban areas and the need to scale up measures to protect and enhance urban biodiversity. Members also noted the importance of biodiversity planning for urban public land, including consideration of how such land might support pollinator pathways or wildlife corridors.

99. Dr Lynn highlighted research undertaken by UCD into Government expenditure on biodiversity and stated the importance of effective spending to improve biodiversity:

“The results show that approximately 10% of funding for biodiversity comes through the National Parks and Wildlife Service. Approximately 78% goes through the Department for Agriculture, Food and the Marine. This is where we need to focus. We need to look at how the money is spent and whether it is being spent effectively. There is a move towards more results-based approaches. We are using a lot of EU funding through the LIFE programmes to test and pilot work which is farmer led. We state what we want the habitat to look like and that when it does we will provide the payments. It is results based. We are looking to scale up a lot of this work.”

100. Significant changes to policy and the enforcement of policy will be necessary to meet carbon emissions targets and it is clear that biodiversity and nature-based solutions provide an excellent opportunity for multiple benefits. However, Members agreed that in order to ensure long-term positive effects for the climate, it is necessary for relevant Departments and agencies to work cohesively across sectors to implement policy that is in line not just with restoring biodiversity, but also retaining it.

101. The Committee noted that indigenous people make up 5% of the global population but protect 80% of the world's biodiversity and 25% of the land. Members noted that measures must be taken in light of the UN Biodiversity goal of protecting 30% of land by 2030, to prevent the eviction of indigenous peoples. Members also emphasised Ireland's responsibility to be a constructive voice on the issue within international negotiations on the topic.
102. Dr. Lynn highlighted there are targets in the Global Biodiversity Framework dedicated to indigenous protection, emphasising its importance. Dr. Lynn also noted the importance of respecting indigenous people and including them in all aspects of decision making:

“We hope that very strong lines will be taken in terms of the protection of indigenous lands to ensure that the international community is not promoting land grabs. The ecosystem approach contains 12 principles. It brings it right back down to the level of the people who were involved with the land at that point.”

It was noted however that “landowners” does not carry the same meaning as ‘Indigenous Peoples’, although some may of course be both.

103. The Committee heard that under the EU taxonomy for investment that biodiversity should not be damaged. Furthermore, Dr Lynn stated in relation to the proposed EU nature restoration law that:

“The nature restoration law will be very significant. I believe the Minister of State, Deputy Noonan, has already requested that very high-level officials get together to discuss the implications of the EU restoration law when it comes out. There may be different threads to this. There will be targets relating to the numbers of the EU protected habitats and species returning to favourable status or ensuring no further decline and there could be wider ecosystem targets for restoration. We have to draw up our

own national restoration plan, as well. We have to have discussions about who leads on these big biodiversity agenda items. We need to look at our State-owned and public lands. We are looking at our landbanks for housing; we should look at our landbanks for biodiversity purposes as well. Then we should look very closely at any of the areas where we have been putting EU money in for restoration purposes as well.”

Conclusions and recommendations

Marine biodiversity

1. The Committee recommends the designation and management of Marine Protected Areas (MPAs) without delay. The management and monitoring of MPAs should be robustly underpinned by legislation to support the implementation of management plans and ensure that the future of renewable energy in Ireland does not result in further depletion of marine habitats and species. The Committee further recommends that MPAs include highly protected marine areas, HPMAs, as part of that designation. In addition, the Committee recommends that coastal zone management is integrated into the MPAs.
2. The Committee recommends the immediate development and implementation of management plans for all current Marine Protected Area sites and the designation of new Marine Protected Areas as a matter of urgency. This is necessary not only for restoring marine biodiversity but also for preventing further damage from the expansion of offshore renewable energy.
3. The Committee notes that due to the extent of our marine environment, Ireland might be expected to lead on the designation of Marine Protected Areas and recommends urgent action to meet or exceed the 2030 target.
4. The Committee recommends prioritising the designation of new Marine Protected Areas and that where there is construction and implementation of new offshore infrastructure, that “sensitivity mapping” be completed while awaiting MPA designation.
5. The Committee recommends interim measures are implemented and monitored to protect and restore the marine environment whilst the MPA designation process is underway.

6. The Committee recommends urgent action is taken to address Ireland's failure to meet the UN's biological diversity target of protecting 10% of our marine area by 2020.
7. The Committee notes that recent INFOMAR research has highlighted a range of vulnerable habitats which have not yet been integrated into Ireland's Natura 2000 or Marine Protection framework, including endangered shark nurseries and deep-water corals and recommends that interim measures be put in place to provide protection for such habitats pending the provision of longer-term protection.
8. Additionally, the Committee recommends that instances of bottom trawling and dredging should be significantly reduced and entirely prohibited within special areas of conservation or marine protected areas.
9. The Committee recommends legislating for the protection of endangered sharks and other marine fish and invertebrates.
10. The Committee acknowledges the benefits to be gained from offshore renewable energy in Ireland. Members agreed, however, that appropriate planning and consideration of sites must be implemented. The Committee is, therefore, of the view that best practice guidelines are needed for the offshore renewables industry and recommends that a review of examples from other jurisdictions should be conducted to inform the future infrastructure of renewable energy projects.
11. The Committee recommends the updating and further development of guidelines on undersea noise, to reflect findings from the Automated Cetacean Acoustics Project (ACAP) and Marine Institute study on humpback whales.
12. The Committee recommends that better engagement be undertaken with the fishing industry in relation to the designation of MPAs and marine environment conservation. Such engagement should be inclusive and

informative and provide assurance with regard to changes that may impact the industry.

13. The Committee recommends further exploration of the potential measures for marine biodiversity restoration in wind farm locations that become no-fish zones.
14. The Committee recommends that increased resources be provided for the monitoring and research of marine environments to inform future policy development.
15. Greater resources should be allocated to public data collection and research.
16. The Committee recommends a more integrated approach to monitoring and restoration of biodiversity and that consideration should be given to establishing a separate department for the marine to better address the challenges of climate change in relation to the marine environment.
17. Noting the negative impacts of high levels of nitrates on young fish, stunted growth and decreased oxygen levels in water, the Committee recommends further exploration into alternative fertilisers as an effort to protect marine species harmed by nitrates pollution.

Agriculture and land use

18. The Committee recommends that the Ag Climatise Roadmap 2020 be aligned with the agreed sectoral emission ceilings.
19. The Committee recommends that greater effort should be made to ensure that human activities such as the intensification of agriculture and afforestation do not further contribute to biodiversity decline. A review of the impacts of Ireland's derogation to the Nitrates Directive must be undertaken to ensure that the derogation does not contribute to declining water quality in Ireland's water bodies.

20. The Committee agrees that there is a need for the implementation of a robust agri/environment scheme, so that farmers are no longer penalised for having areas of biodiversity and wildlife habitat on their land. Such a scheme would ensure that farmers are incentivised to protect and create areas of biodiversity and habitat on their land. The Committee feels this is a key element in restoring biodiversity in Ireland.
21. The Committee recommends that urgent steps be taken to ensure Ireland reaches its EU obligations on the designation of Special Areas of Conservation immediately.
22. The Committee recommends that protection and restoration of biodiversity should be reflected in all Government land-use policies and decisions, including land use policies in respect of climate action.
23. The Committee recommends the identification and use of appropriate public land for the creation of new Statutory Nature reserves.
24. The Committee recommends that biodiversity planning for all public land, including urban public land, including consideration of how such land might support pollinator pathways or wildlife corridors.
25. The Committee recommends Local Authorities, the National Transport Authority and Transport Infrastructure Ireland support the creation of Wildlife Corridors and Pollinator Paths in cities, towns and villages to protect and promote biodiversity in urban and semi-urban areas.
26. The Committee recommends that greater resources be allocated to the National Pollinator Plan and that consideration be given to placing that plan on a statutory basis.
27. The Committee recommends maintaining prohibitions and enhancing regulations on pesticides that risk causing considerable damage to bees.

28. The Committee recommends that consideration be given to increasing the legislative protection for the native Irish Honeybee and other key natural pollinators and notes the legislation currently underway and encourages progress in this regard.
29. The Committee recommends that remaining old oak forests in the State should be designated as special areas of conservation.
30. The Committee recommends scaling up measures to deepen and sustain urban biodiversity across towns and cities in Ireland.
31. The Committee notes the important role of hedgerows in biodiversity and recommends that public policy would seek to enhance, protect and better monitor that role.
32. The Committee also notes the potential co-benefits for biodiversity in old and new green networks of pedestrian and cycleways the continuation and expansion of this.

Resources, Monitoring and Research

33. The Committee agreed that while biodiversity is a data-informed, evidence-based policy area, there is an absence of consistent data and research in Ireland. The Committee recommends that greater commitment be given to resourcing research, monitoring and data gathering projects for biodiversity in Ireland on a consistent basis to inform future Government policy.
34. The Committee recommends that increased support is given to research into both land and marine biodiversity, and that research collaboration and networking is also supported.
35. The Committee recommends that the National Biodiversity Data Centre be placed on a more secure footing to ensure a consistent approach to the gathering of data for the restoration of biodiversity and for the mitigation of climate change.

36. The Committee also recommends that greater levels of monitoring be facilitated through initiatives such as that of the National Capital Ireland forum to increase assessments with regard to the improvement or degradation of biodiversity in various ecosystems.
37. In light of the review of the Natural Parks and Wildlife Service, the Committee recommends that examples of successful agencies in other countries be examined to inform the development of the agency in Ireland. The Committee recommends that consideration be given to a model such as the EPA with clear staff structures, accountability and resourcing to ensure objectives are met and include biodiversity measures.
38. The Committee recognises that biodiversity should be measured in terms of it being a common good and recommends that any measurement or data collection methods utilised in the State are ultimately informed by the ecological and social common good which biodiversity represents.
39. The Committee recommends that to support biodiversity and ensure it is seen as a common good, that resources should be given to further the development of a biodiversity score.
40. The Committee recommends active education, training and recruitment initiatives to increase the supply of essential skills across a number of aspects of biodiversity, from the need for more hydrogeologists and other relevant experts to support environmental impact assessments to the urgent need for hydrologists, ecohydrologists and engineers to support peatland restoration and rewetting.
41. The Committee recommends greater public resourcing of the civil society organisations and environmental NGOs who offer established and independent expertise in areas such as environmental impact assessment, monitoring and research.

Peatlands and Forestry

42. The Committee recommends the ending of drainage of peatlands and peat soils for agriculture as a matter of urgency given this process alters the peatlands natural absorption of carbon dioxide and instead leads to emissions in carbon dioxide and nitrous oxide.
43. The Committee recommends the establishment of a national peatlands unit. Such a unit would engage with and work across sectors to inform policy development and co-ordinate the implementation of action plans and measures to improve and restore the biodiversity of peatlands and wetlands.
44. The Committee recommends the establishment of a national inventory for peatlands to identify and address any gaps in data around peatlands. An inventory would not only provide the research and data to assist with conservation and recovery but also to reduce the risks associated with degraded peatlands such as carbon loss, bogslides and fires.
45. The Committee recommends that greater engagement with landowners is vital for providing tailored solutions to peatland restoration. The Committee therefore recommends that an examination of international practices for the restoration of peatlands be conducted and should include, for example, an examination of the work of the Greifswald wetlands group in Germany to ascertain measures that could be transferrable for peatland restoration in Ireland.
46. The Committee recommends that a thorough examination of the support schemes and CAP measures be conducted to ascertain potential initiatives and incentives to encourage farming communities to implement biodiversity restoration on their lands.
47. The Committee notes that the many benefits of forestry which include biodiversity, carbon sequestration, water quality and recreation, and notes that these benefits are often not incorporated into the mainstream

forestry model in Ireland. The Committee recommends that priority be given to implementing the Continuous Cover Forestry, CCF system on a broader basis for greater sustainable forest management, with the development of a best practice guide for CCF and specific targets for CCF. It is also important that appropriate environmental assessment of afforestation locations takes place to ensure new forestry is not planted on high nature value lands such as wetlands and peatlands that was a practice in the past. The Committee is also of the view that greater public awareness of CCF is needed to encourage private landowners to deliver and prioritise this system.

48. The Committee recommends transitioning away from the practice of monocultural forestry and pursuing a policy of forestry diversification instead to increase the resilience of our forests and improve biodiversity.
49. The Committee recommends that an examination of the practices for managing overgrazing especially of non-native species of deer be undertaken to ascertain potential solutions to the issue of overgrazing and the role they play in exacerbating monocultural forests. The licensing around deer culling should be reviewed as part of this examination it is carried out in a manner that is based on best ecological herd management principles.
50. The Committee recommends Ireland's next Forestry Programme puts wild bird, pollinator and habitat conservation at its core by identifying and protecting their habitats and avoiding all afforestation on high nature value grasslands and peat habitats and ensuring that forestry activities are wholly in line with EU environmental law.
51. The Committee notes the negative impact which failure to properly apply EU environmental assessment tools such as Environmental Impact Assessment and Appropriate Assessment has had on forestry and recommends a shift towards earlier and better use of these tools.

Other key legislative and policy measures

52. The Committee recommends that Government put in place an emergency plan to address the crisis in Ireland's biodiversity.
53. The Committee recommends the introduction of legislative provisions to place the protection and promotion of biodiversity on a statutory basis and to set out the role and obligations of all Departments and public bodies in respect of biodiversity.
54. The Committee recommends the establishment of a biodiversity officer / biodiversity unit in all Government Departments, public authorities and semi-state bodies, where appropriate; to lead, coordinate and promote biodiversity measures and support biodiversity proofing of plans, policies and legislation.
55. The Committee recommends consideration be given to the establishment of an Inter-Departmental Working Group on Biodiversity to share knowledge, best practice, expertise and drive action on biodiversity across Government.
56. The Committee recommends that local authorities work to empower local communities and farmers to restore biodiversity. This should include incentives and initiatives that reward farmers for enhancing biodiversity on unused lands.
57. The Committee recommends that a biodiversity "champion" be considered to engage with the public to encourage support for biodiversity related measures and plans.
58. The Committee recommends that following the inclusion of a species on the Red List, that a prioritised action plan for that species be developed. This should be a cross-sectoral plan that sets in place sufficient actions to facilitate the protection and restoration of an endangered species.

59. The Committee recommends a cross-departmental taskforce is set up under ministerial mandate and funded to halt and reverse biodiversity loss including the losses of farmland birds including breeding waders like Curlew, Lapwing, Snipe, Golden Plover, Dunlin and the Corncrake.
60. The Committee recommends that consideration be given to the establishment of a Joint Committee on Biodiversity to oversee developments with regard to biodiversity in all environments.
61. The Committee recommends that a review of the Wildlife Act and Heritage Act be undertaken with a view to underpinning the protection of hedgerows in legislation without delay, in light of the degradation of hedgerows in Ireland.
62. The Committee recommends that legislation around wildlife and biodiversity should be reformed and that consideration should be given to a Biodiversity Act that would provide for action plans and management of biodiversity restoration. As a matter of priority, out-of-date legislation such as the Arterial Drainage Act 1945 should be updated to align with Ireland's climate and biodiversity ambitions.
63. The Committee recommends that Government plans, policies and legislation undergo biodiversity proofing on a systematic basis to evaluate their potential impacts on biodiversity and prevent the introduction of policies and legislation that lead to greater biodiversity loss and increase carbon emissions.
64. The Committee notes the important links between biodiversity and the Sustainable Development Goals, particularly the goals on life in water, life on land and sustainable cities and communities and recommends that this be reflected in policy on biodiversity and the SDGs.
65. The Committee recommends that a review of the policy around nature reserves and special areas of conservation (SACs) be conducted to ensure that SACs are subject to ongoing management plans and monitoring with specific conservation objectives for each site. It is also

important to ascertain why some SACs are in worse condition than areas outside the SAC. In addition, the Committee recommends that legislation to support national parks in order to prioritise nature be considered.

66. The Committee recommends full implementation of the EU Regulation on Invasive Alien Species.
67. The Committee recommends that local authorities and Transport Infrastructure Ireland should commit to managing and considering the road network to better benefit biodiversity and that greater effort should be made to meeting the biodiversity potential of road networks in Ireland.
68. The Committee recommends that the Government commit to the protection of 30 per cent of land and marine, 10 per cent of which is highly protected, on a national basis. This would align national policy with Ireland's commitments under the High Ambition Coalition for Nature and the EU Biodiversity Strategy for 2030.
69. The Committee recommends accelerated action and investment to meet binding nature restoration targets as part of the EU Biodiversity Strategy 2030.
70. The Committee recommends that on an international level, as part of their participation in the UN Biodiversity COP process, the Irish Government should seek to ensure that the achievement of biodiversity targets is done in a way which recognises and protects collective and customary land tenure systems, adopts strong enforceable safeguards for Indigenous Peoples and their human rights and prevents poor practice such as land grabs.
71. The Committee recommends that Ireland advocates for measures which would ensure that where the achievement of a 30% land conservation target incorporates any Indigenous territory, it should not seek or involve any transfer of the ownership or control of such territory.

72. The Committee recommends earlier, wider, adequately resourced and better use of EU environmental assessment tools such as Environmental Impact Assessment and Appropriate Assessment.
73. The Committee recommends properly conducted Environmental Impact Assessment Reports and other measures of environmental assessment in relation to new Climate Action or Energy infrastructure.
74. The Committee recommends Ireland engages more actively and constructively with the UN Biodiversity Conference process and demonstrates its commitment to the Kunming Declaration by working together with its international partners to realise an ambitious and just post-2020 Global Biodiversity Framework that achieves real transformative change.
75. The Committee recommends greater integration between the achievement of biodiversity and climate action targets and just transition supports, including investment and employment in the areas of ecological care and restoration.

Appendix 1 – Terms of Reference

Functions of the Committee – derived from Standing Orders [DSO 95; SSO 71]

- (1) The Select Committee shall consider and, unless otherwise provided for in these Standing Orders or by order, to report to the Dáil on any matter relating to —
 - (a) legislation, policy, governance, expenditure and administration of—
 - (i) a Government Department, and
 - (ii) State bodies within the responsibility of such Department, and
 - (b) the performance of a non-State body in relation to an agreement for the provision of services that it has entered into with any such Government Department or State body.
- (2) The Select Committee appointed pursuant to this Standing Order shall also consider such other matters which—
 - (a) stand referred to the Committee by virtue of these Standing Orders or statute law, or
 - (b) shall be referred to the Committee by order of the Dáil.
- (3) The principal purpose of Committee consideration of matters of policy, governance, expenditure and administration under paragraph (1) shall be—
 - (a) for the accountability of the relevant Minister or Minister of State, and
 - (b) to assess the performance of the relevant Government Department or of a State body within the responsibility of the relevant Department, in delivering public services while achieving intended outcomes, including value for money.
- (4) The Select Committee appointed pursuant to this Standing Order shall not consider any matter relating to accounts audited by, or reports of, the Comptroller and Auditor General unless the Committee of Public Accounts—
 - (a) consents to such consideration, or
 - (b) has reported on such accounts or reports.
- (5) The Select Committee appointed pursuant to this Standing Order may be joined with a Select Committee appointed by Seanad Éireann to be and act as a Joint Committee for the purposes of paragraph (1) and such other purposes as may be specified in these Standing Orders or by order of the Dáil: provided that the Joint Committee shall not consider—

- (a) the Committee Stage of a Bill,
 - (b) Estimates for Public Services, or
 - (c) a proposal contained in a motion for the approval of an international agreement involving a charge upon public funds referred to the Committee by order of the Dáil.
- (6) Any report that the Joint Committee proposes to make shall, on adoption by the Joint Committee, be made to both Houses of the Oireachtas.
- (7) The Chairman of the Select Committee appointed pursuant to this Standing Order shall also be Chairman of the Joint Committee.
- (8) Where the Select Committee proposes to consider—
- (a) EU draft legislative acts standing referred to the Select Committee under Standing Order 133, including the compliance of such acts with the principle of subsidiarity,
 - (b) other proposals for EU legislation and related policy issues, including programmes and guidelines prepared by the European Commission as a basis of possible legislative action,
 - (c) non-legislative documents published by any EU institution in relation to EU policy matters, or
 - (d) matters listed for consideration on the agenda for meetings of the relevant Council (of Ministers) of the European Union and the outcome of such meetings,
- the following may be notified accordingly and shall have the right to attend and take part in such consideration without having a right to move motions or amendments or the right to vote:
- (i) members of the European Parliament elected from constituencies in Ireland,
 - (ii) members of the Irish delegation to the Parliamentary Assembly of the Council of Europe, and
 - (iii) at the invitation of the Committee, other members of the European Parliament.
- (9) The Select Committee appointed pursuant to this Standing Order may, in respect of any Ombudsman charged with oversight of public services within the policy remit of the relevant Department consider—
- (a) such motions relating to the appointment of an Ombudsman as may be referred to the Committee, and
 - (b) such Ombudsman reports laid before either or both Houses of the Oireachtas as the Committee may select: Provided that the provisions

of Standing Order 130 apply where the Select Committee has not considered the Ombudsman report, or a portion or portions thereof, within two months (excluding Christmas, Easter or summer recess periods) of the report being laid before either or both Houses of the Oireachtas.

b. Scope and Context of Activities of Committees (as derived from Standing Orders) [DSO 94; SSO 70]

- (1) It shall be an instruction to each Select Committee that—
- (a) it may only consider such matters, engage in such activities, exercise such powers and discharge such functions as are specifically authorised under its orders of reference and under Standing Orders;
 - (b) such matters, activities, powers and functions shall be relevant to, and shall arise only in the context of, the preparation of a report to the Dáil;
 - (c) it shall not consider any matter which is being considered, or of which notice has been given of a proposal to consider, by the Joint Committee on Public Petitions in the exercise of its functions under Standing Order 125(1)1; and
 - (d) it shall refrain from inquiring into in public session or publishing confidential information regarding any matter if so requested, for stated reasons given in writing, by—
 - (i) a member of the Government or a Minister of State, or
 - (ii) the principal office-holder of a State body within the responsibility of a Government Department or
 - (iii) the principal office-holder of a non-State body which is partly funded by the State,

Provided that the Committee may appeal any such request made to the Ceann Comhairle, whose decision shall be final.

- (2) It shall be an instruction to all Select Committees to which Bills are referred that they shall ensure that not more than two Select Committees shall meet to consider a Bill on any given day, unless the Dáil, after due notice to the Business Committee by a Chairman of one of the Select Committees concerned, waives this instruction.

Appendix 2 – Submissions

I would like to provide you with some information that I received as a result of an expert virtual seminar held virtually by my university, UBC, in support of the work of the UN Expert Mechanism on the Rights of Indigenous Peoples (EMRIP) in February 2022. The topic was militarization of Indigenous peoples' lands, and we collected a body of information pertaining to militarized protection of land, which also happens to be the territories of Indigenous peoples.

Please see a summary of key points below.

Kind regards,
Sheryl

Overview

Over the past fifty years there has been a significant rise in militarized approaches to conservation.^[1] With the expansion of protected areas^[2] and increased focus on biodiversity conservation^[3] and addressing climate change^[4], protected areas around the world are bound to increase. For example, protected areas in the 10 countries in Central Africa have doubled in the last 20 years to more than 200 protected areas covering a total of 800 000 km², or twice the size of Cameroon.^[5] With the 30 by 30 Agenda, in which the UN plans to protect 30% of the planet by 2030,^[6] indigenous territories will further be threatened. Protected areas often feature heavy policing, with national wildlife services and local government rangers patrolling the protected areas including those in indigenous territories.

In 2020, Indigenous activists made up nearly 1/3 of the total of 331 human rights defenders killed worldwide. Even though Indigenous peoples comprise only about 6% of the global population. Attacks against indigenous defenders were reported in inter alia, Mexico, Guatemala, Brazil, Colombia, the Philippines, Saudi Arabia and Indonesia.^[7] In 2017, former UN Special Rapporteur on the Rights of Indigenous Peoples, Victoria Tauli Corpuz, produced a report to the Human Rights Council on the attacks on and criminalization of Indigenous human rights defenders.^[8] According to that report, the root cause of the current escalation of aggression is the lack of respect for the collective land rights of indigenous peoples, and the failures to provide Indigenous communities with secure land tenure, which in turn negatively impact their ability to effectively defend their lands, territories and resources from damage.

There is a risk of criminal recession and attacks against indigenous human rights defenders coming from the rush to implement climate change related adaptation and mitigation measures, like protected areas without human rights safeguards.

Indigenous peoples also suffer human rights violations from clean energy projects (in addition to oil, mining, coal and energy projects), including renewable energies such as hydroelectric, photovoltaic and wind power. While such projects are aimed at countering global warming and the negative ecological effects of other sources of energy, when indigenous peoples are forced off their lands this can not be considered good practice.^[9]

Recommendations

Community-based resource management frameworks should be utilized wherever possible, in order to affirm the rights of Indigenous peoples and communities relating to the conservation, control, management and sustainable use of their natural resources including wildlife.

Recent research shows that affirming collective property rights to Indigenous peoples reduces environmental exploitation.^[10] In this way, States can protect Indigenous communities as well as natural environments by supporting Indigenous peoples' collective land rights. Because many militarized conservation projects depend on international funding from State governments and NGOs,^[11] these groups should be encouraged to formally adopt protections for indigenous rights as outlined in the *United Nations Declaration on the Rights of Indigenous Peoples*.

States and UN entities should support and encourage community partnership and public participation in conservation efforts, instead of militarized enforcement of conservation. Victoria Tauli-Corpuz, former Special Rapporteur on the Rights of Indigenous Peoples, and other scholars have published a range of ideas on how to implement Indigenous-led conservation. Those recommendations include that NGOs and governments work directly with Indigenous peoples to map and incorporate their territories into conservation plans; that State governments fund Indigenous peoples directly for their conservation work, instead of ecoguards; that NGOs identify and address rights violations in their conservation work; and that Indigenous peoples themselves oversee protected areas.^[12] States and different stakeholders, including UN entities, should facilitate collaboration and the sharing of good practices in this field. States should ensure that their conservation agencies choose their collaborators based on their human rights records.

^[1] Submission by Indigenous Peoples of Africa Coordinating Committee.

² Dudley, N., 2013. Guidelines for applying protected area management categories including IUCN WCPA best practice guidance on recognising protected areas and assigning management categories and governance types. *Best Practice Protected Area Guidelines Series*, 21(1).

³ See for example discussion on the Post-2020 global biodiversity framework at <https://www.iucn.org/resources/issues-briefs/post-2020-global-biodiversity-framework>

⁴ See for example UN CBD, Biodiversity and Climate Change at <https://www.cbd.int/climate/>

⁵ CIRAD, Protected areas in Central Africa: a new report proposes avenues to improve their effectiveness, June 2021 at <https://www.cirad.fr/en/press-area/press-releases/2021/state-of-protected-areas-in-central-africa-2020>

⁶ Minority Rights Group International, UN plan to protect 30 percent of the planet by 2030 could displace hundreds of millions, NGOs and experts warn, September 2020 at <https://minorityrights.org/2020/09/02/convention-on-biodiversity/>

⁷ Presentation made by United Nations Special Rapporteur Fransisco Cali Tzay at the expert seminar convened by the University of British Columbia in February 2022.

⁸ A/HRC/39/17

⁹ Presentation by Leonardo Gonzalez Paragon made at the expert seminar convened by the University of British Columbia in February 2022.

¹⁰ Kathryn Baragwanath and Ella Bayi. 2020. Collective property rights reduce deforestation in the Brazilian Amazon. *Proceedings of the National Academy of Sciences*, Vol. 117: No. 34. <https://doi.org/10.1073/pnas.1917874117>

^[11] Presentation by Mohamed Ewangaye Didane made at the expert seminar convened by the University of British Columbia in February 2022

^[12] Vicky Tauli-Corpuz et al., "Cornered by PAs: Adopting Rights-Based Approaches to Enable Cost-Effective Conservation and Climate Action," *World Development* 130 (June 2020): 104923, <https://doi.org/10.1016/j.worlddev.2020.104923>. See also Asia Indigenous Peoples Pact (AIPP)'s Handbook: Extractive Industries and Free, Prior and Informed Consent of Indigenous Peoples, 2019, https://aippnet.org/wp-content/uploads/2020/05/AIPP-Handbook-on-Extractive-Industries-and-FPIC-of-Indigenous-Peoples_web.pdf

Sheryl Lightfoot, PhD

Senior Advisor to the President on Indigenous Affairs

Canada Research Chair of Global Indigenous Rights and Politics

Associate Professor, Political Science and the School of Public Policy and Global Affairs

Faculty Associate in the Institute for Critical Indigenous Studies
The University of British Columbia
Buchanan C-425 - 1866 Main Mall, Vancouver BC CA V6T 1Z1
E: Sheryl.lightfoot@ubc.ca | Twitter: @sheryllightfoot

Vice Chair and Member from North America (2021-2024)
United Nations Expert Mechanism on the Rights of Indigenous Peoples
<https://www.ohchr.org/en/issues/ipeoples/emrip/pages/emripindex.aspx>

For scheduling requests, please contact Executive Coordinator, Andrea Barragan Rivero at abarragan.rivero@ubc.ca.

About UBC's Office of Indigenous Strategic Initiatives (OISI): <https://isp.ubc.ca/about-oisi/>

Indigenous Strategic Plan updates: <https://isp.ubc.ca/>

Research Project website: www.complexsovereignties.ca

UBC is located on the traditional, ancestral, and unceded territory of the hə́nqəmíə̀m̓-speaking *Musqueam* people.



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[1] Submission by Indigenous Peoples of Africa Coordinating Committee.

[2] Dudley, N., 2013. Guidelines for applying protected area management categories including IUCN WCPA best practice guidance on recognising protected areas and assigning management categories and governance types. *Best Practice Protected Area Guidelines Series*, 21(1).

[3] See for example discussion on the Post-2020 global biodiversity framework at <https://www.iucn.org/resources/issues-briefs/post-2020-global-biodiversity-framework>

[4] See for example UN CBD, Biodiversity and Climate Change at <https://www.cbd.int/climate/>

[5] CIRAD, Protected areas in Central Africa: a new report proposes avenues to improve their effectiveness, June 2021 at <https://www.cirad.fr/en/press-area/press-releases/2021/state-of-protected-areas-in-central-africa-2020>

[6] Minority Rights Group International, UN plan to protect 30 percent of the planet by 2030 could displace hundreds of millions, NGOs and experts warn, September 2020 at <https://minorityrights.org/2020/09/02/convention-on-biodiversity/>

[7] Presentation made by United Nations Special Rapporteur Fransisco Cali Tzay at the expert seminar convened by the University of British Columbia in February 2022.

[8] A/HRC/39/17

[9] Presentation by Leonardo Gonzalez Paragon made at the expert seminar convened by the University of British Columbia in February 2022.

[10] Kathryn Baragwanath and Ella Bayi. 2020. Collective property rights reduce deforestation in the Brazilian Amazon. *Proceedings of the National Academy of Sciences*, Vol. 117: No. 34. <https://doi.org/10.1073/pnas.1917874117>

[11] Presentation by Mohamed Ewangaye Didane made at the expert seminar convened by the University of British Columbia in February 2022

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September 12, 2022

The Honorable Alice-Mary Higgins,
Senate of Ireland

Dear Senator Alice-Mary Higgins

On behalf of the Indigenous Peoples Rights International (IPRI) we would like to commend your efforts on the field of the climate change, environment and human rights protection. We also commend your efforts in upholding the rights of Indigenous Peoples in the context of the upcoming Conference of the Parties (COP) of the Convention on Biological Diversity (CBD).

Hereby, we respectfully request that, in the context of the on-going discussions for the upcoming COP of the CBD and the Joint Oireachtas Committee for the Environment and Climate Action report on Biodiversity, the rights of Indigenous Peoples are properly respected and protected in law and practice. This is a precondition for us as indigenous peoples to continue and enhance our invaluable and strategic roles and contributions to biodiversity protection. Evidence have shown that indigenous peoples continue to protect 60-80% of the world's remaining biodiversity.

IPRI is an Indigenous-led organization with a mission to end the criminalization and impunity against Indigenous Peoples. We are seeing a growing trend of criminalization, violence and impunity against Indigenous Peoples around the world. This also includes rights violations resulting from fortress conservation initiatives .

While IPRI commends the commitment made by global leaders to protect the world's biodiversity with the 30x30 target, this action also requires strong partnerships with indigenous peoples guided by strict adherence to the human rights obligations and commitments of states. Given the past and current violations against Indigenous Peoples in many conservation initiatives, we are deeply concerned that the global efforts to address climate change and biodiversity loss, such as the 30x30 initiative, will result in further violations against our individual and collective rights. Indigenous Peoples have asserted that the 30x30 initiative must have explicit commitments to protecting and respecting our rights, as enshrined in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP).



As documented on our “Global Report - Redefining Protected Areas: A study on the criminalization and human rights violations against Indigenous Peoples in Conservation”, territories and areas conserved mostly by Indigenous Peoples cover at least one-fifth of the world’s land surface (at least 28 million km²). Of this, 83 percent (23 million km²) lies outside of protected and conserved areas that are governed by states or private actors.

In many cases, the “fortress conservation” approach promoted by many States and big conservation NGOs has regarded Indigenous Peoples as enemies to conservation. This is leading to the expropriation of our customary land, massive, forced displacement, denial of self-governance, lack of access to their traditional occupations and livelihoods, loss of cultural and spiritual sites, and non-recognition of our own customary authorities, among others. Ultimately, this is jeopardizing Indigenous Peoples’ very own survival. Worst, when we defend our lands, territories and resources, we are being criminalized with the use of unjust laws and policies that are in violation to the exercise and protection of our collective rights as indigenous peoples.

In addition, many States’ national legal frameworks lack the recognition of Indigenous Peoples rights resulting to systemic criminalization of indigenous peoples in the exercise and defense of our collective rights, affirmed by international human rights instruments, especially our rights to their lands, territories and resources including our sustainable livelihoods and resource governance and management systems. And our right to self-determination. Only 10% of indigenous peoples’ customary lands is legally recognized which is a key factor in the continuing and even worsening cases of land grabbing being justified in the name of conservation, national economic growth and development. The on-going violence and threats of massive eviction of more than 150,000 Maasai Indigenous Pastoralists in Loliondo by the State of Tanzania, to set up the “Pololet Game Conservation Area” to be managed by the Otterlo Business Corporation, a hunting company from the United Arab Emirates is a glaring case of the dangers of promoting conservation that is disrespectful of indigenous peoples.

It is important to highlight that Indigenous Peoples are demanding a human rights-based approach to conservation. In addition to safeguarding our individual and collective rights, the objective to protect the environment will also be achieved. Numerous examples have positively documented how the human rights-based approach is more effective than non-rights-based approaches. The World Bank’s Independent Evaluation Group concluded that community-managed forests are more effective in reducing deforestation than strictly protected areas and, “[i]n Latin America, indigenous areas are almost twice as effective as any other form of



protection.” Similar conclusions were drawn from a review on Africa stating that with stronger land tenure, indigenous communities are able to enact their land governance structures more effectively, contributing to overall better biodiversity.

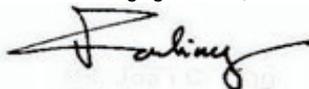
In light of the above, we respectfully submit, for your consideration and reference our Global Report - Redefining Protected Areas: A study on the criminalization and human rights violations against Indigenous Peoples in Conservation.

In addition, IPRI would like to recommend that in the context of on-going and future discussions regarding global conservation initiatives, it is necessary to have a human rights-based approach, which includes *inter alia* the following:

- The UN Declaration on the Rights of Indigenous Peoples (UNDRIP) is upheld in law and practice in all conservation initiatives at all levels;
- Indigenous Peoples rights over their lands, territories and resources are protected and respected including policies and mechanisms regulating business activities in indigenous territories and projects that will affect them
- That protected areas are not established on Indigenous Peoples lands or territories without their Free, Prior and Informed Consent (FPIC);
- That States do not criminalize Indigenous Peoples for defending their rights, particularly to their lands, territories and resources. This requires policy coherence to respect and protect the collective rights of indigenous peoples
- That, in the global discussions and standard-setting processes, Indigenous Peoples’ voices are heard and respected through their meaningful participation
- That crimes against Indigenous Peoples in relation to conservation initiatives are properly sanctioned and these do not end in impunity.

Finally, we would like to express our support in these discussions and is willing to engage in any future discussions on the subject and provide technical advice in case it is needed.

Sincerely yours,



Joan Carling
Executive Director
Indigenous Peoples Rights International

Survival



**For tribes, for nature
for all humanity**

Survival International
6 Charterhouse Buildings
London EC1M 7ET
United Kingdom

+44 (0) 20 7687 8700
info@survivalinternational.org
www.survivalinternational.org

**We are Survival International, the
global movement for tribal peoples.
We're fighting for their survival
around the world.**

Members of the Joint Oireachtas Committee for
Environment and Climate Action
Leinster House, Kildare Street
Dublin 2

20 September 2022

Dear Members of the Joint Oireachtas Committee for Environment and Climate Action,

Survival International, the global movement for tribal peoples, urges the Joint Oireachtas Committee for the Environment and Climate Action to raise concerns regarding the inclusion of the target to turn 30% of the Earth into Protected Areas in the Post 2020 Global Biodiversity Framework (GBF).

The 30% plan will be [devastating for Indigenous and local people](#), who will face a massive increase in evictions and human rights violations, and it will not protect the planet's biodiversity. The target is [not based on science](#) and ignores the many studies that demonstrate that recognizing the rights of Indigenous Peoples to their lands [is the best](#), and most cost effective, way to protect biodiversity.

We urge the Joint Oireachtas Committee for the Environment and Climate Action to oppose the inclusion of any percentage-based Protected Area targets and instead to call for the recognition of the rights of Indigenous Peoples to their lands. However, should such a target be included, we call on the Committee to push for the GBF to recognize and protect collective and customary land tenure systems and adopt strong, enforceable safeguards for Indigenous Peoples and other land dependent communities that will apply to all new and existing Protected Areas.

These safeguards must adhere to international human rights agreements and guarantee the rights to lands, resources, self-determination and free, prior and informed consent of Indigenous Peoples. A plan should be adopted for how these safeguards will be applied to existing Protected Areas, and a robust review mechanism be established, before any increase in Protected Areas is considered. Finally, these safeguards must be integrated into the text of the targets and not merely in a separate set of guidance and principles that would apply to the whole GBF (see attached letter for more information).

We would be very happy to meet with you to discuss these issues further, or provide you with more information regarding the devastating impact of the 30% plan.

Yours sincerely,

Fiore Longo
Head of the Decolonize Conservation campaign

Since 1969

Offices in Berlin, London, Madrid,
Milan, Paris, and San Francisco

Survival International Charitable Trust
Registered charity number 267444

Company registered in England no. 1056317
Registered office as above

Houses of the Oireachtas

Leinster House
Kildare Street
Dublin 2
D02 XR20

www.oireachtas.ie

Tel: +353 (0)1 6183000 or 076 1001700

Twitter: @OireachtasNews

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