

DÁIL ÉIREANN

AN COMHCHOISTE UM GHNÍOMHÚ AR SON NA HAERÁIDE

JOINT COMMITTEE ON CLIMATE ACTION

Dé Céadaoin, 11 Nollaig 2019

Wednesday, 11 December 2019

The Joint Committee met at 2 p.m.

Comhaltaí a bhí i láthair / Members present:

Jack Chambers,	Paul Daly,
Marcella Corcoran Kennedy,	Máire Devine,
Pat Deering,	Pippa Hackett,*
Timmy Dooley,	Alice-Mary Higgins,
Carol Nolan,	Ian Marshall,
Thomas Pringle,	Michelle Mulherin.
Sean Sherlock,	
Bríd Smith,	
Brian Stanley.	

+ In éagmais le haghaidh cuid den choiste / In the absence for part of the meeting of Senator Alice-Mary Higgins.

I láthair / In attendance: Deputy Michael Fitzmaurice.

Teachta / Deputy Hildegard Naughton sa Chathaoir / in the Chair.

Business of Joint Committee

Chairman: We are now in public session. We have received apologies from Deputies Butler, Heydon and Neville. I propose we go into private session to deal with some housekeeping matters. Is that agreed? Agreed.

The joint committee went into private session at 2.10 p.m., suspended at 2.13 p.m. and resumed in public session at 2.16 p.m.

Forestry and Climate Change: Discussion

Chairman: We are in public session. I welcome members and viewers who may be watching our proceedings on Oireachtas TV to the Joint Committee on Climate Action. Before I introduce our witnesses today, at the request of the broadcasting and recording services, I ask members and visitors to put their mobile phones on flight mode or to switch them off as they interfere with the sound system.

On behalf of the committee, I welcome Mr. Colm Hayes and Mr. Fergus Moore from the Department of Agriculture, Food and the Marine; Dr. Áine Ní Dhubháin from University College Dublin; Dr. Eugene Hendrick, an expert in forest and climate; Ms Imelda Hurley, Mr. Mark Carlin and Dr. Ciarán Fallon from Coillte; Mr. Paddy Purser and Mr. Liam Byrne from Pro Silva Ireland and; Mr. Mark McAuley and Mr. Brian Murphy from Forest Industries Ireland.

I wish to advise witnesses that by virtue of section 17(2)(l) of the Defamation Act 2009, you are protected by absolute privilege in respect of your evidence to the committee. However, if you are directed by the committee to cease giving evidence on a particular matter and you continue to so do, you are entitled thereafter only to a qualified privilege in respect of your evidence. You are directed that only evidence connected with the subject matter of these proceedings is to be given and you are asked to respect the parliamentary practice to the effect that, where possible, you should not criticise or make charges against any person, persons or entity by name or in such a way as to make him, her or it identifiable.

Members are reminded of the long-standing ruling of the Chair to the effect that they should not comment on, criticise or make charges against a person outside the House or an official either by name or in such a way as to make him or her identifiable.

I call on Mr. Colm Hayes from the Department of Agriculture, Food and the Marine to make his opening statement.

Mr. Colm Hayes: I would like to start by thanking the committee for giving me the opportunity to address members here today on the important role forestry policy will play in climate change mitigation. The challenges of climate change and the global effort that is required to meet those challenges will require significant action across the whole of society. The recently published climate action plan provides a whole-of-government approach to reducing Ireland's greenhouse gas emissions and provides a range of actions for all areas of our economy, which includes the agriculture and the forest land use sectors. We know the mitigation potential from agriculture is limited but the ag-climatise strategy in the Department, which is currently out for consultation, sets out an ambitious strategy for our agriculture and land use sectors. The Government's climate action plan sets out ambitious targets for forestry, which can be broadly

summarised into the following three main pillars: maintaining the existing forests through sustainable forest management; expanding the forest area through afforestation and; promoting and increasing the use of harvested wood products, including the use of energy derived from sustainably produced forest biomass.

The existing forest estate has grown steadily over the past 100 years to just over 770,000 ha today. The national forest area is 11% and is at its highest level for over 350 years. This expansion is testament to the significant efforts made by generations of foresters and landowners who have built a forest resource that is providing multiple benefits to society.

Successive Governments have provided significant financial supports in the creation of the public State forests but also in the creation of the private forests owned by more than 22,000 forest owners. Some 350,000 ha have been planted since 1990. In 2018 more than 3.69 million cu. m of timber was harvested from Ireland's forests with more than 1 million cu. m coming from private forests. However, it is important that we continue to manage these forests sustainably to ensure that they continue to provide a range multiple benefits, including carbon sequestration. Based on the national inventory report, Irish forests remove more than 3.6 million tonnes of carbon dioxide per year. In addition, the carbon stored in harvested wood products, amounting to an additional 0.73 million tonnes, demonstrates the importance of increasing the use of timber across the whole of society. The climate action plan also acknowledges that we must continue to protect and monitor our forests for disease, fires and deforestation which can also be a source of emissions.

The second key pillar of the climate action plan is to continue the efforts to increase the size of the national forest area through increased afforestation. The climate action plan has set an ambitious target of achieving 8,000 ha per year and this will present many challenges but also opportunities for landowners who wish to plant. The performance of meeting our afforestation targets under our current national forestry programme has fallen behind in recent years for a variety of reasons, including land availability and increasing land prices. However, this trend must be reversed.

We have made significant changes to our forestry programme as part of the mid-term review and we are seeing some progress in certain areas but more needs to be done. We must also work harder to communicate to the wider public the importance of forestry and ensure that the forests created reflect good practice in forest design. We must continue to support species diversity and ensure that forests have a positive impact on the environment. The recent changes made to the existing forestry programme are having positive impacts in increasing the percentage of broadleaves planted which amounted to more than 27% of the species mix in forests planted in 2018. We must also continue to support and encourage forest owners in the management of their plantations and encourage a diversity of species and sustainable management practices. I am encouraged to see the increased take up in the use of continuous cover forestry and agro-forestry, although small-scale, these certainly have an increasing role to play as an alternative management practice in certain locations. Species selection and tree breeding can also play a significant role in ensuring that existing and future forests are resilient and can adapt in a changing climate.

It is clear there is no silver bullet to achieving higher planting rates and that a multifaceted strategy must be employed. This means putting in more efforts to get farmers to re-engage with the programme and better communication of the farm-forestry message. It means better integration between the next Common Agricultural Policy and the next national forestry programme. It also means better use of suitable public lands for afforestation and we have already

seen some significant announcements here through collaboration between Coillte and Bord na Móna, for example. We also need to share knowledge and build and manage more resilient forests for the future and the Department of Agriculture, Food and the Marine is working closely with stakeholders and the COFORD Council through various working groups.

The forecasted increase in volumes from the forest estate is set to double to nearly 8 million cu. m by 2035, and it is important that we continue to mobilise this timber to all available markets. The climate action plan contains a number of actions which will continue the good work already taking place in areas of research and innovation.

Forestry is a climate change solution and combined with emission reductions across all sectors, we will continue our efforts to meet our climate change commitments. I look forward to discussing with the committee the role forests plays in climate change and to hear members' views on how we can maximise the contribution that forests will make now and in the future.

Chairman: I thank Mr. Hayes. I now call Ms Imelda Hurley from Coillte.

Ms Imelda Hurley: I thank the Deputies and Senators for the opportunity to engage with them today. I joined Coillte as CEO just over one month ago and it is already very clear to me that responding to climate change will be one of the defining challenges of my leadership of this organisation and, for this reason, I welcome the opportunity to engage with the committee at this early stage of my tenure.

The 2017 Citizens' Assembly recognised the important role forestry has to play in tackling climate change in Ireland. Last April this committee published its report, and in June the Minister, Deputy Bruton, published the Government's first climate action plan. Each of these valuable initiatives have highlighted the same core message, which is that forestry is a key enabler in Ireland's response to climate change and I believe that there is a serious responsibility on all of us to respond positively to these clear calls to action.

What strikes me about the debate on the role of forestry in supporting climate action is that almost everybody agrees that we need to plant more trees and that we need to manage our existing forests responsibly. However, there are differing views on forestry practices and systems and on the direction of forest policy. I am very happy to be here with my colleagues today to listen to those views and to offer insights and perspectives from an organisation that has spent 30 years managing forests on behalf of the State.

Coillte is custodian of approximately 7% of our total land area, so we clearly have a vital role to play. We do not have all the answers but what we have within our organisation is a deep well of forestry knowledge and expertise and, as the largest manager of woodlands in the State, we are acutely aware of the threat posed by climate change and our role in helping society meet this challenge.

Ireland's forests represent our largest carbon sink and store. They also offer solutions to many of the other challenges our society faces. Our forests support a vibrant forest products sector which employs 12,000 people in rural areas. They provide sustainable building materials to replace carbon heavy products such as steel and concrete. They can also improve our biodiversity, clean our water, reduce the risk of flooding, and provide great places for people to get active outdoors and experience nature. On this last point, Coillte's forests are entirely open access and we have an estimated 18 million visits to our forests each year. We already have over 3,000 km of hiking trails, 12 forest parks and nearly 300 recreation areas. Looking forward, we

will continue to enhance our outdoor forest recreation offering.

Ireland's forestry is very young in international terms. When the State was formed nearly 100 years ago our country had almost no forest cover, but as a result of significant public investment over the second half of the last century, it has increased to approximately 11%. However, despite this expansion, we still have one of the lowest levels of forest cover in Europe. That said, Ireland has exceptionally good conditions for growing trees. Our soils and our mild, wet climate mean that some tree species grow faster on this island than anywhere else in Europe.

As a country, we have an opportunity to increase our level of forest cover and realise all the benefits that forestry has to offer. However, to achieve this we need a vision for the future of forestry that enjoys broad public support. Forestry is a long-term commitment and decisions taken today have consequences far into the future. We therefore need to focus on identifying a vision for forestry that responds to the challenges we face in the century ahead. In my view the vision of the future of forestry can, and should, be inspiring and appealing, but it also needs to be realisable and sustainable. This is where balancing the economic, social and environmental dimensions of forestry is crucial.

In this context it is important that we recognise that managed forests are highly efficient at sequestering carbon. As forests grow and mature the rate at which they sequester new carbon eventually begins to decline. The advantage of an actively managed forest is that when trees mature, they are removed and replaced by new young trees, which are more effective at absorbing new carbon, thus starting the cycle again.

Actively managed plantation forests have a really important role to play in tackling climate change. This is due to their triple benefit whereby in the first instance trees sequester carbon as the tree grows. This carbon is then locked away in timber products when the mature tree is harvested thereby providing a second benefit. Timber products substitute other carbon heavy products like concrete or steel.

As the transition to a low carbon economy begins to take hold, we are already seeing innovative new applications of wood fibre and it is likely this trend will accelerate as the circular economy and the bioeconomy scale up and become mainstream. In continental Europe, we are already seeing engineered timber construction being deployed in high-rise structures and wood-based products being developed to replace plastics and synthetic textiles. At Coillte, we are committed to building on the momentum we have achieved in recent years to contribute further to Ireland's approach to forestry, climate change and the use of our natural resources for the greater good of Irish citizens. The challenge, as we see it, is to continue to get the balance right between the commercial, environmental and social or recreational dividend from forests in the ever-evolving world in which we operate. We are always looking to strike the right balance and for us, it is about planting the right tree in the right place with the right objective.

Today, we manage one fifth of our estate primarily for biodiversity purposes. In order to underpin how we are responding to changing societal demands, we recently established a new non-profit entity, Coillte Nature, which will focus exclusively on increasing the delivery of non-commercial woodlands, undertaking major biodiversity projects and large-scale forest conversion projects. Forestry has never been more relevant than it is today. Our objective is to work collaboratively with the Government, the Oireachtas, this committee, our customers and the public to ensure we optimise the contribution Coillte can make in the years ahead. My colleagues and I look forward to elaborating further on the points made in this short opening statement and to answering any questions members may have.

Chairman: I thank Ms Hurley. I now invite Dr. Áine Ní Dhubháin from UCD to make her presentation.

Dr. Áine Ní Dhubháin: I thank committee members for this opportunity to address the Joint Committee on Climate Action on the subject of forestry, climate change and the social impacts of forestry. My statement will cover the social impacts of forestry. I am joined today by Dr. Eugene Hendrick, who will take any additional specific questions on forests and climate change.

As stated in the Department of Agriculture, Food and the Marine's forestry programme, one of the aims of the current afforestation programme is to increase forest cover so as to "capture carbon, produce wood and help mitigation". This programme will require a significant number of landowners to change land use by undertaking afforestation. Such a change will have both climate impacts and social impacts. Let us look at what are the social impacts of forestry. In its narrowest sense, the social impact of forestry can be measured in terms of employment generation. Based on research carried out by me and a number of colleagues, we estimated that the total employment, direct and indirect, associated with forestry is 5,531 full-time jobs, while estimates for total employment in the wood products sector is 6,408 full-time jobs. This research dates back to 2012 and I am involved in new research to get more up-to-date estimates of current employment in the two sectors. Employees in the forestry and wood processing sectors are, in the main, rural based and a recent study suggests that a significant proportion of these are part-time farmers.

In recent years, the understanding of what is meant by social impacts has broadened to include impacts on quality of life. Forests may generate social values or be connected with people's lives in ways that contribute or deduct from social well-being. For example, forests provide opportunities for recreation and amenity. Based on published research, estimates of visitation rates to Irish forests vary from 18 million visits per annum to 29 million visits per annum. Recreation in Ireland generally occurs in the public forest estate as there is no right of access to private forests. Other quality-of-life impacts are generally assessed by investigating how local stakeholders perceive forestry as a part of their social and physical environment. In Ireland, a number of social impact studies of forestry have been undertaken. These have focused on case studies in the north west, east and south west of Ireland and have employed structured interviews with stakeholders. The findings from this research indicate that the reaction to afforestation and attitudes generally to forestry are context-specific. Where planted forests have been a feature of the landscape for a long period, more positive attitudes to forestry and afforestation have been recorded. Among the factors that influence reactions to afforestation is the question of who is doing it, whether it is local people or outsiders. If it is the latter, it can lead to a sense that afforestation is replacing people, thereby threatening cultural identity. Even if local people, typically farmers, are the ones engaging in afforestation, there can be a concern that if trees replace agricultural activity this will in turn replace people.

The evidence to date is that the majority of the 22,955 owners of forests planted since 1980 are farmers. The statistics suggest that these have chosen to afforest only a portion of their farm, as the average size of afforestation parcel is 8.7 ha. Typically, afforestation has been carried out on the poorest parts of farms. The income from the forestry premium contributes to farm income and enables those who wish to do so to remain in farming. In 2017, of the €72 million paid in forestry premiums, €67.5 million or 94%, was paid to farmers.

Social impact studies have consistently highlighted the often dramatic effect of large blocks of forest, in particular conifer forests, on the landscape. As trees grow, they heighten the sense

of social isolation that prevails in many rural areas. Afforestation has often coincided with social changes, such as a decline in the agricultural labour force, ageing of the agricultural population, and population migration to urban areas. For some, forests are the manifestation of this rural transformation. Afforestation often also challenges long-held beliefs as to the appropriate use of agricultural land.

At a broader scale, public attitudes to forestry in Ireland have been gauged in a number of large studies. In the most recent study, the majority, that is, 88% of the almost 1,000 people surveyed, agreed that forests were an important part of the traditional landscape of the Irish countryside and agreed that all types of forest are good for the environment. Nevertheless, the study showed a strong preference for mixed forests and broadleaf forests over conifer forests. It also showed, as have similar studies across Europe, that the forest outputs that the public rank as the most important tend to be the ecological ones such as the conservation of plants and animals rather than the timber production and employment outputs. I look forward to taking questions on my opening statement.

Chairman: I thank Dr. Ní Dhubháin. I now invite Mr. Paddy Purser from Pro Silva Ireland to make his opening statement.

Mr. Paddy Purser: I thank members for the opportunity to speak to the committee today. We look forward to dealing with questions from members afterwards. Pro Silva Ireland is an all-Ireland organisation supporting the use of alternative forest management systems to the clear-fell system. These alternative systems are generally called continuous cover forestry, CCF, and these systems do not clear-fell the forest but instead involve thinning trees periodically while allowing the retained forest to grow and develop. Pro Silva Ireland is part of a wider European network of Pro Silva organisations across 27 countries. We have a diverse and dynamic membership of foresters, forest owners, contractors, ecologists, wood scientists, artists and others.

Well-managed forests can provide many functions. They can produce timber for domestic and industrial use, be places of recreation while enhancing our landscape, protect and clean our water while helping prevent flooding, stabilise and improve our soils, harbour and enrich biodiversity, sequester carbon, shelter our farms and be places of inspiration, wonder and calm.

Successive forestry programmes and forestry practice in Ireland has concentrated on the timber-production function. This has resulted in the successful establishment of a vibrant timber processing sector and in vital job creation in rural communities. The clear-fell system has been used in efficiently producing timber to feed this industry. However, this management system struggles to satisfactorily deliver the other services that society requires from forests and this is at the heart of recent protests against forestry in Leitrim, for example. It is clear that society wants more from Irish forests in the form of the aforementioned multiple benefits. That has been recognised in the forestry sector and many positive initiatives have developed over the past 20 years in that regard. In Pro Silva Ireland we believe that CCF will deliver these multiple benefits in a sustainable way that will rebuild a forest culture, be profitable and at the same time deliver a range of environmental services. We know from the experience of CCF forests managed in Ireland, and more so from those under longer-term CCF management in Europe, that it is possible to sustain commercial timber production while delivering the multiple benefits. This committee's role is to consider action on climate change and what measures can be adopted to mitigate this hugely serious issue. Well-managed forests are excellent carbon sinks and we are paying the price both globally and nationally for both current and historic deforestation. How we manage our forests also has a significant effect on the efficiency of carbon sequestration.

CCF is an efficient means of optimising carbon storage in forests as it avoids the large-scale release of soil carbon that occurs when plantations are clear-felled, given that more than 70% of forest carbon is held in the forest soil. It produces a higher percentage of high-quality and long-life timber products, in which sequestered carbon is locked for a longer timeframe. Moreover, it increases forest biodiversity in general and provides permanent forest habitats that keep carbon locked in the forest and results in more resilient forests, with lower biotic and abiotic risks.

Planting new forests has been widely recognised as a way in which society can take positive climate action. We must, however, maintain a focus on delivering the multiple benefits of forestry, rather than just one function, whether timber production or carbon sequestration. The question of monocultures inevitably arises in this regard. Pro Silva Ireland is deeply concerned with the continued predominance of monocultures in Irish forestry. Even aged monocultural crops are incapable of delivering the wider long-term social and environmental benefits of forestry. There is also considerable concern about their resilience in the face of climate change. The very forests planted to mitigate climate change could become casualties of it. Concerns about the sustainability of monocultures are not new and at present in central Europe, bark beetles devastate large areas of monocultural spruce plantations, which suffer drought stress directly related to climate change. In Ireland, we have our own problems, with ash dieback disease devastating monocultural ash plantations.

To date, most policy initiatives to encourage or require greater levels of diverse planting have ended up compartmentalising different species into small monocultures. We believe that new planting must be robustly mixed with greater utilization of native species and that we should cease planting monocultures. It is important that expectations be managed in respect of what is possible from CCF. Forests, by their nature, take time to plan, develop, grow and transform. Similarly, if we want to achieve a cultural change in Irish forestry, this will also take time and investment. No magic wand can be waved to transform Irish forests overnight. It will take long-term planning, with a refocusing of forest policy and programmes. There are significant challenges in the form of training and capacity building within the forestry sector, transforming existing monocultures into more diverse forests, maintaining commercial timber production and associated jobs through the necessary changes, the reliance on private landowners and private forestry businesses to deliver new forests, educating wider society of the multiple benefits of forestry, managing invasive and unsustainable deer populations, as well as restructuring inappropriately located and designed forests.

Tackling climate change and specifically reducing our carbon and greenhouse gas emissions is a multifaceted problem and no single policy, such as planting more forests, will solve it. Nevertheless, well-designed, well-managed and resilient forests can play their part in tackling this great problem of our time while at the same time doing much more.

Chairman: I thank Mr. Purser and invite Mr. Murphy to make his opening statement.

Mr. Brian Murphy: I thank the committee for the opportunity to appear before it and to discuss the contribution that forestry and timber make to combating climate change. Forest Industries Ireland, FII, is only one year old. We want to increase knowledge and awareness about forestry and timber. We would love to better inform our fellow citizens about the industry, its prospects and challenges and its contributions to climate change.

I am the chief executive of Balcas Limited. We have two factories, in Enniskillen and Invergordon in Scotland. We process 1 million cu. m of sustainable forest output annually, from which we produce a range of wood products for construction, fencing and packaging. We gen-

erate all our own electricity and spill the same amount to the grid, which is enough electricity for all the homes in County Fermanagh. We also make wood pellets, and our heat fuel from the forests of Ireland and Scotland annually displaces 100 million l of oil from Ireland and Britain. We have no wood fibre waste.

I am also the chairman of FII, an all-island body constituted within IBEC. Our member companies cover the whole supply chain. There are nurseries that grow saplings, forestry consultants who work with farmers and landowners to plant and manage their forests and factories that convert the forest crop into construction timber, panel products, fencing materials, packaging and biofuel. For many decades, the State and our people have invested in increasing afforestation in Ireland. In return, our island now has an industry that provides 12,000 jobs throughout our rural communities. The economic contribution is approximately €2.3 billion per annum. Over the coming years, the private forests planted in the 1980s and 1990s will come to maturity and will deliver a major supply increase onto the market, which is a further opportunity for Ireland. Today, we work with more than 20,000 farmer-forest owners, most of whom have planted a portion of their land. They receive a steady and reliable income and it delivers a valuable crop when the forest matures. Farmers are invariably interested in the environmental contribution their forests make.

Ireland's forests produce timber at three times the rate of Scandinavia's and are a major carbon sink. Forestry in Ireland is already a large part of this island's fight against climate change. Irish forests capture 3.6 million tonnes of CO₂ yearly, while the total carbon store is more than 300 million tonnes. This is testament to the policies of successive Governments to plant trees and create and support a vibrant forest sector. Throughout the world, forests have been identified as the most scalable opportunity to absorb CO₂. In Ireland, we have learned a great deal. We are increasing diversity and balance, are providing more leisure and recreational opportunities for our citizens and are increasing the provision of one of nature's great renewable raw materials.

We should increasingly seek to use our own timber as a mass-market construction material. Wood can displace cement and steel in our built environment and is doing so today throughout the world. The world's tallest timber building was completed in Norway this year, with 18 storeys of apartments. Wood is used to remodel, expand and extend the life of existing structures, maintaining the existing foundations. In Ireland, too, we should embrace the greater use of timber, which will require changes to our building regulations. The Government can take a lead by enabling the construction of more timber housing, and procuring new greener schools and civic buildings that use cross-laminated timber as the backbone of their structure. Ireland's commitments to climate action are already supported by our growing forests. To continue this into the future, we must plant more and continue to improve forest management. We have done well to climb back from less than 1% forest cover 100 years ago to the 11% of today. Now is the time to redouble our efforts and build a coalition of farmers, foresters and policymakers to drive continued forest development.

Farmers are the foundation of future policy, and industry and the Government must rise to the challenge of rewarding them. The climate action plan produced by the Minister for Communications, Climate Action and Environment, Deputy Bruton, has an annual target of 8,000 ha of new afforestation. We need to support our farmers and rural communities. We want them to feel encouraged to see forestry as a positive option on their farms, both for the sake of the environment and for a reliable family income. We all want to find ways to diversify the forest estate. Already, approximately 30% of the trees being planted are broadleaf. We want to increase the

creation of native woodland and can do so in a way that will go hand in hand with the creation of conifer forests and will sustain the economic value they contribute. Currently, the greatest driver of broadleaf planting in Ireland is the planting of Sitka spruce.

Our sector calls for a renewed vision for forestry in Ireland, based on economic development, climate change goals, biodiversity and social values. We need all the stakeholders to come together and agree the way forward, rather than have different groups pulling in different directions. Forestry and timber can make a great positive impact on climate change. If we get it right, it will work for everyone and for once, the economic and environmental stories will work hand in hand.

Chairman: We will start with the Fianna Fáil group, which has 15 minutes.

Deputy Jack Chambers: I thank all our guests for their contributions. I will start with the Department. I want to assess where the Department is with the recommendations that the committee made. We asked the Government to commission a study to quantify the climate mitigation and adaptation functions of hedgerows by 2021. We also asked that it improve the national forestry programme to better support native species and ensure that communities are included in the process. We asked for a review of the Forestry Act 1988 to ensure that the policy is consistent with the objective of environmental, social and economic sustainability. Will the Department respond to these commitments so that I can get a sense of where it is on them?

Mr. Colm Hayes: The committee's report fed into the Government's climate action plan and we implement the goals of the plan. Hedgerows were mentioned in the plan as something that should be explored in more detail. They are a sink since they sequester carbon. They do not have an accounting value *per se* under the international climate change agreement as I understand it but there is a commitment that the Department and local authorities should do a more detailed assessment of the density of hedgerows within their confines. There was previously a study by the EPA, with some input from Teagasc and the Department, which examined this issue. We are a significant funder of hedgerows under our GLAS scheme. We fund the creation of approximately 1,500 to 2,000 km of new hedgerows and that scheme is ongoing. In the past three successive agri-environment schemes that we have run, we have funded the creation of approximately 6,000 km of new hedgerows. The challenge is to find a mechanism for how the sequestration ability of hedgerows can be better factored into climate change policy. It is a key recommendation that was taken up in the climate action plan from this committee and needs to be looked at in more detail.

The second question was about the Forestry Act, which established Coillte. I am not sure whether that was taken up in the climate action plan as a result of this committee's report. We are not actively looking at it right now. Our Department and the Department of Public Expenditure and Reform are the shareholders in Coillte, so we have ongoing engagement with it. We have a shareholder letter of expectation every year, which outlines what we expect to see Coillte do each year. It reports to our Ministers for consent for any activities.

The final matter related to broadleaves. I am glad this has been raised, with different speakers mentioning it in different ways. In my opening remarks, I mentioned the mid-term review of the forestry programme, which was about reorientating the programme and moving it towards a greater penetration of broadleaves. We looked at a number of ways of doing that. We gave a commitment to try to reach a target of 30% broadleaves as part of the national programme. We recognised that that was not being met mid-way through the current forestry programme. It was at approximately 21%. We did a couple of things as part of the mid-term review. We made

it mandatory for the percentage of broadleaves in every plantation to be increased from 10% to 15%. No forestry site is being planted in the country without a minimum of 15% broadleaf plantation. We put in place some key enhancements, so any additional investment that we put into the mid-term review was directed primarily at broadleaves. We had a 7% increase for all broadleaf and diverse conifer grant categories. We had a 5% increase in the premium category, so if the farmer wants to plant, he will get 5% more than he would previously. We have had different initiatives since then which were outlined. One was the woodland environment fund, a partnership between corporate Ireland, businesses, farmers and the Department. It has taken off recently. A couple of high-profile companies were investing in that recently.

Deputy Jack Chambers: The EPA released a new study on Monday, which highlighted deteriorating river quality. How many ecologists are employed in the Department or Teagasc to carry out ecological assessments and identify the important species and ecosystems that are at risk? The Minister of State, Deputy Doyle, published a study regarding the failure of regulations to require biodiversity assessments for forestry. Will Mr. Hayes respond to that and what the Department is doing? Does the Forestry Act 1988 need to be updated to meet our biodiversity and ecological requirements?

Mr. Colm Hayes: On the question of ecologists, we are, as we speak, interviewing new ecologists for recruitment into the Department, specifically for forestry but some will go into other agri-environment areas. We have two full-time ecologists as part of our forest service. Other ecologists work in the nitrates section of the Department. I cannot speak for Teagasc so the question about its resources is best directed to it.

With regard to the Minister of State, Deputy Doyle's, statements, this is a key issue, which is delaying the release of licences. We are the planning authority for forestry and, therefore, we have to make any licence consistent with all of the relevant legislation, which is mainly EU legislation as it is applied and interpreted here. Case law means that that legislation gets amended and updated. We are no different from any other public body and have to respond to that. That includes the environmental impact assessment directive and the habitats and birds directives.

We are going through a challenging process to essentially reboot our planning process for the appropriate assessment procedures that are required for the issuing of forestry licences. We are putting a lot of investment into this because it is not just a matter of updating the procedures but it is about updating protocols and investing in our own staff in order that they are skilled enough to interpret the legislation and issue the resulting licences. It is also about engaging with the sector so that it understands the changes required and can adapt. We are very public in saying, as is the Minister of State that we expect to see a better quality of application coming in. We are ready to work with the sector on that. A key part of the response is the answer to the Deputy's first question, on the recruitment of additional ecologists. I have been working in forestry in the Department for two years. I have seen substantial environmental regulation in that period, and it has happened over previous years as well. It is a constant challenge for any public body to keep up with that, but that is the issue that the Minister of State referred to. We continue to issue licences all the time. The tap is on but it is not flowing to the extent that anybody would like. We are confident and hopeful that we will get there.

Deputy Timmy Dooley: As a Deputy in a rural constituency, I regularly get representations from landholders who are very put out by the changes to the appropriate assessment. I understand the background to it but I think, at best, that one could say that the Department's response has been less than one would have expected. It should not be a surprise to the Department or the Government that we should have been making progress in setting the appropriate standards

for afforestation. It has been known for a considerable period that it has a positive impact on carbon sequestration. Mr. Hayes has answered that but we need action. It is damaging in a number of ways. It is damaging for farmers who have got to a point where they are ready to plant, which he will be aware is challenging. They see it as placing their land outside their control for the rest of their lives, which is a big move for them. One can get farmers or others to do it and then they are seen to be blocked by the State, which is asking for it to be done on the other hand. I understand the reasons behind it but we need to be more proactive in going out to farmers, otherwise it turns off a swathe of people who say that they will not bother going through the entire process and spend the money, when it then may not happen. It also damages the industry and efforts to keep people involved in planting in jobs. They do not see the commitments or a future in it. Mr. Hayes has covered this but I wanted to make those comments.

Coillte has done a lot of good work over the years but over the past ten years, it started looking at its asset base. When it started to worry about selling off certain plots of land for building or getting into wind energy, that was all great because it is a semi-State company, but the company lost its focus to some extent. The company looked at replanting rather than having an ethos of identifying more parcels of land and aggressively and broadening its footprint. Coillte should return to its core terms of reference of increasing our landmass covered by woodland because that has important benefits that probably were not envisaged ten, 15 or 20 years ago.

Ms Imelda Hurley: Albeit I am new to Coillte, the use of land over the lifetime of the organisation was something that I wanted to understand before I joined and, indeed, understand further. I note the point that the Deputy made about Coillte not increasing its landbank in respect of increased afforestation. There are enablers that, ultimately, are somewhat challenging for Coillte in that regard. One is that we do not have access to grants and premia that are available to the private sector. As a result, when land becomes available there is competition for that land and it is question of financial wherewithal.

Second, the availability of land and finding land to plant is an issue in the first place. As alluded to earlier, farmers find it difficult to give up their land almost forever. When we think about that we think forward and that it would be important that land suitable for forestry is identified and, hopefully, that will be a key enabler of allowing increased afforestation.

Deputy Timmy Dooley: That is important. Ms Hurley has made a good point. Coillte is observing what is going on in the farming sector at the minute with the more marginal land, which was borderline viable at a stage. However, the beef and suckler cow sectors have changed. The next generation may not have the same attachment to such land but they certainly do not see a future in it and, therefore, opportunities exist. Coillte must become aggressive in marketing the potential returns for farmers. There would be a significantly positive impact from an environmental point of view in terms of carbon capture.

Ms Imelda Hurley: I am a farmer's daughter and I have a brother who is a beef farmer.

Deputy Timmy Dooley: We share a lot in common.

Ms Imelda Hurley: Indeed. I have been party to very recent discussions, in light of my new role, as to the role of forestry and how it can coexist with farming. There is work to be done to help everybody understand how they can coexist. Coillte is very open to playing its role in that regard. There is a cultural thinking around forestry that we all have work to do to move forward but I accept the Deputy's point made.

Senator Paul Daly: I have questions on the research conducted by UCD. Earlier Dr. Ní Dhubháin mentioned people's attitudes to forestry. How can we change the attitude of the agricultural sector towards forestry? At the end of the day, none of these targets will be met. I have not heard anything today to convince me that anything has changed and the targets will be met. The farmers of Ireland own the land. Within the farming community, planting forestry is seen as the lazy option and an avoidance of hard work. How can we change that mentality or attitude?

Dr. Áine Ní Dhubháin: A cohort of farmers have made that decision and they can be the champions for other farmers. If they have a positive story to tell or if they can show that planting has enabled them to stay in farming where they otherwise might not have done so, that build-up of numbers can encourage others to get involved. There is a lot of interest now in a different approach to farm forestry because it means the farm, the forest and the two not integrated. There is a lot of interest now and research beginning to ramp up into having these two together. It might be better referred to as agroforestry or silver pasture systems where the farmer can continue to farm. I am well aware that farmers want to be farmers and produce food. If that was possible along with planting trees, albeit less densely, that might be something farmers might find more acceptable but we do not have enough examples of that yet. Approximately 51 ha of such mixtures of trees and grassland have been introduced in the past year or so under the agroforestry grant scheme introduced by the Department. The fact that a farmer does not have to give up on farming and can do the two together might be more attractive.

Chairman: Is Deputy Deering sharing his time with Deputy Corcoran Kennedy?

Deputy Pat Deering: Yes. I welcome the witnesses and I listened attentively when Dr. Ní Dhubháin said that the farmers who are planting forestry can be the champions of the future.

Mr. Hayes made numerous references to communication in his opening statement. The communications strategy must be put in place is key. I have rarely heard, when the benefits of forestry are being communicated, that forestry is the second most profitable agricultural enterprise after dairying. This story must be told around the country if we are going to get new producers into forestry. There is no doubt that the key driver of forestry in the future will be those people who are under pressure at the moment in their current enterprises. There has been a great deal of discussion, this year in particular, about the challenges facing the beef sector. The most profitable agricultural enterprises are dairying, forestry, tillage, sheep and, unfortunately, beef-suckler is at the bottom of the pile. A communication strategy in respect of that has to be developed.

Dr. Ní Dhubháin said the farmers who are planting forestry at the moment can be the champions of the future. Some of those so-called champions have been badly let down over the recent period. They have a negative story to tell about Coillte and the difficulties with farm partnerships. Last week, a delegation from Coillte appeared before the Joint Committee on Agriculture, Food and the Marine and they gave an update on the current position. Since then, I have received communications from a number of farm partners around the country who told me bad stories about the way they have been, and still are being, treated, unfortunately.

From the point of view of the Department of Agriculture, Food and the Marine, there is a very negative story about the ash dieback issue, which was mentioned by a number of witnesses earlier. The Department and State let down a number of farmers who saw forestry as a pension fund but their hard work has been wiped out as a result of ash dieback disease entering the country. For many years nothing has been done for these farmers and they feel very let down.

If we are depending on them to be the champions of the future, which we should be, then we will find ourselves in great difficulty. How can we address these issues going forward?

Mr. Mark McAuley: Deputy Deering and Senator Daly have hit the nail on the head in two different ways. Regarding Senator Daly's question, without doubt farmers are the future of forestry in Ireland. Without the farmers and the support of communities, forestry does not have a strong future ahead of it. Allied to that is the confidence of individual farmers. That confidence has been undermined at certain times over the past number of years. We must restore confidence. We must have the farmer going to the mart and meeting people somewhere and saying, "Yes, I have had a good experience". Hopefully, we will get a lot more of that. We now have a very strong wave of timber coming through from the plantations done in the 1980s and 1990s and I hope a lot of positive stories will come from that. People will have been to the market, sold their timber to the local sawmill and will have a good story to tell about the returns they made. Connecting with communities and individual farmers is the future of this industry. If we do not have that support and if we are not building our policy, as a country, and building our industry around that, then we are going to struggle.

Ms Imelda Hurley: On the point made about farmer partnerships, I am very aware that there have been historic issues and that Coillte has worked very hard to address them. Our understanding is that the very vast majority of farm partners are in overall terms satisfied with the changes made by Coillte, particularly over the past two years with respect to communications and statements being issued in advance of a farmer coming off premia and effectively moving to an income source that comes from Coillte. We will continue to work to ensure we have strong communication with our farm partners. I fear that because of the history of the set-up of farm partners and the experience from a couple of years ago, we will have an ongoing communications challenge associated with that history. We will continue to work hard to communicate with our farm partners and to continue to develop strong relationships with them.

Deputy Pat Deering: I would like to hear from the Department.

Mr. Colm Hayes: Communication is absolutely key and Dr. Ní Dhubháin touched on it as well in asking what is the message for farmers. The analysis we have for the reasons the current programme is not hitting its targets indicates farmers are disengaging from the programme, to be honest. We want to see them back where they were and being the main beneficiaries. The messages here are absolutely around agroforestry schemes and the farm forestry message. We are working very closely with Teagasc and the Agricultural Consultants Association - the private advisers - to get that message out there.

It is not about one or the other and having livestock or trees. It can absolutely be both and one can maintain the same number of livestock while planting some trees. There is massive benefit in a diversified income and a person would not be subject to the fluctuations in a market in a particular year. That person would also have a State-backed guaranteed premium for 15 years.

The question of ash dieback was raised but I dispute slightly the idea that the State left people hanging. The Department swung into action very quickly with a scheme on foot of the discovery of the presence of Chalara at the time. We suspended the scheme last year, as the Deputy knows, and we engaged with stakeholders on that. The suspension occurred because the science changed and when the science changes, the policy must also change. The science indicated the original aims of the scheme, laudable as they were, concerned eradication and that was no longer possible. The disease is now essentially endemic.

We pulled the scheme and worked on it. It has gone out to the relevant stakeholders now for consultation and there is a date of approximately mid-January for feedback. The supports that were there will still be there, albeit modified. People who are dealing with infected trees must know it is there. They know it is there, although it may not be moving at the pace they would like. There are supports for those who, unfortunately, are dealing with infection.

Deputy Pat Deering: This has left a very sour taste in some people's mouths. If we want to move this on at the pace required to meet the targets, such matters need to be addressed shortly.

Deputy Marcella Corcoran Kennedy: I thank everybody for their presentations. My first question is to the Department. I know we have an ambitious target of 8,000 ha per year for afforested land but what exactly is the target for the percentage of forestry to be covered and by when? I wish to ask Pro Silva about concerns people might have on planting forestry. We hear that it ties up the land but in what condition will the soil be afterwards? I have been asked if the land would forever be under trees. There was a comment in the presentation about more resilient forests but will Mr. Purser outline a little more the biotic and abiotic risks referred to? There is also the question of training and capacity building in the forestry sector. How many foresters will be required if we want to get where we wish to go?

Another question coming to me from the farming community concerns the impact of increased acidic degrading of pine needles in waterways, so will Coillte address this? This occurs if there are many streams running through forests etc. Is that an issue, as farmers are very concerned about it? On the appropriate use of agricultural land, will Dr. Ní Dhubháin expand a little on her point? Mr. Brian Murphy from Forest Industries Ireland indicated that 20,000 farmer-forest owners have made a decision to plant a portion of their land but what is the average size of the land holding put under forest cover?

Mr. Paddy Purser: I thank the Deputy for the questions. There was a question on the replanting of land but it is not particularly relevant to us because it is a legal matter. Felling licences are issued for clear-felling, of which we would not be strong advocates. Normally it comes with an obligation to replant. That is not particularly relevant to continuous cover forestry.

Deputy Marcella Corcoran Kennedy: If a person wants to engage in continuous cover forestry, it means exactly as it states; the land would continue to be under forestry forever.

Mr. Paddy Purser: That is right. It becomes a permanent forest. There is still a licence to harvest trees on a periodic basis but it would be a thinning licence, as opposed to a clear-fell licence. The Deputy mentioned biotic and abiotic risks. Abiotic risks include elements like wind and fire. We know the risks for even-aged forests and monocultural forests are higher with wind damage, particularly in cases of poor management, including if they are thinned late, for example. Fire is an increasing risk with climate change as we are getting drier summers. We are also getting increased wind storm events because of climate change.

In my presentation I outlined the concern that we may drive to plant many new forests, which is a fantastic objective that we should all aspire to, but if they are not made resilient they could become casualties of climate change themselves. The design and management of those forests is really important. On the biotic front, I referred to the bark beetle infestation in central Europe, which again has come as a result of very hot and dry summers. The spruce bark beetle affects monocultures in particular in central Europe and it attacks stressed trees. When trees and forests come under stress, they are much more prone to the infestation and it has had a

knock-on effect here. As the forest industries know, it has affected timber prices because there is a flood of timber on the market in Europe as those forests had to be felled in an unplanned way. That has depressed the price of timber. The cheap timber is going to England now, and that is our main market.

The Deputy asked about training and capacity building. While there is a very strong cohort of foresters and forestry contractors in the country, we advocate a rethink or transition of silvicultural systems in Ireland whereby those same foresters and forestry contractors, as well as the forest owners, will upskill in alternative management of those forests. We are not looking at an entirely new resource of people or recruitment. We are trying to broaden the skills base of the forestry professionals out there in order that they can offer services to the forest owners of this country and to the State that will deliver on the multiple benefits that forestry can provide.

Dr. Áine Ní Dhubháin: There was a question on the appropriate use of agricultural land. The research comes from the belief among most farmers that good agricultural land is for agriculture and food production, with forests being more acceptable if they are planted on poor quality land because it does not compete with agriculture. It was in that context I mentioned the argument and it related to a comment from Senator Paul Daly. Farmers feel that land, and particularly good land, is for producing food. That is the context to which I was referring.

Chairman: I will bring in Mr. Carlin from Coillte. I ask him to be brief if he can.

Mr. Mark Carlin: I will say two things about the impacts of forestry on water. First, we are very mindful of it and deal with it through our environmental risk assessment system. When we are planning any forest operation we carefully monitor the impacts it could have on water courses. Second, in carrying out our forest operations we follow best practice regarding setbacks from streams and relevant water courses and silt traps. We carry out extensive water sampling and water monitoring as well.

Chairman: Mr. Hayes wishes to come in very briefly before we move on.

Mr. Colm Hayes: The issue of resilience was mentioned. Obviously, climate change is not just about mitigation; it is also about adaptation. Our Department published a climate change adaptation strategy last year. We would be happy to send on more details to the committee, but the strategy includes exactly the issues Pro Silva and others talked about.

Mr. Mark McAuley: To answer Deputy Corcoran Kennedy's question about the average size of a forest, the average private forest is approximately 7 ha. Private forests account for approximately half of all forest. We have tens of thousands of very small forests, which has an implication for how they are managed and what the return on them needs to be for the owner. One must be quite careful about how one manages that because these are very small forests.

Deputy Brian Stanley: My first question is for Coillte and concerns setback distances from dwellings. I understand there was a setback distance of 30 m, which was subsequently increased to 60 m. A question arises with replanting and so on. As I understand it, private forestry must stay with the 60 m minimum regime. Is Coillte sticking with that or replanting into the original 30 m setback from dwellings?

Mr. Mark Carlin: We are following afforestation and reforestation best practice guidelines. Where a lot of our old forest was planted too close to roads and infrastructure, we are correcting that through our forest planning for the second rotation. We will keep to the same setbacks as with afforestation, that is, 60 m for dwellings and roads.

Deputy Brian Stanley: The setback is 60 m then.

Mr. Mark Carlin: Yes, the same in reforestation as in afforestation.

Deputy Brian Stanley: I have a question for the Department of Agriculture, Food and the Marine. Legal action is being pursued against directors of an insurance company that has a 1,000 acre forestry portfolio.

Chairman: I ask the Deputy not to name anybody.

Deputy Brian Stanley: I am very careful like that. In this case the company failed to return the 30-year lock-in investment. The Central Bank has confirmed that the company in question was neither authorised nor supervised by the regulator, which puts any claim of mis-selling for the shareholders outside of the jurisdiction of the Financial Services and Pensions Ombudsman. Can the Department comment in general on how a Department, the Department of Agriculture, Food and the Marine in this case, was given grants and incentives - Exchequer money, taxpayers' money - to subsidise or incentivise these commercial companies, which are now apparently beyond the reach of the financial regulator? Could one of the Department officials comment on that?

Mr. Colm Hayes: Obviously, legal proceedings are ongoing so I will not comment. The issue the Deputy raises concerning the fund, I understand, is the return to the investors, which has nothing to do with the Department. The matter is entirely a commercial venture between that fund and the investors.

Deputy Brian Stanley: That is not the question I asked. The question I asked concerns the Department providing incentives or grants to companies or any kind of investment entity that is not regulated by the financial regulator or registered. Such a company is then beyond the reach of the financial regulator. What checks does the Department carry out to ensure that that does not happen?

Chairman: It is a general regulation question.

Deputy Brian Stanley: Yes. This is a multimillion euro industry now.

Mr. Colm Hayes: The afforestation scheme is open to private investors and we encourage anybody who is interested in planting land to engage. Farmers are the priority but the scheme is obviously open to private investors as well. I am not aware that we do the background checks as to what are the requirements of the financial regulator. The financial regulator is needed to advise on what companies are allowed and not allowed to do in their business activities in this country, so the Deputy's question would probably be best directed at the regulator.

Deputy Brian Stanley: Mr. Hayes is not answering the question about the Department providing the incentives. In the light of cases such as this arising, is it the Department's intention to pick up the phone to the financial regulator to ensure that before the Department pays out any subsidies, grants or incentives, the regulator checks that the company is registered with the regulator? Could the most senior official in the Department present confirm that the Department will do that?

Mr. Colm Hayes: May I write to the committee on this in more detail when we have an opportunity?

Chairman: Yes. I thank Mr. Hayes.

Mr. Colm Hayes: It is a complex area.

Deputy Brian Stanley: My next question is for Coillte and concerns increasing the land mass. Coillte was seen as a company that took over, acquired and bought huge land masses. In the constituency I live in, Laois-Offaly, there is a big footprint. In this regard, and bearing in mind that Coillte does not get the same incentives as the private investors, which puts it at somewhat of a disadvantage, does Coillte see its role into the future as increasing its land mass and doing wide-scale planting like it did in the 1950s, 1960s and 1970s, or does it see its role as just being involved with the partnerships and the farming schemes? Related to that, while the on-farm schemes have been mentioned, does Coillte see a role in the cutaway of Bord na Móna bogs and planting there?

Chairman: There is only two minutes left in the Deputy's slot.

Ms Imelda Hurley: Today, Coillte is the custodian of 7% of the land mass of Ireland. We are acutely aware of the climate action plan and the requirement in overall terms to achieve 8,000 ha of afforestation annually. We want to play our part in how that is achieved and to contribute towards that target. We are working with the Department on all options that might be available to us such that we can contribute in an economically viable way to the afforestation target. Today, 20% of the landbank we have is managed for biodiversity and we have always been very mindful of managing our forest in a sustainable way. As to how we think forward, it is all about balance - the right tree, the right place and the right objective - and balancing economic, environmental and social aspects. We will be mindful of that as we move forward but we certainly see our role as playing a part in the next stage of what the State needs from its overall landbank.

Deputy Brian Stanley: Has Coillte had much dialogue with Bord na Móna regarding large cutaway areas of bog?

Ms Imelda Hurley: We just very recently announced we will work with Bord na Móna. It is a memorandum of understanding at this point in respect of 1,500 ha. I will ask Mr. Carlin to comment briefly on the specific work of Bord na Móna, some of which predates my time in office. While I am very familiar with the matter, Mr. Carlin is more so.

Mr. Mark Carlin: Yes, we are in discussions with Bord na Móna and the Department in a joint venture looking at what we can do with some of the cutaway bogs. Clearly, this is a matter for Bord na Móna as well. We are trying to ensure we follow the national peatlands strategy. We need to take the best ecological advice on this as well. If an area is fit and appropriate for forestry, that is what we should do. Coillte can certainly play a role in that, creating native wilderness forests. Where peatland is more appropriate to rewetting, that is an option. It is perhaps best to leave certain areas alone. It is important we follow the peatlands strategy and choose the right treatment for each area.

Senator Máire Devine: I will fire off four questions. The first is for Dr. Hendrick. I refer to a study by Dr. Kim Naudts at the University of Amsterdam. She stated:

In Europe, two and a half centuries of land-use change increased the forest area by 10% and has put over 85% of the forests under management, but it has failed to result in net CO₂ removal from the atmosphere, because wood extraction released carbon otherwise stored in the biomass, litter, dead wood, and soil carbon pools. In addition, converting deciduous forests into coniferous forests resulted in changes in albedo, canopy roughness, and evapo-

transpiration from the land surface, which contributed to

warming rather than mitigating it. Hence, any climate framework that includes land management as a pathway for climate mitigation should not only account for land-cover changes but also should equally address changes in forest management, because not all forest management contributes to climate change mitigation.

Could the witnesses comment on her findings given the Irish context and their opinion of the future of our forest management?

My second question is for Professor Ní Dhubháin. The comprehensive study showed that the percentage of forest cover in Leitrim is way above the national average. She also noted that spruce is the dominant species at 61% compared with 51% nationally. Almost all of those surveyed - 96% - said that they would not under any circumstances consider selling all or part of their holdings for forestry purposes? They were quite opposed to it and indicated that they did not favour any further afforestation of the county yet Professor Ní Dhubháin states that the resistance to afforestation is often proportional to the length of time a community has been associated with forestry. Given that Leitrim has seen almost a century of afforestation policy and has very high coverage, does she agree that the resistance to further expansion in this instance is not based on time to afforestation?

I have two questions for the Department. I come from Dublin city so I am an urbanite. Twenty years ago through Dublin City Council, the Tree Council of Ireland gave a lot of residents, who took it up, a free tree. I see that rowan tree growing in my back garden. It is a private place. Twenty years ago, we did not have an appreciation of the environmental good that trees do but we do now. Is involving, educating and encouraging urbanites, who cannot be forgotten when we talk about afforestation, part of the plan? Does the Department plan to plant 440 million trees by 2040?

My last question is for Ms Hurley, Mr. Murphy and perhaps the Department. It was said that timber will provide sustainable building materials to replace carbon-heavy steel and concrete. Walking around Dublin 15 years ago, the facades were wooden. They became ugly and were banned by Dublin City Council. Is there a need for local authorities to stipulate that a percentage of the interior infrastructure - not the wooden panels but the holding and bricks - needs to be put in for when submitting a planning application to replace the steel? When we first started talking about timber frame houses at about the same time, there was stuff about insurance. Insurance would be so high as to be unaffordable. Would this still be the case if we were to use wood as a replacement for carbon-heavy steel and concrete?

Chairman: There are only about three minutes for those replies so I will start with Dr. Hendrick.

Dr. Eugene Hendrick: The question of whether we should keep the forests and not harvest them in terms of climate change mitigation has been comprehensively addressed by the Intergovernmental Panel on Climate Change. In its fifth report, which it issued a number of years ago, the panel concluded conclusively that the best mitigation we can get from forests is threefold - material substitution, sequestration and the use of bio-energy. This has been endorsed by quite a number of scientists in the Intergovernmental Panel on Climate Change. The best way to mitigate climate change is by managing the forests sustainably, increasing forest cover, reducing the amount of deforestation and using wood products to substitute for energy-intensive materials. This has been endorsed and agreed by the Intergovernmental Panel on Climate Change.

Dr. Áine Ní Dhubháin: Forest cover in Leitrim is much higher than the national average. The national average is 11% while in Leitrim, it is 18.9%. That is what we found in the national forest inventory. This is partly reflective of the fact that the quality of the land in Leitrim is possibly marginal for agriculture but very suitable for afforestation. Although Senator Devine quoted figures that about 96% did not want to sell land for forestry, this figure is from 1975. There has been long-documented resistance to afforestation in Leitrim, nevertheless 18.9% of the county has been afforested, half of that by private individuals, so certainly some of them have changed their minds regarding afforestation and have planted.

Chairman: I might bring in Mr. McAuley or Mr. Murphy - whoever wants to answer.

Mr. Brian Murphy: Regarding the question about timber cladding, I am afraid I am not familiar with the planning applications and things that went on in Dublin 15 years ago. I can say that timber frame housing is becoming ever more popular. Over 15% of houses in England are now timber frame while the figure in Scotland is over 30%. Most houses in the US and elsewhere in the world are timber frame so there is no reason for any issues with insurance premiums. Timber frame is very safe.

Senator Máire Devine: Insurance companies probably.

Mr. Brian Murphy: In fact, timber frame is better than steel and concrete. It is much more fire-resistant and much stronger.

Senator Máire Devine: Then just to the Department-----

Chairman: Is it the education question?

Senator Máire Devine: Yes.

Chairman: Very briefly.

Senator Máire Devine: What about free trees for urbanites?

Mr. Colm Hayes: I agree with the Senator's main premise, which is that we engage with everybody in terms of the promotion of the benefits of trees. What the Senator might be talking about is possibly an initiative of the local authority but we would be happy to discuss with the local authority if it wants to get back into that space. We do things around national tree week, particularly with schools. We did a lot of stuff with science week recently with Science Foundation Ireland, again, around schools. Many schools in urban areas would have received trees and would have had planting ceremonies. We are very keen. It goes back to communication. Everybody must understand the multifunctional benefits of forestry irrespective of where they live. Even if someone lives in Dublin, chances are he or she makes good use of the forest resources in the Dublin Mountains. Not to speak for Coillte Nature but one of its high-level goals in its early announcements was around reorienting some of the forests in the Dublin Mountains. That is the kind of thing that will certainly engage the urban population as well. There are a lot of things. I agree with the Senator that we need to engage everybody in understanding the benefits of forestry.

Deputy Sean Sherlock: We have had much to contemplate today because the submissions from each of the constituent parties here have been very thought-provoking. I will start with Forest Industries Ireland. I was pleasantly surprised by the submission we received because if I interpret it correctly, there is a very clear message from Forest Industries Ireland involving a

reaching out to all other stakeholders in respect of a vision for forestry for the future. I perceive - correct me if I am wrong - that there is a tension between the forestry industry and people in NGOs who are advocating for mixed use, greater use of broadleaf species and mixed forests, and there is an ongoing battle involving the dreaded conifer and so on. Am I interpreting Forest Industries Ireland's statement correctly when I state that there is a mood within Forest Industries Ireland that wishes to reach out to those NGOs and a broader set of stakeholders to have that engagement to see if there can be some meeting of minds regarding what the future looks like?

Mr. Brian Murphy: Absolutely. Moving the business forward will require all of the stakeholders and parties to be for forestry and afforestation and to be supportive of the timber industry. There is no value to any of us in trying to plough on alone. I apologise if I get slightly parochial but one of the things I have spoken to my own team about is that we want to grow and must move forward but we cannot have another beef crisis, as we had recently. We must be able to continue to make the growers and landowners prosper. The processors must be able to do it and we must increase the markets for timber, which people want to buy, so that we create more value and can afford to reward all of the people investing in it. It is a very competitive world. We have to balance commercial competitiveness and making money out of what we harvest with the environmental mix and the beauty of broad-leaf trees. Driving that forward is a matter of everybody talking and recognising each other's viewpoints. The industry wants to reach out and do that to ensure a bigger future for it and for the people. We see ourselves as a major employer, creating jobs in the area I live in, for example, and keeping people living there.

Deputy Sean Sherlock: We need actions to follow the statements that are made here. If there was a clear offer on the part of IBEC, Forest Industries Ireland, FII, or the relevant NGOs to start this process with some sort of summit on the future, that would be a very good result. I would welcome that.

The second issue concerns the Common Agricultural Policy, CAP, and the multi-annual financial framework. I do not know what stage it has reached or where forestry sits in that. Farmers are arguably farming to schemes. We recognise that from a social and cultural point of view it is very difficult for farmers to give up farming livestock if they have been doing so for three or four generations and switch to afforestation. I take the point made by the two doctors about the proportion of a given holding that is given over to forestry. Is there scope within the next round of CAP and the next multi-annual financial framework to have clear schemes and financial packages to incentivise climate action among farmers on this island? That could include afforestation or biodiversity measures. Is it the understanding of Mr. Moore or Mr. Hayes that the CAP is moving in the direction of incentivising climate action on the part of farmers and landowners?

Mr. Colm Hayes: Very much so. The Commission and the Ministers are very clear that the next CAP is about delivering more environmental dividends than have ever been delivered before and responding to the climate emergency. Some 40% of the next CAP will be set aside for climate and environmental measures. In my opening remarks I stated that one of the key factors which will drive the success of the climate action plan and help us meet its goals will be better integration between the next CAP and the next national forestry programme. That could mean that agri-environment schemes under the next CAP will involve significant amounts of tree-planting, which was not always the case in the past.

Deputy Sean Sherlock: We will keep our answers brief. Where is CAP at the moment? What is the current position of the negotiations?

Mr. Colm Hayes: The MFF negotiations are ongoing. That is at a high level and is broader than CAP, so I will not comment in too much detail. The Commission has produced a proposal for a transitional regulation which will take us from the end of the current CAP in 2020 to the next CAP. There is an expectation that the next CAP will be slightly delayed. Whether that transition period is one year or longer, these are all the issues that are being discussed by agriculture ministers in Brussels, the European Parliament and the Commission. There is no final decision on that. It is all a bit up in the air but to answer the Deputy's original question, nobody is taking their eye off the ball when it comes to driving climate measures under the next CAP. That is very much a part of our thinking.

Deputy Sean Sherlock: I refer to the COFORD Council. Can the witnesses disabuse me of my perception that the COFORD Council is nothing but a talking shop and that no real policy interventions arise from it? Can they disabuse me of the perception that if the COFORD Council was working properly we would have increased forestry cover and stakeholders, including the very NGOs that I spoke about previously, would be triaging the issues we are talking about today to a much greater degree? There would be real policy outcomes, real delivery of climate measures and the potential of the forestry sector would be realised.

Chairman: To whom is the Deputy directing the question?

Deputy Sean Sherlock: I will start with the Department of Agriculture, Food and the Marine, but I will go around the houses.

Chairman: I will call on Mr. Fergus Moore. If anyone wants to comment they can do so.

Deputy Sean Sherlock: I would like to hear from Coillte after that.

Mr. Fergus Moore: We have the chairman of the COFORD Council, Dr. Eugene Hendrick, here today. In the last several years the COFORD Council has developed a range of policies and advice for the Department. As the members know, the COFORD Council is appointed by the Minister to advise him on matters of forestry policy. In the last several years, the COFORD Council has been actively involved in producing a range of reports on climate change, ecosystem services and the availability of land for afforestation. The Minister of State is currently examining several reports on the reasons foresters do not engage in certain services and farmers do not engage in forestry. It has also done very important work on timber mobilisation and production forecasting. I am pleased to note that the next COFORD Council will run for three years, from 2019 to 2021. We have set up a range of working groups. The first working group concerns forestry and climate change and will advise the Government on a range of issues. We also have a group working on the socioeconomic impacts of forestry. Another working group has been set up to look at forest genetics, tree-breeding and forest resilience. The work of the COFORD Council is very important. It helps to inform policy and will inform the direction of funding in the next several years.

Chairman: Dr. Hendrick was not invited here in his capacity as chairman the COFORD Council, but if he wishes to comment he is more than welcome to do so.

Dr. Eugene Hendrick: I thank the Deputy for the question. To add to what Mr. Moore said, the COFORD Council is a very important forum for stakeholders. It is not a talking shop. It comes up with recommendations which are passed to the Department. For example our wood forecast, which runs to 2035, has been developed by the COFORD Council and stakeholder forum. This forum brings saw-millers, end users and so on together. It is a very important forum

which allows stakeholders to see that they are being listened to and are influencing forest policy developments.

Deputy Sean Sherlock: Could I hear from Coillte on that? I know that organisation is a stakeholder.

Chairman: There is about a minute left.

Mr. Mark Carlin: I will keep it very brief. As a forester, I have referred to a lot of COFORD Council material for factual information. We said earlier how important it is for the industry to promote the message about the benefits of forestry. It is important that the facts are brought to the table. The COFORD Council can play its part by bringing good science and good facts.

Deputy Sean Sherlock: In my remaining ten seconds I would like to ask about Coillte's six regional strategic plans. My understanding is that under the climate action plan Coillte is committed to replanting or restocking a total of 34,770 ha between 2016 and 2020. Is that effort on target? Moreover, the witnesses mentioned that 20% of the estate is managed for biodiversity. Will that be extended across that 34,770 ha?

Mr. Mark Carlin: We are absolutely on target in regard to reforestation. In fact, we are ahead of our target. This year we will carry out a planting programme of 9,000 ha. We will plant 9,500 ha next year, so we are on target. Biodiversity is accounted for within that.

Deputy Bríd Smith: I thank the witnesses for their presentations. I want to start by reminding everyone that the emergency we are currently going through is both a climate emergency and a biodiversity emergency. This is important in the context of this discussion, particularly where Coillte is concerned. Its representatives say that Coillte manages one fifth of its estate primarily for biodiversity. I am disappointed to hear that. It falls well short of what is required. I used to live beside a Coillte forest in Donegal and I utterly hated it. The forest floor was dark. Nothing grew on it. There were no insects, butterflies or bees and consequently no frogs. The run-off from the forest made the water acidic, to the point that it would sting. In discussing reforestation and the number of hectares that are planted we need to be very careful not to repeat the mistakes of the past. As Einstein said, we do not solve our problems by repeating the mistakes that created them in the first place. We need a clear path for Coillte to pursue afforestation to the extent that is required in the country without the destruction that has happened in the west of Ireland. Anyone who has driven through counties Donegal, Mayo, Leitrim or Galway knows that the level of Sitka spruce planting there is offensive to the eye.

I acknowledge that Ms Hurley is new to the job. In 2012, there was an attempt to privatise or part privatise Coillte. I was part of a successful campaign led by Deputy Boyd Barrett to stop the privatisation of the forests. Are there any plans to sell off part or all of Coillte to private enterprise?

One of the priority recommendations of the working committee that held several meetings on these issues was that there should be a full review conducted of Coillte. That does not form part of the Government's climate action plan, but it is something that the committee wanted to see happen. There are many legacy issues in that regard. May we see the memorandum of understanding between Coillte and Bord na Móna?

That kind of leads on to my next question, which is more for the biologists, scientists and eco people. There is a concern that reforestation of the wetlands may have a net negative effect

on sequestration and carbon emissions because bogs and wetlands sequester more carbon than trees potentially do. If we are going to plant trees on the wetlands, will there be a net impact on our CO₂ emissions? Would it not be better to focus on regenerating the bogs? Of course, if one does so, the problem is what one says to farmers and others in places such as Leitrim and Mayo in the west of Ireland. It seems that most of the incentive for reforestation is not going to small farmers of the sort shown in the “Ear to the Ground” television programme which featured a lovely farm where trees, cattle and sheep mixed together because there was a lot of space between the trees. The Department referred to that model. Where is the financial incentive for the poorer smaller farmers to gain from such reforestation? All the incentives seem to be going one way. A resident of County Leitrim interviewed on the RTÉ “CountryWide” radio programme stated that Norwegian and Danish investment funds are buying up land. There are approximately four such funds operating in his village. Some regular people who have money are buying up the land around the country in order to make more money. The residents of the village do not want any more Sitka spruce planted. As was pointed out, 18.9% of County Leitrim is afforested, most of it with Sitka spruce. To reach the national target of 18%, are we going to further saturate places such as County Leitrim? According to the man interviewed in that recent edition of “CountryWide”, global companies are buying up land in poorer areas to plant more forestry. I would like all or any of the witnesses to try to answer my questions.

On a lighter note, something struck me when Mr. Murphy referred to Forest Industries Ireland making wood pellets: was it involved in the cash-for-ash scandal?

Chairman: To whom was the Deputy’s first question addressed?

Deputy Bríd Smith: My first question was mainly addressed at the representatives of Coillte.

Ms Imelda Hurley: I will address some of the questions and then ask Mr. Carlin, who is a forester, to deal with some of the others.

I am aware of the moves that were made in 2012. Coillte is the custodian of a State asset and it is ultimately a matter for our shareholders to decide how we are dealt with. I wish to clarify that I am unaware of moves for any part of the business or its operations to be sold off. Indeed, in my short time in the organisation it has been very clear to me that Coillte provides many social benefits. I understand the Deputy’s earlier question, to which we will return. Many social benefits such as recreational facilities, hiking trails and so on are provided because they fit within what Coillte does. I am unaware of any plans to sell off part or all of the business. I am aware of the suggestion that Coillte be subject to a full review.

On the memorandum of understanding with Bord na Móna, we would be happy to revert to the committee with further information. We will write to the committee in that regard.

Chairman: Thank you.

Mr. Mark Carlin: On biodiversity, the 20% quoted relates to primary biodiversity, that is, areas that are solely managed for biodiversity. We recently carried out a full bioclassification of that 20%, or 90,000 ha, and identified international, national and local level biodiversity value. Part of that exercise identified 20,000 ha of international class biodiversity which we are now investing in enhancing and restoring. That does not mean there is no biodiversity in the rest of the estate. There is biodiversity across our estate. As the Deputy stated, from a commercial point of view Sitka spruce is the predominant species, at 53%. That is so because of its success

in terms of productivity, timber products, climate and carbon. However, we are very mindful of biodiversity within our forest operations outside of certain areas. We always seek to enhance and restore where we can.

Mr. Brian Murphy: We have not benefitted from the cash-for-ash scheme at all. It was a mistakenly structured scheme set up for whatever reasons. We are the largest producer of wood pellets on these islands by several degrees. Most of our markets are in Britain, Northern Ireland and the Republic of Ireland. We supply all of the heat to the hospital in Enniskillen which is the cleanest public building in the United Kingdom and has zero emissions.

Deputy Bríd Smith: I thank Mr. Murphy. I was being slightly facetious; I could not resist it.

I ask the representatives to address the questions of bogs versus forestry.

Dr. Áine Ní Dhubháin: My understanding - the representatives of the Department can correct me if I am wrong - is that afforestation no longer occurs on peatlands. It took place in the 1960s and 1970s but it is no longer permissible to afforest peatlands.

Deputy Bríd Smith: If that is the case, why do Bord na Móna and Coillte have a memorandum of understanding? Even though they are used bogs, would it not be better to rewet or rehabilitate them rather than planting on them?

Dr. Eugene Hendrick: The best way to mitigate degraded wetlands is to rewet them. One sometimes gets an increase in greenhouse gas emissions when one starts to rewet them because there is a change from a degrading CO₂ to methane being emitted, but that gradually alters. There is much good evidence that rewetting of wetlands and peatlands gives a net carbon benefit over time. The forest service has moved away from grant aiding afforestation on peatlands for a significant period. Some areas with small layers of peat are afforested but they would not be classified as peatland. There is good research evidence to show that on those soils, which can be highly productive for forestry, that gives a net removal of CO₂ from the atmosphere. Basically, one must look at the site type and so on.

On rewetting and the midland peatlands, a landscape level approach is taken. It is probable that a substantial portion of the cutaway is suitable for rewetting, which will deliver climate change mitigation benefits. Other parts are suitable for planting trees. One must bear in mind that some of these areas in the midlands were once forest. Some of the basal peat layers come from wood. Birch, yew and oak grew in those forests a long time ago. Those areas are suitable for growing trees. The goal is not blanket afforestation of cutaway, which would be a bad idea. A sensitive landscape approach needs to be taken, looking at afforestation, rewetting and other land uses in the context of biodiversity and climate change mitigation.

Mr. Colm Hayes: I will be very brief in response to Deputy Bríd Smith. I do not intend to comment on the specifics of the Coillte-Bord na Móna proposal. Like any other planting proposal in this country, this project will be subject to the full rigours of our approvals process, which involves appropriate assessment. In light of the scale of this project, an environmental impact assessment will probably be necessary as well. All of the issues raised by the Deputy need to be teased out. When one is pursuing a project like this, one does not plant trees just for the carbon benefit. I say that in response to what has been said about the issue of biodiversity. All of these broader environmental dividends will need to be factored in as well as the environmental challenges. We are a bit away from that because we are not even at the application stage.

All of these things will be factored in.

Chairman: Mr. Carlin wants to come in at this juncture.

Mr. Mark Carlin: I would like to build on the point made by Dr. Hendrick. The afforestation with Bord na Móna will be managed carefully. We will take the best ecological advice. We are looking at developing wilderness forest using native species like birch and Scots pine. This will be done with the best ecological advice.

Deputy Bríd Smith: Can the way financial incentives are distributed be changed to encourage smaller farmers to get involved, rather than big companies coming in and buying up land on which to grow massive amounts of trees? Can the financial incentives that are given to such companies be redistributed? Has a different model been examined?

Chairman: I suggest that question would be more appropriate to the Department.

Deputy Bríd Smith: I am not sure.

Chairman: I think it is because it relates to the CAP.

Mr. Colm Hayes: We are straying into policy and future policy here. It is probably a question for the Minister of the day.

Chairman: It will form part of the CAP negotiations.

Deputy Bríd Smith: That is why I want to stray there.

Chairman: Perhaps the Minister will be able to address the question when he comes before this committee to discuss the CAP.

Senator Alice-Mary Higgins: Are the negotiations not happening now?

Mr. Colm Hayes: The negotiations on the broader CAP regulation are happening now. Obviously, they will not set the detail of the individual schemes. That is up to us as the national competent authority. All of this will be subject to full public consultation when the time comes. I am wary of straying into future policy decisions.

Deputy Bríd Smith: I am afraid it is up to me as a Deputy to ask the question.

Chairman: I think Mr. McAuley wants to come in. I ask him to be brief.

Mr. Mark McAuley: I would like to speak about where the CAP process is going. When I was in Brussels last Thursday, I met people from around the Commission. The vast majority of them are foursquare behind additional forestry in Europe. The Deputy is absolutely right when she suggests that there is a wind of change towards more mixed forests with more diversity. This is being advocated with a view towards protecting our forests against future climate change, as well as using them to combat future climate change. The situation is changing. A new green deal will come out of Brussels shortly. That will contain a lot of talk about what forestry will look like in the future.

Deputy Thomas Pringle: I thank the witnesses for the information they have given us. Some of my questions have been asked already. I would like to ask the witnesses from Coillte about the planting of forestry on peaty soils. This matter has been discussed already. The reply to a parliamentary question that was tabled last week clarified that we do not have a current

estimate of the net carbon losses as a result of peatland afforestation. Surely this is the kind of thing we should be looking at. Discussions about such ideas should be taking place within Coillte as an organisation. I accept that everything it does is subject to assessment. I assume Coillte looks at this stuff. What is Mr. Carlin's view on the estimate of net carbon losses? Has anything been done in this respect? I have to admit a personal interest in the question of Balcas wood pellets. It was suggested recently that wood contributes to smoke damage for people. What impact will this have on Coillte's wood pellet business?

Mr. Mark Carlin: We need to develop our thinking on the science behind the exact carbon equation when it comes to forest operations and reforestation.

Deputy Thomas Pringle: Does Coillte not have that at the moment?

Mr. Mark Carlin: We are working our way through that. We are working with the Council for Forest Research and Development as well. More than ever, when we are doing forest operations like clear felling on peaty soils - deep peat, in particular - we are open to being really careful about what we do with the next rotation. In some areas, it is right to put the forest back in place. In other areas, it is a question of what makes sense from a commercial forestry point of view. In some cases, we decide to leave the biodiversity forest alone as part of an effort to recreate and protect the carbon store. In some areas in which we have taken trees away, we have rewetted over 3,000 ha. We have another 2,000 ha to look at. We are more conscious than ever that we have to be very careful with the reforestation of these areas. There is work to be done on the carbon equation.

Deputy Thomas Pringle: Coillte must have some expertise.

Mr. Fergus Moore: I remind Deputy Pringle that the national forest inventory is done every three or four years. We are just starting our next cycle. The results of the inventory are taken with the modelling to estimate the total amount of carbon in the forest estate. We know exactly how much forest carbon is distributed across the entire estate. It depends on the types of soil and species. In general, we report to the EPA, which then reports to the UNFCCC on the total carbon sequestration of the forest estate for Ireland, which includes the Coillte forest estate. It is true that peat soils have a different carbon dynamic from mineral soils. Overall, the entire forest estate is still a net sink for carbon dioxide.

Chairman: I ask Mr. Murphy and Dr. Hendrick to respond to some of the other questions.

Mr. Brian Murphy: I expect that Deputy Pringle's question has arisen from what the Taoiseach said the other day about the decision to refer all smoky fuels for review. Wood pellets would have 3% of the particulate emissions if they were burned wet without any of the protection of burning wet firewood. They are 97% better in the sense that they have 97% less particulate emissions. If one puts any sort of half-decent small ESB or electrostatic precipitator onto that equipment, it will bring that figure down to virtually zero. I do not expect wood pellets to be classed in the same breath as a smoky wood fuel. That is because they are dry.

Dr. Eugene Hendrick: I am involved in some initiatives around the question of emissions from wood fuels, including smoky wood fuels. The wood fuel quality assurance scheme, which is operated by Ervia, certifies wood suppliers that meet certain standards. Anyone who wishes to become a member of the International Standards Organisation's standard on wood fuels - ISO 17225 - has to provide wood fuel firewood with a moisture content of 25% or less. There is very good evidence to show that if we reduce the moisture content of wood fuels in Ireland

from 30% firewood to 20%, which is eminently achievable, we can reduce particulate emissions by a factor of two or three. As we all know, there is a lot of wood fuel out on the market that has a moisture content of considerably more than 30%. If we combine the use of proper combustion technologies with the new ecodesign regulation, which is coming in on 1 January 2020 with regard to boilers and from 1 January 2022 with regard to wood stoves, there will be a considerable reduction in emissions from wood combustion. The point I want to make is that there are answers.

Chairman: I call Senator Higgins.

Senator Alice-Mary Higgins: A number of interesting questions have been asked. They have given rise to more questions that I would like to ask. However, I will try to focus on a few clear points. While I do not wish to contradict Mr. Hendrick directly, it is important to clarify that when the UN talks about material substitution, sequestration and bioenergy, it is not talking about the same tree. The need for large numbers of trees requires a huge scale of afforestation - not necessarily commercial afforestation, but afforestation which serves a role in terms of sequestration. We need to be really clear that there is not an endorsement that all forestry must be commercially exploited as substitution or indeed bioenergy. That is certainly not the position as I understand it. The most recent IPCC land use report, which came out earlier this year and has been debated at this committee, seems to contradict any such suggestion. Other witnesses may wish to comment on this in their responses. While the report does not use such language, I suggest that a “keep it in the ground” perspective is a core element of its approach to land use.

The other key function, in addition to those functions, is biodiversity. We are facing the twin crisis of an ecological crisis with a huge level of species collapse and an absolutely linked climate crisis. I sometimes worry that the focus on carbon maths causes us to forget about the accelerants of climate change, one of which will be biodiversity loss. I will focus on that and build on some of the questions Deputy Brid Smith asked.

Mr. Purser mentioned that 70% of the carbon capture is in the soils. We know that, for example, in the first five years of a tree being planted there can be a carbon loss during that period because of the turning up of soil and so forth. That is one of the reasons retention of trees for longer and moving away from clear felling is so important. Mr. Purser indicated that he has concerns about clear felling but I ask the Forest Industries Ireland and Coillte witnesses to be clear on where they stand on continuous cover and whether that is a future policy they will move towards, as they have moved on broadleaf, and the extent to which that policy will become central in the future.

On the issue of broadleaf, we are still looking at a figure of 27% in terms of the species mix in forests planted in 2018. However, I hear from people who have engaged around forestry and they still find that many foresters talk to them about the practice of broadleaf fringing, that is, broadleaf around the edge of a core, which might be a monocultural crop like Sitka spruce. That is a major concern. What measures have been taken to address that practice? If we are talking to the witnesses in two years time, will Sitka spruce still be a majority in terms of species mix? What will be the percentage of Sitka spruce in our future forestry plans and what measures will the witnesses introduce to achieve that?

Broadleaf fringing is also an issue in terms of wildlife and biodiversity corridors, and the national pollinator plan. We have not heard much mention of the national pollinator plan. How are the witnesses' forestry strategies ensuring effective enhancement of the national pollinator plan?

That brings me to the CAP. With respect, policy is our business. We are legislators. Policy is not an issue that is out of discussion. We are not asking these questions for the good of our health. I ask about future policy and the advice, suggestions or recommendations this committee might give towards future policy, which is the reason we are here. We need more clarity on current policy from the Department. The application for CAP funding may be a period of time away but as Mr. Hayes acknowledged, the negotiations are happening now. What is the Irish position on the negotiations in terms of issues such as broadleaf percentages in forestry, the pollinator plans and co-benefits? That is something that relates to the CAP because rather than talking about an individual farmer, for example, will there be a layer of co-benefits where landowners co-operate with each other around the creation of, say, a pollinator pathway? Is that something we would be looking to be additionally recognised for and that would be reflected in payments? Is that an issue on which we are advocating?

Has Ireland taken a position on the issue of clear felling versus continuous cover? Are we in that discussion? The reason we are here is to talk about our plans and if a national climate plan is being produced in the coming weeks, it is relevant that we would hear where we are in the negotiations.

There are many issues I want to raise but I will conclude shortly to ensure I have a chance to come back in.

Chairman: The witnesses have five minutes to reply.

Senator Alice-Mary Higgins: On a global level, the issues we have heard are how we can make access available for farmers with smaller holdings, linking in biodiversity and ensuring that it is not simply large-scale commercial calculation of carbon in a way that is detrimental in the long term. Those are issues internationally. In terms of the regional economic development, RED, funding, and under the UN funding, we know that farmers in Uganda, Kenya and other countries around the world are facing issues in accessing these mega-schemes. Can Ireland be an advocate within Europe, and in the international discussions, and say that when we looked at those in detail we realised that they were issues? How do we intend to reflect that understanding of the way forestry works in a meaningful way in the positions taken globally?

I want to conclude because it is-----

Chairman: There are many questions that need to be answered.

Senator Alice-Mary Higgins: It is a single sentence. This issue is very important. I have just returned from the UN Climate Change Conference, COP. One of the most bizarre comments I heard was from a well-meaning business leader who said that the best invention we ever came up with is a tree. I think he thought they had invented trees because they had finally found a business use for them and a natural service. It is an important reminder-----

Chairman: I am going to call the witnesses to reply.

Senator Alice-Mary Higgins: -----that we are working with nature and not simply a case of nature working for us.

Chairman: I will start with Mr. Carlin from Coillte who will be followed by Dr. Hendrick.

Mr. Mark Carlin: The Senator has asked many questions.

Chairman: That is why I wanted to call Mr. Carlin.

Mr. Mark Carlin: I will try to break down the reply into a few categories. The Senator asked about substitution, commercial forests and Sitka spruce.

Senator Alice-Mary Higgins: Continuous cover.

Mr. Mark Carlin: I will deal with that separately. The general point I would make around that is that what we try to do all the time is strike a balance in terms of the economic, social and environmental aspects. From an economic point of view, house builds need to double in Ireland and in the UK. There is a demand for 3.4 billion cu. m of timber, and timber is a good product. It is a better product than other carbon-heavy products. We need those products. Forty per cent of the world's timber comes from 7% of the world's forests. Getting timber products efficiently from plantation forests allows us to safeguard our own growth forests. We need these timber products and we need to get them in an economic way but also in a social and environmental way also. It is critically important that we understand that we need the timber products.

When it comes to silvicultural systems, we operate different silvicultural systems. We operate long-term attention where we want to keep the forest covered, particularly in recreational areas. We operate small group felling where we want to change the age structure within the forests. We operate clear felling reforestation, which is the most productive in terms of timber production, and we operate continuous cover forestry in areas particularly of high biodiversity or landscape sensitivity. We are trying to look at that balance all the time and ask ourselves what is the best silvicultural treatment to deliver the economic, social and environmental benefits from our forests. We are open to any dialogue on the best way to achieve that but it is important that we achieve all of those. We have to have a good recreation and social policy but also protect, enhance and restore biodiversity while keeping a vibrant industry that is producing sustainable products. The great point about forestry is that every single tonne of timber that is used is saving 2 tonnes of carbon.

Dr. Eugene Hendrick: On the point about harvesting versus retention, the question I was asked was whether it is advisable to keep the carbon in the forest rather than harvesting. To answer the Senator's question, there are areas of forest that should never be touched because their nature value is extremely high. They should be retained and not used. There are examples in Europe and across the globe.

On the general question as to whether it is better to tackle climate change by not felling managed forests or to keep the carbon in the forest, the scientific census I indicated is that it is better to harvest the managed forests in the context of biodiversity enhancement and so on. That was the point I made.

Mr. Mark McAuley: I will make a couple of points. On the type of forestry we want to do, the industry's position is that we should do both. We should do more close to nature forestry and more biodiversity, but we should also produce products for that benefit.

Senator Alice-Mary Higgins: Does Mr. McAuley have percentage targets on those?

Mr. Mark McAuley: No. It is already 70%:30%. Let us see where it goes from here. It will probably move in a particular direction.

The bigger point is that if we want to take advantage of forestry for climate change benefit, it has to scale. If we continue to come up with many reasons not to do it, it is similar to coming up with many reasons not to do wind farms, allow people get on bicycles-----

Senator Alice-Mary Higgins: I do not think that is related to the question.

Chairman: Let him answer.

Mr. Mark McAuley: If we want it to scale, we have to have an economic element to doing it. If there is no economic element, it will not scale in Ireland, Europe or across the world and we will end up getting very little out of forestry in terms of climate change.

Chairman: Mr. Purser wants to come in. I will then call the Department witness.

Senator Alice-Mary Higgins: I will then follow up on one of the points raised.

Chairman: It will have to be a brief follow-up.

Mr. Paddy Purser: Many of the points being made are related to the different products and services forestry offers. The questions from the members have been fantastic. As elected members, I presume they reflect the demands on forests from society. It is clear that a great deal is asked of our forests in terms of the social, environmental and commercial services they provide. It is not a question of saying that these forests are delivering biodiversity, these are delivering recreational value and these are where we go to get our timber. We can do all those things. In some forests there is a greater emphasis on one product or service than in others but all forests should be capable of producing many or all those products and services. We need to get away from the idea that the function of a forest is to produce timber and nothing else. That has been alluded to and I know that Coillte is working on policies and practices around that. What we are advocating is the continuous cover forest management system which offers the opportunity to commercially manage forests. I am speaking from experience here. Deputy Niamh Smyth very kindly referred to me earlier as an ecologist but I am not an ecologist. I am a commercial forester; that is my job. I manage commercial forests for private forest owners whose bottom line is that they need a cheque from timber sales. They get that cheque but we are also able to manage those forests through skills we have developed to deliver the other social and environmental services. This is part of a forestry culture that we need to develop in Ireland. The way in which the forest sector in Ireland developed was related to the fact that we had only 1% of land under forest at the start of the last century. There was an emphasis on planting new forests and that was achieved. Now we need to move on and figure out how to transition those forests into more permanent and multifunctional spaces that deliver on the demands of society, as reflected in the questions posed today.

Chairman: The Department representative wants to respond but we have gone way over time so I ask him to be brief.

Mr. Colm Hayes: I will be very brief. I want to deal with the question as to why we are not engaging in more detail on the CAP right now and to dispel the notion that detailed consideration is not ongoing. There is a whole other forum out there which is considering the shape of the next CAP and what it should look like. The Minister has established a CAP consultative committee on which there are environmental NGOs and various other social partners. That discussion is very much ongoing. What will the next CAP look like in terms of biodiversity and climate? It will be a mix of trees, organic farming and a whole host of other things. I am not sure if Senator Higgins or this committee has made a submission to the CAP consultation process. Lots of people have made submissions so perhaps that is something for the committee to consider. Obviously, the high level point still stands. We do not even know what the budget for the next CAP will be and without an idea of the budget, one cannot fix the individual schemes.

That said, one can still have the discussion and that discussion is taking place.

Finally, pollinators were mentioned and the Department is hugely supportive of the all-Ireland pollinator plan. We are also a significant financial supporter of the National Biodiversity Data Centre and its work. I would like to give one example of the crossover between woodlands and bees. Earlier this year we launched an initiative to encourage owners and local bee organisations to use native woodlands to host beehives and open up these habitats to foraging bees. This is part of the implementation of the all-Ireland pollinator plan. There is a huge amount going on but this type of whistle-stop format does not allow us to elaborate further. However, I would be happy to bilaterally deal with any issues or questions.

Chairman: Senator Hackett is next.

Senator Alice-Mary Higgins: The Chairman indicated that I would be given a moment for further-----

Chairman: Yes but we are way over time. Senator Higgins asked an awful lot of questions in her ten minute slot.

Senator Alice-Mary Higgins: Indeed, but I would simply ask for a written reply on specific questions.

Chairman: Which ones?

Senator Alice-Mary Higgins: I ask that the other witnesses would comment on the pollinator plan-----

Chairman: Maybe they could send in a written submission.

Senator Alice-Mary Higgins: Yes, and also if we could have more information on the safeguarding of old-growth forests and forests in urban areas and how that is being done. Lastly, the question on the rehabilitation of the 1960s forests that were clear-felled. Is consideration being given to re-wetting or the rehabilitation of those sites as peatland rather replanting them?

Chairman: Okay. Senator Hackett is next.

Senator Pippa Hackett: How long do I have?

Chairman: Five minutes.

Senator Pippa Hackett: I thank the witnesses for their presentations. I note that the average size of a forestry plantation is 7 ha. I own a young plantation and am very interested in this issue. I welcome the establishment of Coillte Nature and look forward to seeing how it pans out. There was some discussion around planting on cutaway bogs. I accept that some bogs are so cut away that they can only be planted on and cannot be re-wet. However, data suggests that drainage of peat soils for forestry has a negative effect on greenhouse gas and ammonia emissions into surface water. We should probably be avoiding draining such soils. However, Dr. Ní Dhúbhain indicated that planting on peaty soil no longer happens. I ask the representatives from the Department or Coillte to confirm that is the case. If not, should we consider discontinuing that planting practice? A decision not to drain peat soils for planting means that we need to increase planting on what could be described as better soils. What is the Department's view of this aspect of our forestry programme? Agroforestry has been mentioned a number of times today. I am a big fan of agroforestry and am staggered to hear that we have only 51 ha in the

country under agroforestry. I do not know of any near my home but would love to have some on my own farm. It is a forestry model that the Department should be really getting behind because it facilitates farming animals along with growing forests.

Chairman: I will start with the Department and Mr. Hayes.

Mr. Colm Hayes: I will invite my colleague, Mr. Moore, to comment on the question about planting on peaty soils. I absolutely agree with the Senator's comments on agroforestry. One of the main initiatives we took in the mid-term review was to treble the rate of agroforestry. The Minister hosted an open day recently on a site in Kilcock, County Kildare. We also increased the grant rates. It is a bit of slow burner. Some of the feedback on it suggests that the premium period needs to be longer and the Minister has publicly commented on that. That is something that we need to reflect on in the context of the next forestry programme. I share the Senator's enthusiasm for agroforestry because it is a good gateway into forestry and allows for farming and forestry to co-exist. We are big supporters of it and we will definitely see more of it in the future.

Mr. Fergus Moore: Related to the planting of the cut-over bogs in Bord na Móna, Coillte Nature has engaged a lot of ecologists and-----

Senator Pippa Hackett: Sorry, I was talking more about peaty soils rather than the cut-away bogs. One sees pictures in newspapers of drained sites that are not cutaway bogs. They have vegetation growing on the top and trees have been planted into them. The indication from Dr. Ní Dhúbhain was that it does not happen.

Mr. Fergus Moore: In the past, particularly in the 1960s and 1970s as well as in the early part of the 1980s, we would have planted a lot of peatland areas but in the last number of years we have moved away from planting on peatland soils. We have rules which do not allow for any planting on blanket or raised bogs. The vast majority of planting takes place on mineral soils which are basically wet clay soils that cover large parts of Ireland. Planting on soils that are a bit peaty can produce emissions in the first number of years but as the forests mature and close canopy, they become a net sink of carbon dioxide. The Senator is correct in terms of plantations and soil disturbance. When there is soil disturbance it produces some emissions but generally when the forest starts to grow, develop and close canopy, those emissions reduce and the forest turns back into a net sink.

Chairman: I am sorry to interrupt but a vote has been called in the Seanad. If Senator Hackett wants to pose another question, it can be answered in her absence.

Senator Pippa Hackett: I do not know if I have to leave. I have not been instructed to go to the vote. Sorry, I do have to vote.

Chairman: The Senator can ask a question-----

Senator Pippa Hackett: Okay, I have a question for Mr. Purser on continuous cover forestry. How many years after planting can thinning begin? I am thinking of farmers or landowners who are considering adopting this method from scratch rather than converting an existing forest. How soon can thinning take place and what sort of revenue might they expect from their thinnings? Are there any special infrastructure requirements for continuous cover as opposed to standard monoculture forests?

Chairman: The answer will be recorded for the Senator.

Senator Pippa Hackett: Thank you.

Mr. Paddy Purser: Ideally with continuous cover forestry, the best way to start is at the establishment stage, in terms of the design and the diversity of species planted. Obviously, as Coillte has said, it is important to plant the right trees in the right place, with the right management. That is the best time to set out compatible species that are suitable for the site. Most of the work we are doing in Pro Silva and in continuous cover forestry in Ireland is in transforming even-aged monocultural crops and that starts at the time of first thinning which is somewhere between 15 and 20 years of age. Early thinnings in that process are very similar to what one might do under a conventional system but things change over time. There is an emphasis on timber quality and forest retention. There are specific techniques we use. In the transformation period, the first few thinnings do not differ significantly from a conventional management approach.

Ms Imelda Hurley: I just wanted to speak on Coillte Nature. To give a little bit of context, Coillte has been managing its forests on a sustainable basis for a very long time. There has been a great focus on balance. As the organisation thinks about balance, we think about social, environmental and economic factors. We continue to evolve and to recognise changes in requirements and in what we can offer to Ireland. Coillte Nature was established this year. It is a non-profit entity which aims to increase focus on certain areas. I will give three very brief examples. There was mention earlier of the Bord na Móna memorandum of understanding. That is part of the Coillte Nature initiatives on which we are working. There was also a mention of the Dublin uplands and the conservation of what are currently commercial woodlands which will, over time, become recreational forests. There is also a focus on biodiversity. One of our early initiatives in that regard is a biodiversity restoration project in Hazelwood in Sligo. Coillte Nature is a further evolution in what we can do to improve balance in a given area.

Chairman: I call Deputy Fitzmaurice, who has five minutes.

Deputy Michael Fitzmaurice: I thank the Chair. I must have 15 minutes at this stage.

Chairman: The Deputy has five minutes.

Deputy Michael Fitzmaurice: I will start with a quick-fire round. I have a question for Mr. Murphy. I will not mention the companies involved but am I correct in saying that cut-offs and waste timber left over from a site can be used for different processing or generation activities in Northern Ireland but that the EPA will not grant people in the South licences to use timber in that way?

Mr. McAuley asked why people do not want to get into forestry. He is right. There is a need for commercial operators. The likes of ECC Timber and Murray Timber Group provide employment. We need a certain amount of activity to ensure that we keep jobs in certain areas, such as in Connemara. The problem is that what has gone on has left a bad taste in many people's mouths. We have an estimate at the moment. Will Mr. Hayes tell me what we have not achieved in the last few years? My understanding is that we have 5,000 ha or 6,000 ha less than our target. We are now saying that we will plant 8,000 ha per year. Some 80% of land west of Galway has been designated such that it cannot be planted. One cannot plant in Mayo. Going around the country, where will we get the land? We are living a lie in this room if we believe we are going to achieve something which we will not.

I hope I will be corrected if I am wrong but I have dealt with Departments with regard to

people who have bought land from Coillte on which the trees were fit for cutting and in respect of which there was an obligation to plant on raised bog - wet peatland. Can anyone here tell me that one does not have to replant in that situation? The fact is that one has to replant on raised bog.

Some 6% of our countryside is covered in forestry, much of which is broadleaf, planted by farmers and State bodies. Not one bit of this is used in calculating our emissions. What is our Department doing to resolve that issue? Such forestry all over Ireland is excluded from these statistics. Why do we not have schemes for areas of 0.5 acres to 50 acres and an acre to 100 acres? If we want to encourage the planting of broadleaves to reduce net emissions, shelter belts of 30 broadleaf trees could be planted along ditches under an environmental or CAP scheme without interfering with farming. We could plant 60,000 ha in one year. Our big problem is that we do not have the money for it.

Mr. McAuley has asked why farmers are not willing to go down this road. Coillte has partnerships with farmers with which there are problems it has not addressed. Mr. McAuley and I both know that, in the business world, one person tells another who tells another. Coillte says that it is engaging. Engaging is not solving. At one time, when one was sowing timber, it was done on the bad piece of land at the back of the garden or the end of the field. That day is gone now. That will not happen. One has to have a better standard of land. This has left a bad taste in the mouths of many farmers and word spreads. Farmers are becoming reluctant to plant. Mr. Hayes will be familiar with the case of a farmer who has been in forestry for three years. I have contacted him and his people over the last year or 18 months in this regard. This farmer wants to brash trees for access. A licence was given to dig drains. This has been going around in circles. This person who has planted forestry is trying to improve it and the Department has not addressed the problem. People wonder why more people are not going down the road of forestry. How many licences are being stopped by the so-called environmentalists who are going to save the world? How many roads are being blocked? How many areas in which people want to plant trees are being blocked? This is not being addressed. The Derrybrien case has been a problem. We have addressed nothing.

Mr. Brian Murphy: The first question was for me. I apologise-----

Deputy Michael Fitzmaurice: I want quick answers.

Mr. Brian Murphy: I did not quite understand the questions.

Deputy Michael Fitzmaurice: When one puts up a timber roof there may be pieces left. This is called used timber even though it was never used. In the North one can bring it to Balcas or another company. One can get a licence for that.

Mr. Brian Murphy: No. One cannot because it is not recognised by the Forest Stewardship Council. One simply cannot do that. One may be able to burn it in one's fireplace. There is nothing stopping people from doing that. Of course we have an incinerator down the road, not very far away, which burns waste.

Mr. Mark McAuley: The Deputy asked where the land for forestry is. That is the burning question. We need to find it. It needs to be the right kind of land, to be economically viable, and to be environmentally viable without any problems associated with it. The Deputy also mentioned farmers' attitudes and experience. Even under the current system, it is absolutely paramount that farmers entering the process have a good experience. They need a quick an-

swer, to get their licences, and to be able to get on with it, otherwise they change their minds and do something else.

Mr. Colm Hayes: The Deputy mentioned the issue of hedgerows. We addressed that earlier on-----

Chairman: We dealt with it at the outset of the meeting.

Mr. Colm Hayes: -----before the Deputy arrived but I am happy to repeat my response.

Chairman: Mr. Hayes may do so very briefly.

Mr. Colm Hayes: The Deputy is right. They are not included as things stand. One of the actions included in the climate action plan is to carry out a deeper assessment or baseline survey of what hedgerows sequester. Perhaps they will be included at some point in the future.

Deputy Michael Fitzmaurice: It is a simple way of doing this. When the single farm payment application goes out to farmers, the Department should give them €50 extra and ask them the number and type of trees on their lands. If they have been growing since 1990, they should count.

Mr. Colm Hayes: I have pointed out that through successive agri-environment schemes we have planted the bones of 6,000 km of new hedgerows around the country. We are alive to the issue. I do not believe we are on different pages.

Chairman: There was also a question about replanting on raised bogs.

Mr. Fergus Moore: New afforestation does not take place on raised bogs. Existing forest cover in Ireland is 11% and our policy is to maintain that level of forestry.

Deputy Michael Fitzmaurice: The policy is to keep replanting what has already been planted on raised bogs.

Mr. Fergus Moore: Reforestation can take place on all soil types. Under the Forestry Act, we can amend the species. We can look at different species.

Deputy Michael Fitzmaurice: It is not being done.

Mr. Fergus Moore: We can look at different management perspectives.

Chairman: I believe that is all the questions.

Deputy Michael Fitzmaurice: No, there was another. Why would people go into forestry? The Department has been dealing with the problem I have mentioned for three years. It has been handed from one person to another. Why has it not been dealt with?

Mr. Colm Hayes: I would prefer not to comment on an individual case.

Deputy Michael Fitzmaurice: I am not asking Mr. Hayes to name anyone.

Mr. Colm Hayes: I would like to familiarise myself with a bit more of the detail but I am very happy to deal with the issue bilaterally.

Deputy Michael Fitzmaurice: Mr. Hayes knows about it well. He has texted me.

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Chairman: Mr. Hayes and Deputy Fitzmaurice can discuss it bilaterally. Was there a further question?

Deputy Michael Fitzmaurice: There was a question to Coillte.

Ms Imelda Hurley: With regard to farm partnerships, we are very much dedicated to continuing to improve them. We will work to do so. Our understanding is that the vast majority of our farm partners are satisfied with communication and so on. If the Deputy is aware of any individuals who are not and passes the names on to us, we will make contact. We want to work to continue to improve. If people have concerns, we are very open to hearing about them. The Deputy might ask the individuals to get in contact with us directly. We have a helpline available to all farm partners. We also have a local forester in each part of the country who deals with farm partners. If there are any issues, we want to make sure they are dealt with.

Chairman: I thank all the witnesses for coming before us this afternoon.

The joint committee adjourned at 4.40 p.m. until 2 p.m. on Wednesday, 18 December 2019.