



IRISH TIMBER GROWERS ASSOCIATION

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Irish Timber Growers Association submission on the draft Adaptation Plan for the Agriculture and Forest Sector

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The Irish Timber Growers Association (ITGA) was established in 1977 and is the national representative body of private woodland owners in Ireland. The membership of the Association mirrors the wide range of different timber growers in the country and current membership includes farm forest owners, forestry co-operative members, private woodland estates, forestry investors and forestry pension funds. This wide range of membership allows the Association take a broad view of the industry and issues facing the sector.

The Irish Timber Growers Association welcomes the opportunity to make this submission on the draft Adaptation Plan for the Agriculture and Forest Sector.

As outlined in the draft Adaptation Plan, the first step towards adapting to future climate change is reducing vulnerability and exposure to present climate variability where adaptation is the process of adjustment to actual or expected climate and its effects. It is inevitable that long term changes in temperature and rainfall patterns will have an impact on the agriculture and forest sector. Hence, eliminating vulnerabilities, building resilience and adapting now are imperative.

Both adaptation and mitigation are essential elements in addressing the challenges and opportunities presented by climate change. Therefore, effective risk reduction and adaptation strategies should consider the dynamics of vulnerability and exposure and their linkages with socioeconomic processes, sustainable development and climate change. Forests provide a range of raw materials for industry in addition to many socioeconomic services to society. One of the most important services provided by forests today in terms of climate change adaptation and mitigation is strongly dependent on having young age classes to balance out harvest losses.

As outlined in the DAFM Adaptation Plan for the Agriculture and Forest Sector dated November 2016, the primary potential effects of Climate change in Ireland have been summarised as follows;

‘Met Éireann (2013) set out projections for the future of the Irish climate including:

- *The observed mean temperature warming is expected to continue with an increase of ~1.5 degrees Celsius in mean temperatures by mid-century; the strongest signals are in winter and summer.*

- *Warming is enhanced for the extremes (i.e. hot or cold days) with highest daytime temperatures projected to rise by up to 2 degrees Celsius in summer and lowest nighttime temperatures to rise by up to 2-3 degrees Celsius in winter.*
- *Winters are expected to become wetter with increases of up to 14 per cent in precipitation under the high emission scenarios by mid-century; summers will become drier (up to 20 per cent reduction in precipitation under the high emission scenarios).*
- *The frequency of heavy precipitation events during winter shows notable increases of up to 20 per cent.*
- *Changes in precipitation are likely to have significant impacts on river catchment hydrology.'*

It is important to note that afforestation and forestry can improve our ability to adapt to 3 of these 5 potential effects identified by Met Éireann as outlined in the draft Adaptation Plan, particularly in relation to the above points regarding the increased frequency of precipitation and river catchment hydrology in association with the increased precipitation. Forests can retain excess rainwater, prevent extreme run-offs and reduce the damage from flooding. They can also help mitigate the effects of seasonal droughts.

A recent report published by the European Environment Agency (EEA) provides an overview of the water-retention potential of European forests in this regard. The EEA report 'Water-retention potential of Europe's forests' (see <http://www.eea.europa.eu/highlights/forests-can-help-prevent-floods>), shows that such water retention has an important role to play in buffering the effects of heavy rainfall and also droughts. The report states that a better understanding of this role will help develop measures to tackle the effects of climate change and extreme weather events. The volume of water retained by forests can depend on characteristics such as forest cover area, the length of vegetation growing season, tree composition and tree density, as well as the age and the number of layers of vegetation cover. Water retention by forests affects the amount and timing of the water delivered to streams and groundwater by increasing and maintaining infiltration and storage capacity of the soil. Forests can soak up excess rainwater, preventing run-off and damage from flooding. By releasing water in the dry season, forests can also help provide clean water and mitigate the effects of droughts. The report shows that water retention potential tends to increase along with the extent of forest cover in a water catchment. Compared to catchments with a forest cover of 10%, total water retention is 25% and 50% higher in water catchments where the forest cover is more than 30% and 70%, respectively. Irrespective of the extent of the catchment's forest cover, water retention is typically about 25% greater in summer time than in winter time and that coniferous forests in general retain 10% more water than broadleaved forests or mixed forests.

In order to sustain the adaptation benefits of forestry a well balanced forest age structure is required at national forest level in addition to active management of the forest estate. It has been estimated by COFORD, that there is a need to continue afforestation at a level in the region of 15,000 hectares per annum for the next two decades. Achievement of this goal will help sustain the ability of the national forest estate to remove carbon dioxide from the atmosphere and it will also provide a renewable energy resource and a sustainable raw material for construction and a range of other uses in addition to the climate adaptation benefits. Expansion of the national forest estate should therefore be a key component of our climate change adaptation strategy and consequently also of our national land use policy.

The Irish Timber Growers Association maintain that in light of the particularly strong climate change adaptation and mitigation benefits of forestry that a future land use policy that reflects these significant benefits should be put in place by the Department of Agriculture, Food and the Marine to favour forestry on lands marginal for agriculture.

Additional planning and resources should also be committed in adaptation and planning to reduce the potential risks to forests of the following threats due to climate change:

- Increased risk of windthrow in forests
- Increased risk of flooding and erosion (which can be mitigated by increased afforestation)
- Increased risk of uncontrolled fires
- Adaptation to future species susceptibility and potential reduced crop yield due to climate extremes - Improve future species choices in relation to climate change adaptation. Improve dissemination of tools which will assist in this regard such as CLIMADAPT.
- Address the impact of potential increased forest pest activity due to climate change such as the potential future impact of large Pine Weevil (*Hylobius abietis*)
- Address the impact of later bud dormancy initiation
- Plan to address potential future soil moisture deficits in forests
- Address the impact of an increase in frost susceptibility due to early or late growth
- Address the impacts on the timing of forest operations such as forest harvesting and ground works and reduced trafficability on sites at certain times due to increased precipitation.

Additional planning and resources should be committed to reducing the potential increased risks to forest as outlined above and to dissemination of research results and information on how best to reduce these risks. These opportunities for climate change adaptation and mitigation by forests can be seized by adopting and resourcing a strong policy and strategy for the forest sector.

As can be seen from research literature and from the COFORD Forestry 2030 Papers (see <http://www.coford.ie/publications/forestry2030/>), the sector has much to offer our economy, environment, in climate change adaptation and mitigation, biodiversity, renewable energy and recreation. Ireland possesses the climate and soils to grow forests at a faster rate than most of the developed world, yet only 10.5% of our land area is under forest compared with almost 40% for the rest of Europe. Our forestry sector holds significant potential in relation to the State's adaptation to climate change. Food Harvest 2020 and currently Food Wise 2025 recognise the potential benefits and contribution of forestry to sustainability and climate change adaptation and mitigation. The level of afforestation since Food Harvest was compiled in 2010 is significantly below that recommended in the Forest Policy document adopted by DAFM, *'Forests, products and people - Ireland's forest policy – a renewed vision'*.

The Irish Timber Growers Association (ITGA) through its work and various information and representation initiatives is committed to supporting the sector's critical role in contributing to climate change adaptation and mitigation. ITGA is actively supporting and promoting forestry's climate change adaptation benefits in afforestation and active forest management.