National Framework for Climate Services

NFCS Newsletter

Issue #1: Winter 2024/'25

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Photo Credit: Dr. Karl Roe

WMO State of Climate Services 2024

Ireland's NFCS Receives International Recognition

The World Meteorological Organization's (WMO) 2024 State of Climate Services Report highlighted Ireland's progress in the provision and application of climate services over the past five years. This year's report is based on contributions from worldwide partners, including major climate finance institutions, and The UN Office for Disaster Risk Reduction, and was launched at COP29 in Baku, Azerbaijan in November 2024.

The report includes a deep dive analysis on how countries have succeeded in using climate services to deliver a range of socioeconomic benefits and advance climate action, with Ireland highlighted as an example of how to successfully establish a National Framework for Climate Services (NFCS).

Highlighting the TRANSLATE project, which aims to standardise future climate projections and develop services to aid climate risk decision-making, the report outlines how the formation of Ireland's NFCS has played a central role in delivering impact-based climate information to inform multiple sectors and national policies.

Ireland's NFCS is already providing useful climate services and producing results for a variety of sectors of the economy, including the built environment and transport sectors where standards for constructing buildings and roads have been updated using future climate change projections.

The NFCS also supplies climate data to support decision-making for stakeholders working within the water and flood sectors. Academic researchers in the agriculture and biodiversity sector are using TRANSLATE projections to run models on future grass and crop growth and are investigating the impact of climate change on the prevalence of agricultural pests.

NFCS Workshop:
Addressing Climate Uncertainty

The NFCS hosted a national forum on 'Addressing Climate Uncertainty' with the Irish climate community in November 2024. The event catered for a cross-section of stakeholders from academia, government agencies, and the private sector in order to gather a national consensus on the state of play when it comes to climate uncertainty.

The main aims of the workshop were to explore strategies for integrating uncertainty into climate-related decision-making and adaptive planning, and to discuss best practices to communicate this uncertainty.

Through expert presentations and collaborative discussions, the event set out to provide an enhanced understanding of the sources of climate uncertainty, as well as practical tools to address these uncertainties.The workshop focused on fostering resilience by embracing uncertainty, enabling participants to address climate risks while balancing long-term sustainability goals across different sectors.

Dr. Markus Todt (Met Éireann) presents on sources of climate uncertainty

Following on from an opening address by Met Éireann's Head of Climate Services, Keith Lambkin, the first presentation from Met Éireann colleague, Dr Markus Todt, looked at 'Sources of Climate Uncertainty'. This in-depth talk provided the basis for the day, outlining both the sources of climate uncertainty, as well as how wide the envelope of uncertainty can actually be. International expert perspectives were provided by Grantham Professor of Climate Science in the Meteorology Department at the University of Reading, Prof Ted Shepherd, and Professor of Climate Literacy at the Amsterdam University of Applied Sciences (AUAS), Prof Janette Bessembinder, who discussed the respective topics of decision-making and tailoring climate data under uncertainty.

You can read more about the outcomes of the workshop by visiting our webpage: met.ie/nfcs

In drawing the meeting to a close, NFCS's Dr Claire Scannell said, "The day was extremely successful in starting a national conversation around climate uncertainty. This is the first step in ongoing efforts by the NFCS to coordinate and inform meaningful discussions around the topic of climate uncertainty within the climate services community in Ireland. We look forward to many more collaborative meetings like this one. Our sincere thanks to the many sectors who so actively contributed".

Climate Services Spotlight

Future Grass Growth

Dr. Elodie Ruelle

Agriculture and Food Development Authority
An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

Increasing the resilience of farms in Ireland to current and future climate is a major task. Farmers experience the impacts of climate change every day, but without a glimpse into the future, how can they effectively plan for it?

Dr. Elodie Ruelle, a Senior Research Officer at Teagasc, is using the MoSt Grass Growth Model and TRANSLATE climate change projections to do just this.

Initial results from the grass growth model compare the historical period (1976-2005) to a 3°C warmer world.

The model assumes the soil is free-draining and has regular fertilizer application.

Overall, there is no major change in **annual** grass yield, with a slight possible increase. However, as shown in *Figure 1*, there are seasonal and spatial variations, as summer growth declines in certain areas while spring and winter growth increases, which could impact fodder availability.

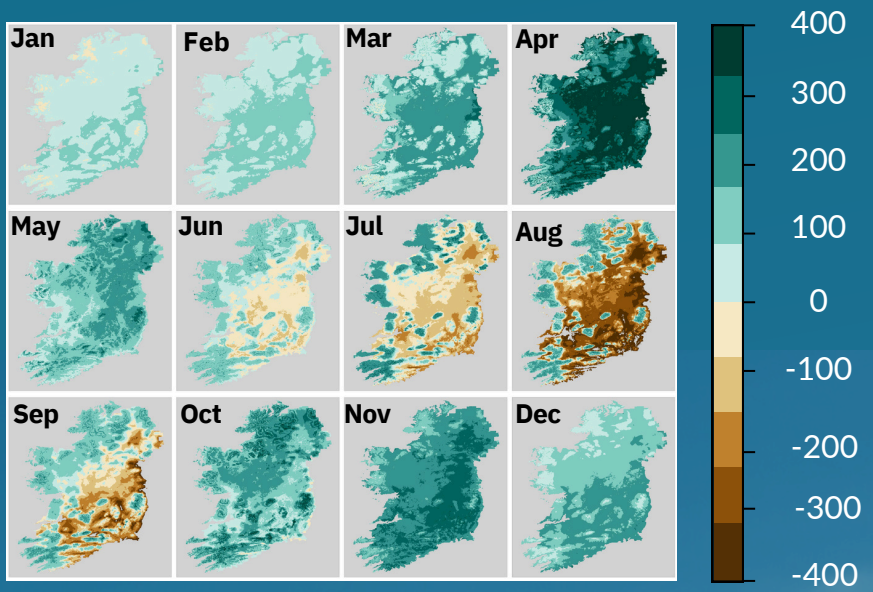


Fig. 1: Change in monthly grass growth projections compared to the historical period for a 3°C warmer world. Units are kg of dry matter per hectare.

Limitations & future work:

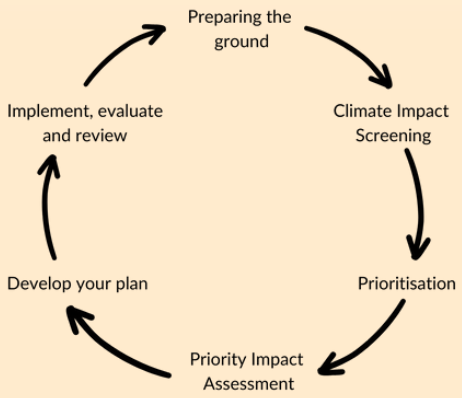
- Only one soil type was simulated, and Irish soils are very complex.
- Trafficability is not accounted for, and climate change projections indicate more frequent and intense rainfall in the spring and winter months, so even if grass is growing more, the soils may not be trafficable.
- Extreme events and climate tipping points could be examined in future.

Climate Service Supports:
Climate Data to Support Sectoral Adaptation Plans

The development of Sectoral Adaptation Plans (SAPs) has once again sparked the demand for climate information and data among Government Sectors. The NFCS, tasked with the coordination of climate services in Ireland, have put together an online asset of available climate data and information in Ireland to support SAP development.

Highlighting a range of climate services, information and data and the step it applies to in the SAP Guidance - the webpage shows where climate services can support the development of the SAPs.
Click the link to explore the webpage.

Climate Services for SAP Development



As a result of the SAPs, climate information has increased in demand. Met Éireann have spent time to update the baseline climate information stored on their website. Exploring what climate change is, how the climate has changed in Ireland, among other information. If you want to explore this information more, click the link: *met.ie/climate/climate-change*

Would you like to talk to someone about climate data, information or services? Check out the box below:

Climate Services Helpdesk

Following the first NFCS workshop in February 2024, it became clear that there was a demand for a point of contact to support stakeholders looking for climate services and information.
The NFCS has now established a dedicated helpdesk where users and producers of climate information can get the assistance they require.
To get in touch, email us at nfcs@met.ie.

The International Landscape

Global and European Climate Services

At the end of 2024, the State of Climate Services Report 2024 was released highlighting some key areas of progress from 2019 to 2024. Key highlights from the report include:

- Over the past 5 years, National Meteorological and Hydrological Services (NMHSs) providing 'advanced' climate services has nearly doubled, from 8 in 2019 to 15 in 2024.
- There is still room for improvement in the provision of climate services however. In 2024, 33% of NMHSs still operate at an 'essential' level of service. Only one third are offering full/advanced services that are tailored to specific needs.
- The National Framework for Climate Services (NFCS) model has surged from 35 to 98 in the 5 year period (as adopted in Ireland). The model is becoming increasingly popular internationally as a mechanism to foster cross-sectoral collaboration and ensuring climate services are focused for the decision maker.

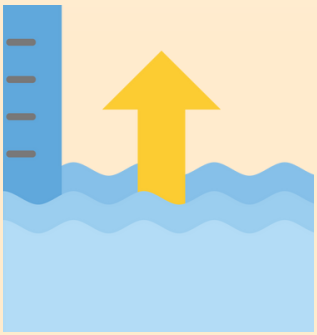
To find out more about the report, *click here*.

There is a vast array of climate services available internationally, but here are some highlights:

- CLIMAXX - an Horizon Europe funded project whose aim is to develop a customized framework and toolbox for climate risk assessment, assisting communities in evaluating past experiences and empowering them to take action.
- Climateurope2 - another Horizon Europe project however addresses the need for timely delivery and effective use of climate information. Working to propose standardisation procedures for future equitable and quality-assured climate services, useful for decision making in all sectors.
- Climate-ADAPT - this is the European Climate Adaptation Platform which aims to support Europe in adapting to climate change, helping users to access and share data and information on:
  - Expected change in Europe
  - Current and future vulnerability of regions and sectors
  - EU, national and transnational adaptation strategies and actions
  - Case studies
  - Adaptation planning tools

Coming this Year:
Upcoming Services from the NFCS in 2025

The NFCS has been working hard to put together a range of climate services to support the community. From tools to support risk assessments, to guidance on sea level rise data.
Keep an eye out for our quarterly newsletter to find out more!



Sea level rise guidance

The NFCS, in consultation with a range of experts in climate service providers in Ireland, is pulling together all of the relevant information on sea level rise data, and its appropriateness in an Irish context. The guidance will be available on the NFCS webpage when it is finalised.

Risk framework tool

As part of TRANSLATE 1, a semi-quantitative risk framework tool was developed to assist in the use of climate data alongside exposure and vulnerability data. The tool is not currently available for use to the public. However, the NFCS team is working to make this tool available by contacting nfcs@met.ie.

Additional Climate Indicators

During TRANSLATE 2, the project team developed additional climate indicators to compliment the original TRANSLATE ensemble. The team are now working on the final stages of these variables, to make them available on the *Climate Ireland Data Explorer*.

For more information about any of the upcoming services from the NFCS in 2025, make sure you subscribe to the mailing list by clicking the link below to receive quarterly updates.

NFCS Mailing List

For more information on any of the contents of Issue #1 of the NFCS Newsletter, get in touch with us.

NFCS@MET.IE

Subscribe here, to hear from us once a quarter and receive future issues of the newsletter.

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