



An Roinn Tithíochta,  
Rialtais Áitiúil agus Oidhreachta  
Department of Housing,  
Local Government and Heritage

# Review of Storm Éowyn



# Table of Contents

|                                                                 |      |
|-----------------------------------------------------------------|------|
| Introduction .....                                              | vii  |
| Review of Storm Éowyn .....                                     | vii  |
| Some Key Actions Underway .....                                 | viii |
| Summary of Recommendations .....                                | xiii |
| Chapter 1: Met Éireann Weather Observations .....               | 23   |
| 1.1 Development of Storm Éowyn .....                            | 23   |
| 1.2 Monitoring and Forecasting Storm Éowyn .....                | 24   |
| 1.2.1 Monday 20 January 2025 .....                              | 24   |
| 1.2.2 Tuesday 21 January .....                                  | 25   |
| 1.2.3 Wednesday 22 January .....                                | 27   |
| 1.2.4 Thursday 23 January .....                                 | 28   |
| 1.2.5 Friday 24 January .....                                   | 31   |
| 1.2.6 Record Breaking Storm .....                               | 31   |
| 1.3 Monitoring and flood forecasting Storm Éowyn .....          | 34   |
| 2 Chapter 2: Co-ordination of the Response to Storm Éowyn ..... | 37   |
| 2.1 Overview of Severe Weather Co-ordination Arrangements ..... | 37   |
| 2.2 Preparedness in advance of Storm Éowyn .....                | 38   |
| 2.3 Response .....                                              | 39   |
| 2.4 Activation of the Union Civil Protection Mechanism .....    | 45   |
| 2.5 Conclusion .....                                            | 46   |
| 2.6 Recommendations .....                                       | 47   |
| 2.6.1 Sharing of Experience .....                               | 47   |
| 2.6.2 Maintaining Relationships .....                           | 47   |

|        |                                                                                                                              |    |
|--------|------------------------------------------------------------------------------------------------------------------------------|----|
| 2.6.3  | Transitioning Roles.....                                                                                                     | 47 |
| 2.6.4  | Subgroups .....                                                                                                              | 47 |
| 3      | Chapter 3: Review of the Communication of Safety Advice and other relevant information to the Public during Storm Éowyn..... | 49 |
| 3.1    | Background to emergency communications structures and procedures – sizes                                                     | 49 |
| 3.2    | Messaging priorities .....                                                                                                   | 49 |
| 3.2.1  | Messaging ahead of and during the storm.....                                                                                 | 49 |
| 3.2.2  | Messaging following the storm .....                                                                                          | 50 |
| 3.3    | Whole-of-government NECG communications.....                                                                                 | 50 |
| 3.4    | Local Authority Communications.....                                                                                          | 52 |
| 3.5    | Channels and methods of communication .....                                                                                  | 53 |
| 3.6    | Media engagement .....                                                                                                       | 53 |
| 3.7    | Media interviews and briefings .....                                                                                         | 53 |
| 3.8    | Local media.....                                                                                                             | 54 |
| 3.9    | Digital communications .....                                                                                                 | 54 |
| 3.10   | Outreach and engagement .....                                                                                                | 55 |
| 3.11   | Recommendations.....                                                                                                         | 56 |
| 3.11.1 | Communications is an essential part of the response in rapidly evolving situations .....                                     | 56 |
| 3.11.2 | Prepare for limitations on communications channels .....                                                                     | 56 |
| 3.11.3 | Communicate ahead of time for resilience and readiness.....                                                                  | 57 |
| 3.11.4 | Communications materials should be readily available .....                                                                   | 57 |
| 3.11.5 | Communicate clearly on emergency response responsibility .....                                                               | 57 |
| 3.11.6 | Outreach systems are needed to reach vulnerable and isolated people                                                          | 58 |

|        |                                                                               |    |
|--------|-------------------------------------------------------------------------------|----|
| 3.11.7 | Operational systems are an important support to public communications.....    | 58 |
| 3.11.8 | Communications units should be resourced adequately to respond .              | 59 |
| 4      | Chapter 4: Humanitarian Support in Communities.....                           | 60 |
| 4.1    | Activation of Emergency Hubs .....                                            | 60 |
| 4.2    | Household & Community Resilience .....                                        | 62 |
| 4.3    | Vulnerable Persons.....                                                       | 63 |
| 4.4    | Department of Social Protection Humanitarian Scheme .....                     | 65 |
| 4.5    | Role of An Post in Response to Storm Éowyn .....                              | 66 |
| 4.6    | Crowd Events.....                                                             | 67 |
| 4.7    | Conclusion .....                                                              | 68 |
| 4.8    | Recommendations .....                                                         | 70 |
| 4.8.1  | Community Support Centres .....                                               | 70 |
| 4.8.2  | Community Support Centre Activation Guide .....                               | 70 |
| 4.8.3  | Activation of Humanitarian Sub-Group .....                                    | 70 |
| 4.8.4  | Humanitarian Support Schemes.....                                             | 70 |
| 4.8.5  | Household Resilience .....                                                    | 71 |
| 4.8.6  | Vulnerable People .....                                                       | 71 |
| 4.8.7  | Public Events.....                                                            | 71 |
| 5      | Chapter 5: Resilience of Critical Infrastructure and Essential Services ..... | 72 |
| 5.1    | Understanding Critical Infrastructure and Critical Entities .....             | 72 |
| 5.2    | Critical Entities Resilience (CER) Regulations .....                          | 73 |
| 5.3    | Competent Authorities.....                                                    | 73 |
| 5.4    | Impact of Storm Éowyn on Critical Infrastructure .....                        | 74 |
| 5.5    | Electricity Infrastructure.....                                               | 74 |
| 5.5.1  | EirGrid .....                                                                 | 74 |

|        |                                                                   |    |
|--------|-------------------------------------------------------------------|----|
| 5.5.2  | ESB Networks .....                                                | 75 |
| 5.6    | Gas Infrastructure .....                                          | 79 |
| 5.7    | Drinking water & Wastewater .....                                 | 79 |
| 5.8    | Communications Infrastructure .....                               | 81 |
| 5.8.1  | Fixed Services (voice and data) .....                             | 81 |
| 5.8.2  | Mobile Services .....                                             | 82 |
| 5.9    | Terrestrial Trunked Radio TETRA.....                              | 84 |
| 5.10   | Air Transport.....                                                | 85 |
| 5.11   | Road and Rail Transport Infrastructure .....                      | 86 |
| 5.12   | Health Infrastructure .....                                       | 87 |
| 5.13   | Public Administration Sector - Principal Emergency Services ..... | 88 |
| 5.13.1 | Fire Services .....                                               | 88 |
| 5.13.2 | HSE National Ambulance Service .....                              | 89 |
| 5.13.3 | Irish Coast Guard (IRCG).....                                     | 89 |
| 5.14   | Department of Agriculture, Food and the Marine .....              | 90 |
| 5.14.1 | Horticulture.....                                                 | 90 |
| 5.14.2 | Meat Processing.....                                              | 91 |
| 5.14.3 | Farms .....                                                       | 91 |
| 5.14.4 | Forestry .....                                                    | 91 |
| 5.15   | Recommendations .....                                             | 93 |
| 5.15.1 | Immediate Actions by Operators of Essential Services .....        | 93 |
| 5.15.2 | Regulatory Measures .....                                         | 93 |
| 5.15.3 | Oversight .....                                                   | 93 |
| 5.15.4 | Critical Infrastructure Sectoral Groups .....                     | 94 |
| 5.15.5 | Local Critical Entities Group .....                               | 94 |

|        |                                                                       |     |
|--------|-----------------------------------------------------------------------|-----|
| 5.15.6 | Backup Power .....                                                    | 95  |
| 5.15.7 | Coordination of Critical Infrastructure Operators through the NECG .. | 95  |
| 5.15.8 | Vegetation and Forestry Management .....                              | 95  |
| 6      | Chapter 6: Implementing the Review Recommendations .....              | 97  |
|        | Appendix 1: Storm Éowyn Review Steering Group .....                   | 99  |
|        | Terms of Reference .....                                              | 99  |
|        | Appendix 2 .....                                                      | 100 |

## Introduction

It is recognised that Ireland experienced one of the most dangerous and destructive storms in living memory on Friday 24 January 2025 when Storm Éowyn made landfall, bringing with it gale-force/storm force winds, including severely damaging and destructive gusts of over 184 km/h, a record for Ireland. The impacts of Storm Éowyn were particularly severe and prolonged in remote and rural communities across the western seaboard, the northwest and midlands of the country.

## Review of Storm Éowyn

The key focus of this review is the National Emergency Coordination Group (NECG) response to Storm Éowyn. The Department of Housing, Local Government and Heritage carried out the review according to the responsibilities of the lead government department as outlined in the *Strategic Emergency Management: National Structures and Framework* policy.

The National Directorate for Fire and Emergency Management (NDFEM) established a Review Steering Group, together with working groups to examine the humanitarian response and to review critical infrastructure resilience. This review identifies recommendations on:

- coordination at national and local levels;
- reducing severe weather impacts on critical infrastructure & essential services;
- assisting communities and individuals severely affected by emergencies; and
- relevant policy issues and cross-cutting responsibilities.

All relevant Government Departments participated in this review, addressing the impacts across all sectors and making recommendations based on lessons identified, from an early stage. It is readily acknowledged that communities across the country took action to protect themselves in advance of the storm and responded to help each other and to support the response efforts of local authorities and essential service providers.

This review makes a number of recommendations throughout, these should be further developed, into actionable plans, with owners and timelines for delivery. An implementation plan will be brought to the GTF, where recommendations that impact on other Government Departments or relate to National Co-ordination, will be finalised.

## **Some Key Actions Underway**

Many of the recommendations of the review are cross-cutting, requiring a focus on longer term policy objectives regarding critical infrastructure resilience.

While the review was being conducted, a number of measures have been taken to ensure an improved response over winter 2025/26.

- The development of a new guide to establish the concept of Community Support Centres was identified as a priority at the start of this review. This guide has been agreed with the CCMA and is now circulated. The Guide supports rapid operationalising of Community Support Centres by local authorities working with local communities, where necessary. The NDFEM is worked directly with the CCMA to ensure this guidance is implemented in a consistent manner across the sector. This guide will be further refined based on the experience of its operation over winter 2025/26.
- NDFEM are reviewing all local authority severe weather plans and flood plans and will run a workshop in October to support the continued development of these plans and confirm winter preparedness.
- The NDFEM have held preparatory meetings with the Humanitarian subgroup, the Transport & Education subgroup and the Infrastructure subgroup in advance of winter 2025/26. A meeting also took place on 02 October of the full NECG where each sector outlined winter preparations and sectoral plans for winter 2025/26.
- The Department of Defence has established an Energy Sector Group as part of its function under the CER Regulations. The purpose of this group is to identify priority areas for resilience in the energy sector. Additionally, this

group will also examine measures to address the challenges identified in recent stress tests of the sector. Further sector groups will be established as part of the operationalisation of the EU CER Regulations.

- Each year the Department of Transport works directly with local authorities and Transport Infrastructure Ireland (TII) to confirm winter planning arrangements for road networks. TII ensure adequate salt stocks are available for road treatment of national priority routes and provide salt stocks to local authorities as necessary throughout the winter season.
- The Local Authority Sector have reviewed their Severe Weather Response Plans, updated with the learnings from Storm Éowyn. Update Winter Preparedness Plans are also in place, with supplies of sandbags and salt for roads in place and delivered to salt barns around the country with the assistance of Transport Infrastructure Ireland (TII).
- Based on previous experience, the sector have formalised arrangements with private contractors on a local basis (agricultural contractors for snow and road clearance, and forestry contractors for the clearance of fallen trees), to speed up recovery.
- Work is underway to increase resilience in internal communications systems. The Sector is also engaging in relation to the next broadband system for around the country
- ESB Networks are working to safeguard the transmission network. DECC brought a Memo to Government (July 2025) addressing legislative provisions for enhanced proactive vegetation management measures to protect the electricity network, including powers to clear vegetation likely to interfere with the network within a 24-month period; provide for the establishment and maintenance of Forestry Corridors to improve resilience and provide for statutory regulation of future forestry planting in proximity to the electricity network.

- A number of additional timber contractors have been engaged to address damage to forestry and timber, with data from Storm Éowyn being used to target areas in need of clearance. Additional forestry harvesters have also been acquired for management of forestry going forward.
- A significant investment has been made in replenishing stocks of materials for repairs and increasing overall stock levels going into this winter season.
- Working to develop Mutual Aid Agreements with European energy counterparts similar to those in place with UK.
- Eirgrid has undertaken short and longer term preparedness actions to enhance resilience. The Winter Outlook 2025/6 an annual report on the adequacy of the power system over winter will be issued mid-October. Their Severe Weather Emergency Protocol has been reviewed, based on the learnings from the Winter 2024/5 storm seasons and Critical Incident Management workshops have been conducted with control room staff on lessons learned.
- Non-market generation – the dispatch of emergency generation for severe storms has been clarified in the Balancing Market Principles Statements (published in August) and the updated Risk Preparedness Plan, currently being consulted on by the CRU.
- Outage facilitation - Operational Security Standards have been revised & published – including a new approach to risk-based outage planning that would facilitate additional outages
- Outage facilitation - the new Transmission Outage Plan (TOP) includes risk assessments and reporting
- Telecommunications - sites unavailable last winter have been addressed and Tetra is being rolled out to generation sites as an additional contingency in the event of backup communications (Optel) failures.

- A new operational policy is being implemented addressing risks associated with faults on the power system, and the annual energy sector emergency exercise took place on 18<sup>th</sup> September.
- In the longer term, Eirgrid is working on the implementation of 24hr backup generators at priority substations and are engaged with the Department of Defence and CRU in respect of the Critical Entities Resilience Directive.
- An Uisce Éireann (UÉ) Severe Weather Preparedness Working Group is in place, focused on facilitating improvement in overall preparedness and organisational response for future Severe Weather events. Progress is ongoing with the installation of c.30 new permanent standby generators. Market engagement has been completed, and the procurement process is underway for the purchase of c.80 mobile generators an increase on c.60 reported previously. Work is also ongoing to facilitate mobile generator connectivity across the Country with a delivery target of an additional c.75 sites for 2025.
- A pilot to test the viability of satellite communication, as an alternative to the use of Tetra Radio, is due to commence at the end of Q3. And a review has been completed by the UÉ Fleet Management Team in relation to 'All Weather' vehicle capability across the Country.
- Extensive engagement has taken place with ESB Networks to further enhance existing collaboration arrangements and the exchange of information in advance of and during future severe weather events. Discussions have commenced with the HSE to review their capacity constraints and to use the lessons learned from the challenges during Storm Éowyn.
- The OGCIO are working with Tetra Ireland to provide additional resilience to the emergency services Tetra radio network.

- Met Éireann (MÉ) Storm Naming – launched in 2015 with the UK Met Office, now includes the Netherlands Meteorological Service – this is an excellent communication tool that allows warnings, impacts and safety advice to be disseminated.
- Improvements to the technology which supports MÉ warning system and website and mobile applications to be rolled out. This will enable a more resilient system which is better placed to stand up to the increasing demands for weather warnings. MÉ's metweb portal is also being made more resilient. The web portal allows users to access bespoke meteorological products
- Met Éireann will continue to grow its social media presence in the dissemination of weather forecasts and warnings.
- Storm Éowyn highlighted the need for additional resilience in particular during prolonged weather events. Internally Met Éireann management are working to provide additional management support during times of extreme weather.
- Public Transport Operators, Dublin Bus, the National Transport Authority and Private Bus Services are prepared for the winter ahead, with severe weather groups established, and winter plans reviewed and learnings from Storm Éowyn implemented.
- TII have revised conditions for ordering delivering of salt supplies – there is good availability of salt and equipment in place for the coming season.
- Technology such as WX horizon – real time modelling for decision makers in roads control centres and the Hail forecasting system – real time data to be displayed on overhead gantries is being employed.
- Maritime ports are prepared for the season ahead
- Airports have reviewed their winter plans especially in relation to snow and ice, and have staff training monitoring in place

- Smaller regional airports prepared for winter ahead – particularly in context of Storm Éowyn, and have made contingency provisions
- AirNav is prioritising resilience especially in locations impacted by Storm Éowyn.

## Summary of Recommendations

### 2.6.1 Sharing of Experience

The NDFEM, the Department of Taoiseach and the Office of Emergency Planning have participated in many NECG responses, with a cadre of experienced staff who understand the LGD coordination mechanism. It is important that this experience is shared with all NECG participants.

### 2.6.2 Maintaining Relationships

The NDFEM and Met Éireann staff work closely together monitoring for potential severe weather. It is essential that this close working relationship is maintained.

### 2.6.3 Transitioning Roles

The Department of Housing, Local Government & Heritage led the NECG response well into the recovery phase. The SEM provides for a Transition of the LGD role in the recovery phase. In future responses, it is recommended that if the LGD, OEP or the Department of the Taoiseach recognise the conditions have emerged for a transition of NECG chair, they will propose to the NECG that an alternative Government Department or Agency should undertake the lead role in the recovery phase.

### 2.6.4 Subgroups

The NECG is a single structure that is activated for emergency scenarios with a national impact. Life safety and support of the frontline response are the key objectives at the early stages of an NECG response. The activation of task specific subgroups under the NECG allows the response to be adapted and focused rapidly. The subgroups listed below formed for the response to Storm

Éowyn reflect the key issues that arise during almost all emergencies at national scale:

- Coordination of Humanitarian Assistance;
- Public Transport & Education;
- Critical Infrastructure;
- Communications Infrastructure; and
- Emergency Communications.

These groups should be activated for all NECG responses to severe weather emergencies. If a subgroup is not required, it may be stood down by agreement through the main NECG meeting.

### **3.17.1 Communications is an essential part of the response in rapidly evolving situations**

- Under SEM 2, each LGD is to have a communications plan in place for their assigned emergencies. Storm Éowyn has demonstrated that it is important that this plan allows for agility and is flexible enough to allow communications approaches and messaging to respond to specific situations and circumstances, and to adapt as these change.
- More agile and streamlined processes should be considered to allow for rapidly evolving scenarios, taking account of the priority information to be communicated, to whom the information should be communicated and the available channels to reach audiences.
- As an important part of response and decision-making, it is important that communications is at the table for operational discussions in fast evolving situations.

The above should be considered in any review of the SEM Framework or SEM 2 Guidelines.

### **3.17.2 Prepare for limitations on communications channels**

Connectivity issues relating to lack of electricity, phone and broadband proved a considerable issue in the communications response to Storm Éowyn.

In the context of this event, and considering other types of emergencies, it is recommended that, as part of their communications plans for emergency scenarios, each LGD undertakes an analysis of the likely impact on communications channel availability and identifies what communications channels can be stood up or reprioritised.

It is also important to consider internal / cross-NECG communications channel availability, for example in scenarios where email is unavailable.

### **3.17.3 Communicate ahead of time for resilience and readiness**

- Storm Éowyn has demonstrated the importance of individual and community resilience during emergency events.
- The public should be equipped with knowledge about how to prepare for emergency events and encouraged to build resilience and readiness. In this context, a longer-term emergency readiness programme would be useful to prepare the public for emergency scenarios. This could include for example, wide distribution of a household advice and information booklet or other resources and/or the development of an information and advice website/app.
- A more long-term approach could include wider outreach and engagement efforts via relevant stakeholder groups or an education programme.

### **3.17.4 Communications materials should be readily available**

In line with their communications plans, LGDs should prepare relevant communications materials and templates to have ready to deploy and make available if a crisis occurs.

In the case of severe weather, which is the most frequent emergency type experienced, it may be useful to prepare a communications toolkit for local authorities and other bodies with a suite of advice and template assets. Materials should be prepared for all relevant communications channels and in line with accessibility standards and language requirements.

### **3.17.5 Communicate clearly on emergency response responsibility**

- As outlined in SEM 2, NECTG communications should take a whole-of-government approach and provide reassurance with regard to a co-ordinated government-led emergency response.
- Given the number of agencies and utility providers involved in the response to Storm Éowyn, including utility providers who needed to communicate on their services and directly with customers, there was potential for confusion in relation to the role of the NECTG in coordinating the national response.
- There are also reports from local authorities that the public had some difficulty in knowing which organisation or agency had responsibility for which service and who could provide them with information or support during the storm response.
- It is recommended that clear consistent information is available on the work of the NECTG and how it operates to coordinate all relevant bodies in responding to emergency situations. Clear and coherent information on responsibilities and helplines/contacts should also be provided at all points

### **3.17.6 Outreach systems are needed to reach vulnerable and isolated people**

Structures and systems should be explored to ensure communication is possible with vulnerable and isolated people in the event of an emergency where typical channels of communication are unavailable.

This would include structures to identify such people along with systems of outreach.

### **3.17.7 Operational systems are an important support to public communications**

- The operational systems integrated into the ESB-N PowerCheck and Uisce Éireann websites, along with customer contact centres, were invaluable to ensuring the public could get ready access to household level information about their power and water supply. Similarly, these systems allowed for

ready access to broader information on the numbers without power and water for national and government level messaging.

- It is important that the public and businesses can have timely access to accurate information about when their services are likely to return in order that they can put in place contingency measures and make appropriate plans. Systems should be put in place to allow for this and where return timings are uncertain or not possible, it should be made clear that a definitive return time is not yet available and guidance about what this means should be provided, e.g. that customers should prepare to be without service for a period of time.
- Compared to power and water, information was less readily available in relation to telecommunications and broadband outages as they are provided by numerous commercial service providers. It is recommended that efforts are made to address this and ensure greater transparency of information in future.

#### **3.17.8 Communications units should be resourced adequately to respond**

Across Departments, agencies, local authorities and utility providers, the response to Storm Éowyn required significant resourcing, including extended weekday working time and work over weekends. This was true too for communications staff and spokespersons.

It is important that emergency planning take consideration of the need to ensure sufficient communications resourcing and resilience, including the need to have trained, experienced spokespersons available for a prolonged period of time.

Alongside building in contingency to increase resources during crises, there is also a need to ensure adequate equipment for communications connectivity, for example, power banks, hotspot tethering, standby mobile phones with dual sims for different networks and satellite communications.

#### **4.8.1 Community Support Centres**

- The Review Steering Group recognises the value in activating Emergency Hubs in the aftermath of Storm Éowyn to coordinate and deliver humanitarian assistance at the scale necessary. The operation of Emergency Hubs was led by local authorities but also were operated locally by community and voluntary groups. This concept is currently being developed in the form of Community Support Centres.

#### **4.8.2 Community Support Centre Activation Guide**

Given the experience of Storm Éowyn, the Review Steering Group recommended that a guide to the activation and operation of Community Support Centres be progressed with urgency. This Guide should be developed as soon as possible in working draft format so that it is available for any future responses. The Guide should address the following areas:

- Selection and preparedness of Centres at key locations
- Activation Mechanism
- Interface with local authorities via Local Co-ordination
- Key Agencies
- Support Measures

#### **4.8.3 Activation of Humanitarian Sub-Group**

- The NECG should activate the humanitarian subgroup for exceptional severe weather events, supporting the local authority response.

#### **4.12.4 Humanitarian Support Schemes**

The DSP and DETE schemes will continue to operate as outlined in this chapter. The activation and operation of these schemes should integrate with the Local Co-ordination Group, with information provided on access to these schemes available at Community Support Centres, ensuring that people in need of assistance have direct access to these schemes in the shortest possible timeframe.

This is in keeping with the Programme for Government Commitment to develop an Extreme Weather Event Assistance Scheme for homes, community

organisations, farmers and businesses, which when initiated, will provide a more direct and speedy pathway to sector specific assistance.

#### **4.8.5 Household Resilience**

- A programme, similar to 'Be Winter Ready' should be put in place to support household resilience and to encourage societal resilience within communities with a planning assumption for the loss of essential services for 72 hours. This will allow responders to focus on the people most in need during exceptionally severe and widespread events.

#### **4.8.6 Vulnerable People**

A further exploration of the area of vulnerability, the identification of vulnerable persons and the management of personal information is warranted.

#### **4.8.7 Public Events**

It is recommend that event organisers should cancel events in areas where an Orange Wind Warning threshold is forecast. Event sites and funfairs with temporary structures of all kinds may need to be considered for closure at a lower threshold, which should be set by the event organiser at the event planning stage. All event organisers should have arrangements in place to monitor winds speeds at the site of an outdoor event.

#### **5.15.1 Immediate Actions by Operators of Essential Services**

- As the development of Critical Entities Resilience is time-bound by regulation, the operators of essential services must take immediate actions to mitigate known vulnerabilities ahead of the next storm season. It remains the responsibility of all organisations impacted by Storm Éowyn to put in place clear and practical arrangements to ensure the continuity of essential services. Electricity, Gas, Communications, Water and Wastewater undertakings should report these through their lead government department to the GTF on Emergency Planning. All Government Departments and Agencies should continue to report on their winter preparations directly to the GTF on Emergency Planning at the October meeting, as has been the practice.

### **5.15.2 Regulatory Measures**

The CER Regulations were signed into law in October 2024. Since then, competent authorities for each sector have been appointed to provide oversight. Over the next two years, critical entities, once identified, will be required to conduct a risk assessment, taking into account key national risks, implement appropriate mitigation measures against the identified risks, and report any incidents. Critical entities in the Digital Infrastructure sector are excluded from the requirements of the CER Regulations but are expected to have at least equivalent requirements on them under the forthcoming National Cyber Security Bill, transposing the NIS2 Directive.

Delivery of the Strategy for the Resilience of Critical Entities, (target for delivery is Q1 2026) ([Critical Entities Resilience \(CER\) Regulations](#))

### **5.15.3 Oversight**

Under the CER Regulations, the Minister for Defence is responsible for preparing the National Critical Entities Resilience Strategy. The Department of Defence will coordinate the development of this national strategy together with the relevant competent authorities. The GTF on Emergency Planning, chaired by the Minister for Defence, will operate as a cross-government forum providing inter-departmental oversight of the process. The work to strengthen the resilience of critical infrastructure remains the responsibility of critical infrastructure operators with appropriate oversight by the national competent authorities.

### **5.15.4 Critical Infrastructure Sectoral Groups**

The Department of Defence has established an energy sector group as a pilot programme to assist in maturing the resilience arrangements for Ireland's critical entities. This group has engagement from the Electricity and Gas subsectors. The Department of Defence will develop an additional sectoral group to cover the water and wastewater sectors and other sectors as required. Progress in these groups will be reported to the GTF on Emergency Planning. Additionally, as the NIS2 Directive addresses resilience in the digital infrastructure and communications sphere, the Department of Defence will work with the National

Cyber Security Centre (NCSC) to ensure that physical resilience is factored into requirements in the digital infrastructure sector, which includes communications.

#### **5.15.5 Local Critical Entities Group**

- This chapter has not addressed local interactions with operators of essential services. However, local authorities play a crucial role in responding to severe weather events. As the lead agencies for managing these incidents, local authorities should consider establishing a local critical entities group.
- The purpose of this group is to foster inter-agency relationships with operators of essential services ahead of future severe weather events and to create an emergency contact list. This group should include operational contacts from agencies such as Uisce Éireann, ESB-N, GNI, local authority broadband officers and their networks, as well as representatives from regional and national telecommunications infrastructure companies as relevant.
- The group should be chaired by the emergency planning officer of the local authorities. It is acknowledged that this initiative may be established in some local authorities.

#### **5.15.6 Backup Power**

Disruption to Gas/Electricity Supply is a key risk identified in the national risk assessment. The cascading impacts of the disruption to the electricity supply following Storm Éowyn highlight the need for all operators of essential services to ensure adequate backup power generation is available. While power to the majority of affected customers was restored within 1 week, complete power restoration following Storm Éowyn took 18 days. Whilst it is not envisaged that every element of critical infrastructure be designed to be available for an indefinite duration without mains power, major subsystems within critical services must be designed to endure long periods without mains electrical power. Detailed guidance on backup power generation should be developed for operators of essential services through the sectoral groups established by the Department of Defence and the NCSC.

#### **5.15.7 Coordination of Critical Infrastructure Operators through the NEEG**

- During any crisis with a potential impact on the operators of essential services, the chair of the NEEG must consider the establishment of a critical infrastructure subgroup. The purpose of the group will be to coordinate with the operators of essential services for the purpose of informing the NEEG of the details of any disruption to essential services and to advise on restoration times and cross-cutting issues.

This recommendation must be included in all lead government departments crisis plans for the NEEG

#### **5.15.8 Vegetation and Forestry Management**

In the context of protecting key electricity infrastructure and limiting the impact of future storms, legislative measures should be progressed to:

- provide for enhanced proactive vegetation management measures to protect the electricity and telecommunications network, including powers to address vegetation that presents risks to the electrical network;
- to include establishment of height limitations for roadside vegetation and the powers and responsibility to enforce same, and,
- provide for the establishment and maintenance of Forestry Corridors to improve resilience and operational safety of the electricity and telecommunications network.

# Chapter 1: Met Éireann Weather Observations

Storm Éowyn brought powerful and destructive winds to Ireland on the night of Thursday 23 January and through the morning of Friday 24 January. It produced record breaking wind speeds at several Met Éireann weather stations. It was the first time that the island of Ireland had red level wind warnings for all counties. Storm Éowyn produced severe impacts for many parts of the country and it also, sadly, led to a fatality.

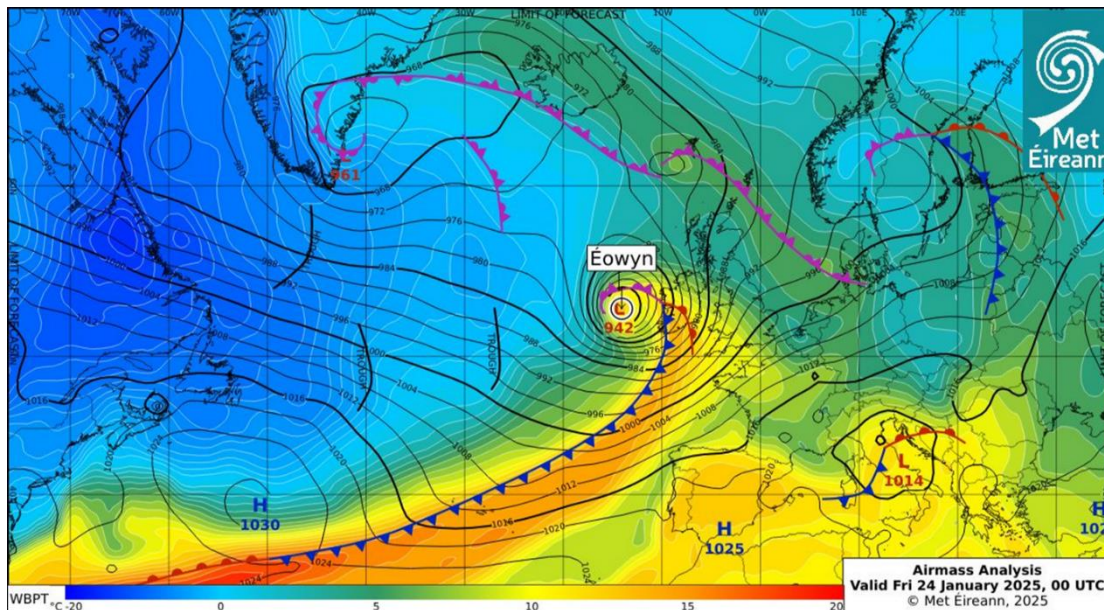
## 1.1 Development of Storm Éowyn

Between 20 and 22 January 2025, a cold plunge of air over North America generated a sharp thermal gradient as it encountered the warm and moist tropical air to the south resulting in a powerful jet stream. The jet stream, which normally has speeds of **305** to **355** km/h, increased to **418** km/h.

A developing depression interacted with this jet stream and it was transported eastwards across the Atlantic towards Ireland. As the storm moved east, it strengthened as its central pressure dropped and rapidly deepened through a process known as explosive cyclogenesis.

A sting jet then likely formed, this is when a core of extremely strong winds gets accelerated down to the surface from the upper atmosphere, and it is these strong winds that caused record-breaking gusts and severe damage, particularly along the west and northwest coasts.

The figure below shows the contrast between the colder air (blue) and the milder air (yellow/orange). It also shows the position of Storm Éowyn at 00UTC Friday 24 January 2025.



*Storm Éowyn Meteorological Chart OOUTC Friday 24 January 2025*

## 1.2 Monitoring and Forecasting Storm Éowyn

Met Éireann forecasters actively assessed predictions from the European Centre for Medium-range Weather Forecasts (ECMWF) global numerical weather prediction forecast model, which predicted that Ireland would be impacted by strong winds as early as the weekend of the 18 - 19 of January 2025. The probabilistic forecasts were in general agreement that Ireland would experience severe winds the following week. Careful consideration of the available information provided a basis for Met Éireann to issue a Weather Advisory.

### 1.2.1 Monday 20 January 2025

At 12:09 on Monday 20 January 2025, Met Éireann issued a Weather Advisory. This was also highlighted in the Advance Warning product that Met Éireann issues daily to the NDFEM and other agencies.

**Level:** Advisory**Type:** Advisory**Message:** On Thursday night and during Friday, a deepening Low-Pressure system is forecast to track close to Ireland. Very strong winds are likely across the country with the potential for damaging wind gusts and disruption in places. High seas and spells of heavy rain are expected also.

Met Éireann is continuously monitoring the evolving situation and weather warnings will be issued as confidence in the forecast track/intensity of the Low-Pressure system improves.

Please check the met.ie website and app for updates to forecasts and warnings in the coming days.

**Affected Regions:** Carlow, Cavan, Clare, Cork, Donegal, Dublin, Galway, Kerry, Kildare, Kilkenny, Leitrim, Laois, Limerick, Longford, Louth, Mayo, Meath, Monaghan, Offaly, Roscommon, Sligo, Tipperary, Waterford, Westmeath, Wexford, and Wicklow**Issue Time:** Monday 20/1/2025 12:09**Expected Onset:** Monday 20/1/2025 12:09**Expires:** Saturday 25/1/2025 00:00

### 1.2.2 Tuesday 21 January

Storm Éowyn was named by the United Kingdom Met Office (UKMO) as they issued warnings (4 days in advance).

As part of the storm naming initiative Met Éireann is in regular contact with its colleagues in the UKMO. These two National Meteorological Services and the Netherlands Meteorological Service (KNMI) form the Western Group of the European Meteorological Network (EUMETNET) storm naming initiative. Met Éireann and the UKMO discussed the likelihood of the storm being named and it was agreed that it would be named Storm Éowyn by the UKMO at 09:00.



Met Éireann uses Impact Based Forecasting which means that the impacts of the expected weather are communicated. This means that Met Éireann informs the public or members of the NECG what the weather will do, not just what the weather will be. Using social media channels as well as TV and radio broadcasts, Met Éireann clearly identified the expected impacts of Storm Éowyn. The impacts shared by Met Éireann are listed below:

## **SUMMARY OF EXPECTED IMPACTS**

- Danger to life
- Extremely dangerous travelling conditions
- High seas: wave over-topping due to strong onshore winds
- Coastal flooding in low-lying and exposed areas of Atlantic coastal counties (e.g. Bantry, Salthill, Galway Bay, Donegal Bay)
- Unsafe working conditions
- Many fallen trees
- Significant and widespread power outages
- Structural damage
- Disruption and cancellations to transport and potentially to other public services
- Cancellation of events
- Poor visibility in any sleet or snow (sleet and snow will be transient and limited to the northwest)
- Surface water flooding, following spells of heavy rain, as the ground is saturated countrywide.

### **1.2.3 Wednesday 22 January**

Met Éireann's high-resolution numerical weather prediction model (DINI) generates probabilistic forecasts up to 60 hours ahead. DINI is an operational implementation of the Harmonie-Arome modelling system developed by Met Éireann through the ACCORD consortium (of 26 National Meteorological Services) and operationalised by Met Éireann as part of the United Centres West consortium with National Meteorological Services from the Netherlands, Denmark and Iceland.

Once Storm Éowyn was within this 60 hours' time frame Met Éireann assessed the detailed forecast information available and issued status Orange Wind Warnings for much of the country and Red Wind Warnings initially for parts of the southwest, but as the model guidance was updated and as the storm continued to develop in the Atlantic, the red wind warnings were extended countrywide. The first NCEG meeting

took place with Met Éireann staff providing technical briefings on both the expected weather and flood conditions due to Storm Éowyn.

#### 1.2.4 Thursday 23 January

Taking account of the updated and improved forecast model guidance received as the meteorological situation evolved, Met Éireann revised the Red Wind Warnings on Thursday. The timings of the Red Wind Warnings were modified to reflect the latest forecast guidance.

From Thursday night, Ireland experienced a strengthening south-easterly airflow as Storm Éowyn approached from the southwest.



**Level:** Red

**Type:** Wind

**Message:** Storm Éowyn: Gale to storm force southerly winds becoming westerly will bring extreme, damaging and destructive gusts in excess of 130km/h

**Impacts:**

- Danger to life
- Extremely dangerous travelling conditions
- Unsafe working conditions
- Disruption and cancellations to transport
- Many fallen trees
- Significant and widespread power outages
- Impacts to communications networks
- Cancellation of event
- Structural damage
- Wave overtopping
- Coastal flooding in low-lying and exposed areas

**Affected Regions:** Clare and Galway

**Issue Time:** Wednesday 22/1/2025 14:47

**Updated Time:** Thursday 23/1/2025 08:28

**Expected Onset:** Friday 24/1/2025 03:00

**Expires:** Friday 24/1/2025 11:00



**Level:** Red

**Type:** Wind

**Message:** Storm Éowyn: Gale to storm force southerly winds becoming westerly with extreme, damaging and destructive gusts in excess of 130km/h

**Impacts:**

- Danger to life
- Extremely dangerous travelling conditions
- Unsafe working conditions
- Disruption and cancellations to transport
- Many fallen trees
- Significant and widespread power outages
- Impacts to communications networks
- Cancellation of event
- Structural damage
- Wave overtopping
- Coastal flooding in low-lying and exposed areas

**Affected Regions:** Clare and Galway

**Issue Time:** Wednesday 22/1/2025 14:47

**Updated Time:** Thursday 23/1/2025 08:37

**Expected Onset:** Friday 24/1/2025 03:00

**Expires:** Friday 24/1/2025 11:00



**Level:** Red

**Type:** Wind

**Message:** Storm Éowyn: Gale to storm force southerly winds becoming westerly with extreme, damaging and destructive gusts in excess of 130km/h

**Impacts:**

- Danger to life
- Extremely dangerous travelling conditions
- Unsafe working conditions
- Disruption and cancellations to transport
- Many fallen trees
- Significant and widespread power outages
- Impacts to communications networks
- Cancellation of event
- Structural damage
- Wave overtopping
- Coastal flooding in low-lying and exposed areas

**Affected Regions:** Leitrim, Mayo, and Sligo

**Issue Time:** Wednesday 22/1/2025 14:54

**Updated Time:** Thursday 23/1/2025 08:37

**Expected Onset:** Friday 24/1/2025 04:00

**Expires:** Friday 24/1/2025 12:00



**Level:** Red

**Type:** Wind

**Message:** Storm Éowyn: Gale to storm force southerly winds becoming westerly with extreme, damaging and destructive gusts in excess of 130km/h

**Impacts:**

- Danger to life
- Extremely dangerous travelling conditions
- Unsafe working conditions
- Disruption and cancellations to transport
- Many fallen trees
- Significant and widespread power outages
- Impacts to communications networks
- Cancellation of event
- Structural damage
- Wave overtopping
- Coastal flooding in low-lying and exposed areas

**Affected Regions:** Donegal

**Issue Time:** Wednesday 22/1/2025 14:58

**Updated Time:** Thursday 23/1/2025 08:37

**Expected Onset:** Friday 24/1/2025 07:00

**Expires:** Friday 24/1/2025 14:00



**Level:** Red

**Type:** Wind

**Message:**

Storm Éowyn: Gale to storm force southwest to west winds with extreme, damaging and destructive gusts in excess of 130km/h

**Impacts:**

- Danger to life
- Extremely dangerous travelling conditions
- Unsafe working conditions
- Disruption and cancellations to transport
- Many fallen trees
- Significant and widespread power outages
- Impacts to communications networks
- Cancellation of event
- Structural damage
- Wave overtopping
- Coastal flooding in low-lying and exposed areas

**Affected Regions:** Cavan, Dublin, Kildare, Laois, Longford, Louth, Meath, Monaghan, Offaly, Roscommon, Tipperary, Westmeath, and Wicklow

**Issue Time:** Wednesday 22/1/2025 15:10

**Updated Time:** Thursday 23/1/2025 08:37

**Expected Onset:** Friday 24/1/2025 06:00

**Expires:** Friday 24/1/2025 11:00



**Level:** Red

**Type:** Wind

**Message:** Storm Éowyn: Gale to storm force southerly winds becoming westerly with extreme, damaging and destructive gusts in excess of 130km/h

**Impacts:**

- Danger to life
- Extremely dangerous travelling conditions
- Unsafe working conditions
- Disruption and cancellations to transport
- Many fallen trees
- Significant and widespread power outages
- Impacts to communications networks
- Cancellation of event
- Structural damage
- Wave overtopping
- Coastal flooding in low-lying and exposed areas

**Affected Regions:** Carlow, Cork, Kerry, Kilkenny, Limerick, Waterford, and Wexford

**Issue Time:** Wednesday 22/1/2025 17:08

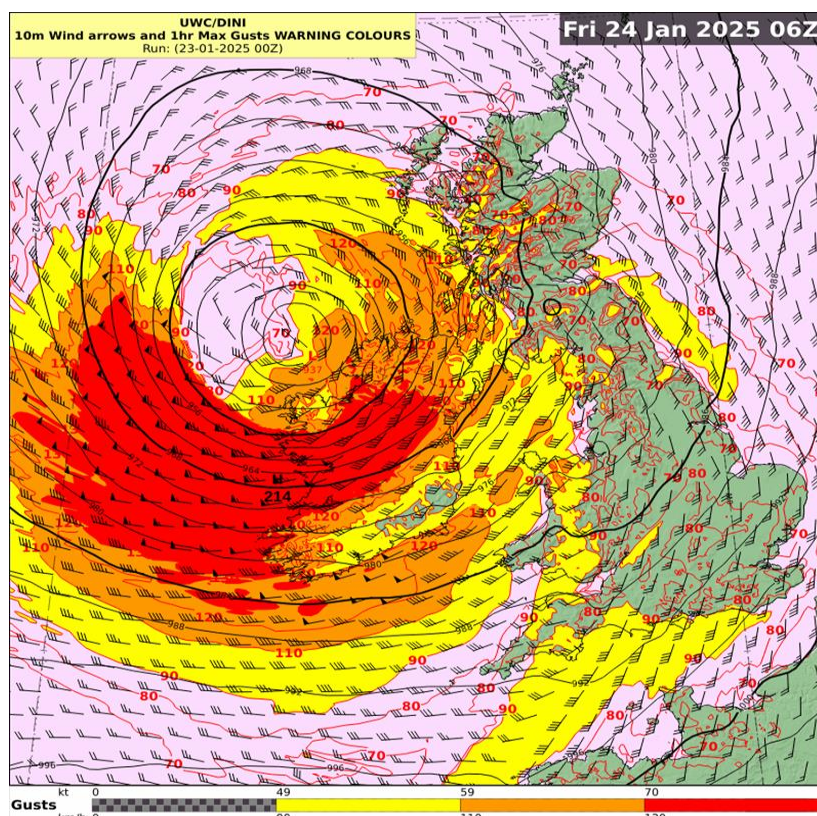
**Updated Time:** Thursday 23/1/2025 08:28

**Expected Onset:** Friday 24/1/2025 02:00

**Expires:** Friday 24/1/2025 10:00

### 1.2.5 Friday 24 January

Overnight Thursday and into Friday morning Ireland lay in a strong gale-force to hurricane-force cyclonic variable airflow generated by Storm Éowyn. The storm continued to bring gale to storm-force southwest to west winds for a time, accompanied by destructive and damaging gusts.



Violent storm-force to hurricane-force winds occurred in some western coastal areas and coastal areas of the north. The winds gradually eased from the south throughout the day, though it remained very windy in northern areas until the evening.

### 1.2.6 Record Breaking Storm

Storm Éowyn was meteorologically a record-breaking storm. Provisionally, the highest **gust wind speeds** were broken at **four** wind observation stations:

- Mace Head, (Clare) – **184.3 km/h @ 04:40 am** (previous record of 182km/h at Foynes Airport Limerick, 18 Jan 1945);

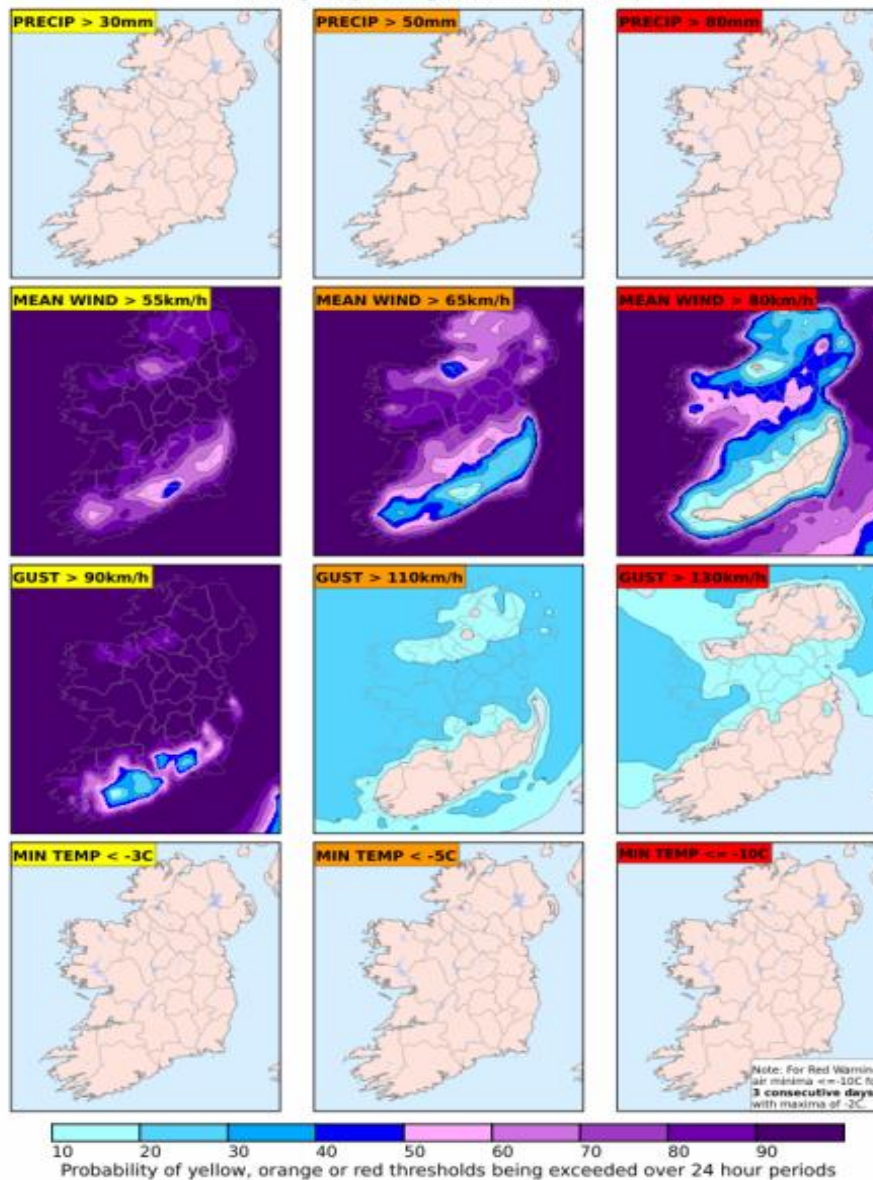
- Finner, Donegal **150** km/h;
- Athenry, Galway **139** km/h;
- and Gurteen, Tipperary **124** km/h.

The highest daily mean wind speed was 142 km/h (76.9 knots) at Mace Head (Galway).

The highest daily mean wind speed was 76.9 km/h (41.5 knots or 47.8 mph) at Mace Head, Co Galway on Friday 24 January 2025. Provisionally, and while not a national record element, this observation average of 41.5 knots is within the top 10 highest daily mean wind speeds on record.

# 24hr Warning Probability Charts for Run 23-Jan-2025 12Z

Friday 24 January (0000Z to 2400Z)



There was some respite on Friday night into Saturday. However, Storm Herminia, named by the Spanish Met Office (Agencia Estatal de Meteorologia, AEMET), brought yellow level winds to parts of the west and south and while the winds were not storm-force, there was the risk of further damage from already weakened structures and difficult travelling conditions.

**AEMET** @AEMET\_Esp

⚠️ **AVISO ESPECIAL** | Temporal provocado por la borrasca Herminia.

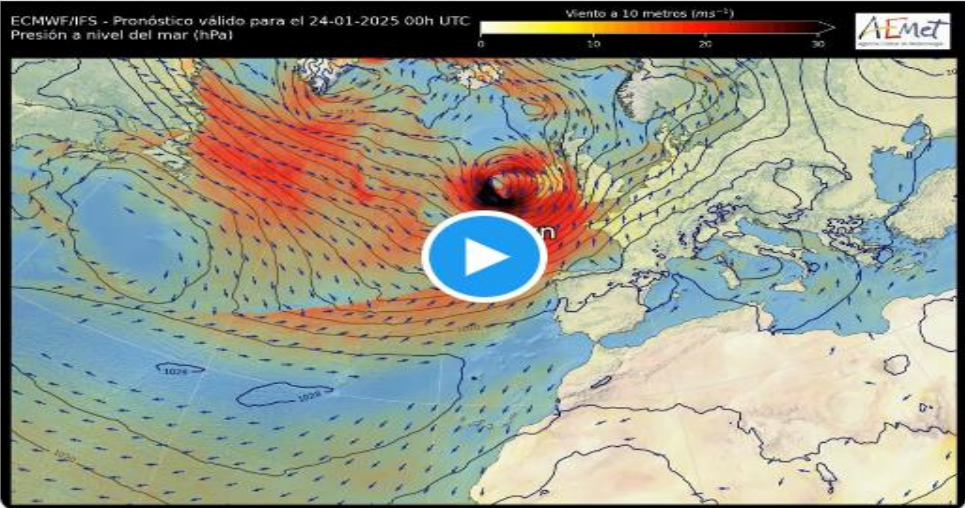
🌪️ Rachas de viento muy fuertes, incluso huracanadas (superiores a 120 km/h).

🌊 Olas superiores a 7 metros en las costas del norte.

🌧️ Lluvias generalizadas, abundantes en Galicia.

🔗 [aemet.es/documentos\\_d/e...](https://aemet.es/documentos_d/e...)

ECMWF/IFS - Pronóstico válido para el 24-01-2025 00h UTC  
Presión a nivel del mar (hPa)



7:58 PM · Jan 24, 2025

👍 428    💬 Reply    🔗 Copy link

[Read 27 replies](#)

⚠️

**Level:** Yellow

**Type:** Wind

**Message:** Strong and gusty winds.

**Impacts:**  
Further damage to already weakened structures and trees. Dangerous travelling conditions.

**Affected Regions:** Donegal, Leitrim, Louth, and Meath

**Issue Time:** Saturday 25/1/2025 11:01

**Expected Onset:** Sunday 26/1/2025 11:00

**Expires:** Sunday 26/1/2025 18:00

## 1.3 Monitoring and flood forecasting Storm Éowyn

For the night Thursday 23 January and through the morning of Friday 24 January the Irish coasts were in a period of low astronomical tides or neap tides.

The coastal level conditions were high along all coastlines in the Daily Flood Guidance Statement for the duration of the storm. Due to the low pressure and gale-

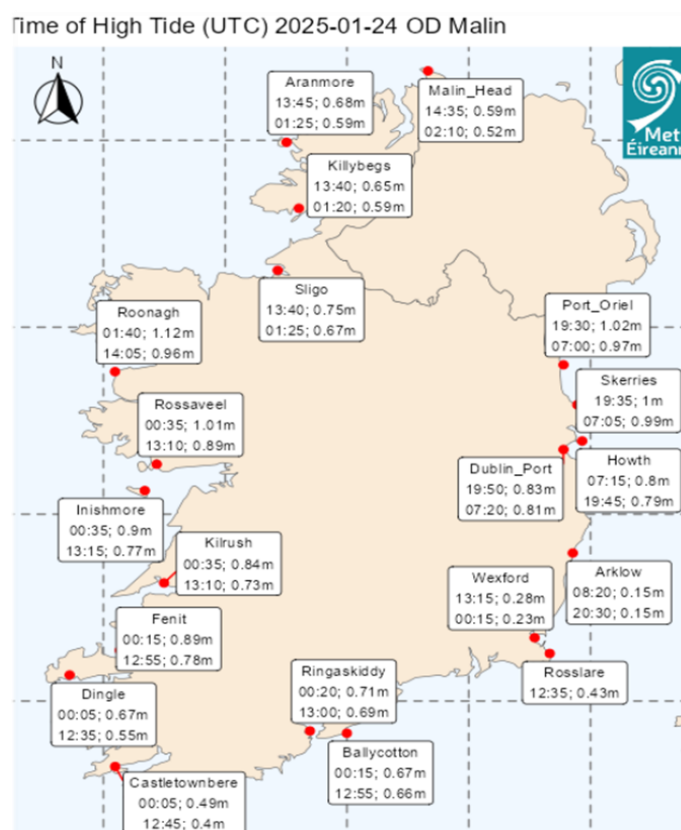
to storm-force southwest to west winds predicted to be generated by the storm, a “High Surge Advisory” was issued on 22 January 2025 covering the period from 21:00 23 January 2025 to 23:59 24 January 2025 for all Atlantic coasts and updated on 23f January for all coasts, see text below;

*“... due to a combination of forecasted exceptional storm surge, onshore storm-force winds and significant wave action as a result of Storm Éowyn, critical thresholds are forecast to be approached and potentially exceeded along the following coasts*

*Even though we are in a period of Neap Tides (Low Astronomical Tides), the exceptional forecast surge, in combination with Red-level mean winds due to Storm Éowyn, means that wave overtopping is likely and there is potential for coastal flooding in low-lying and exposed areas, particularly along the Atlantic coastline”*

The timing of the high tides, combined with storm-force winds and the predicted record-breaking forecast storm surge, was of great concern and was closely monitored by Met Éireann.

The critical timing for high tides during the storm period was on the Atlantic coastal counties on Thursday and Friday between midnight and 1am, and for the Eastern coastal counties, it was on Friday between 07:00 and 08:30, as shown in the figure below.



*Astronomical Tide Times for the 24th January 2025*

The Tidal and Storm Surge model forecasted Storm Surge Levels on 24 January 2025 in the range of 0.66m to 2.25m along Irish coasts.

The timing of the peak winds along all coasts did not coincide with high tide times. The maximum storm surge levels occurred close to low tide times. This resulted in limited coastal flooding impacts, wave overtopping in Salthill, Galway. If the highest surges had occurred at the same time as high tide, the flooding impacts would have been much more significant with an increased threat to life.

Met Éireann supported the recovery operation providing daily weather briefings to the NCEG meetings for a period of 2 weeks after the storm.

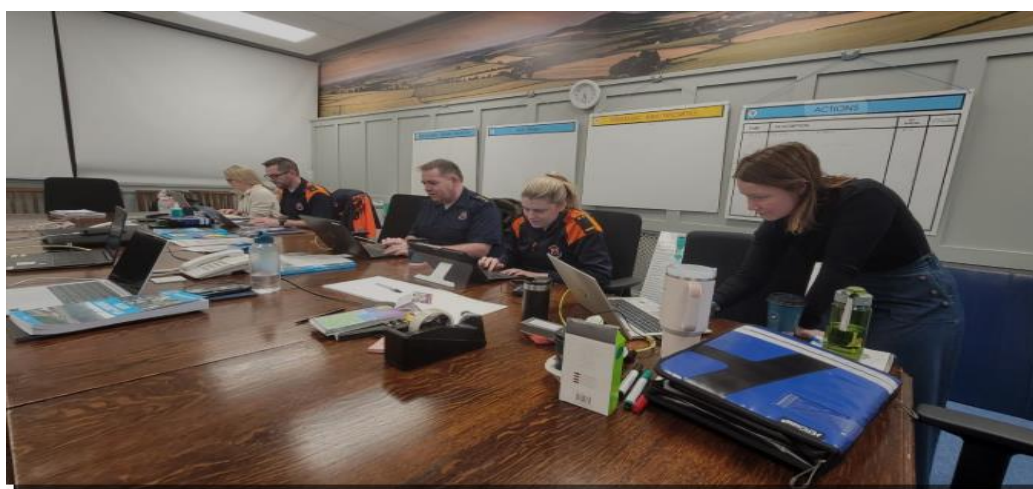
## 2 Chapter 2: Co-ordination of the Response to Storm Éowyn

This chapter reviews the co-ordination of the response to Storm Éowyn by the Principal Response Agencies supported by the NECG. This chapter includes:

- Preparedness actions taken in advance of Storm Éowyn;
- The locally led response by all local authorities through Local Co-ordination Groups;
- The activation of the NECG to harness a whole-of-Government response; and
- The transition to recovery and the extended restoration operations for electricity and water supplies.

### 2.1 Overview of Severe Weather Co-ordination Arrangements

The local authorities are the designated lead agency for co-ordinating a response to severe weather emergencies, working with both An Garda Síochána and the HSE.



*Laois County Council Coordination Centre*

Local authorities have a central role in responding to most of the emergency scenarios identified in the Framework for Major Emergency Management. As well as internal preparation, local authorities have been central to the development of emergency management among the Principal Response Agencies (HSE, AGS and

Local Authorities), supporting the development of inter-agency preparedness and providing Local Co-ordination Centre premises. It is widely acknowledged that the local authorities consistently demonstrate both leadership and capacity in dealing with severe weather.

The effectiveness of the work undertaken by local authorities has been shown through their responses to severe weather emergencies, most notably during ex-Hurricane Ophelia, Storm Emma and most recently for Storm Éowyn, along with challenging events ranging from flooding to drought.

## **2.2 Preparedness in advance of Storm Éowyn**

The NDFEM monitor the five-day forecast, working with Met Éireann to anticipate and prepare for episodes of severe weather, especially where widespread orange or red warnings are likely to be issued.

Having been notified of the potential for an Atlantic storm and in advance of the naming of Storm Éowyn the NDFEM, began liaising with Met Éireann on Monday 20 January. The NDFEM started working with local authorities, utilities and other Departments, monitoring the updated forecasts and preparing for the onset of this storm. Evolving weather models indicated that this storm was increasing in intensity with Met Éireann advising that Ireland would experience extremely dangerous and damaging weather conditions.

As part of the preparatory process in advance of Storm Éowyn, the NDFEM recommended activation of the NECG - the established Government platform for responding to national level emergencies under the SEM. This was approved by the Minister for Housing, Local Government & Heritage. As per section 6.9 of the SEM, “An initial meeting of the NECG will be attended by all members of the GTF”. Once the decision has been made to activate the NECG, the meeting is notified through the Office of Emergency Planning (OEP) in the Department of Defence.



*National Emergency Coordination Group meeting in the NECC, Agriculture House, Kildare Street*

When the NECG is activated for a severe weather emergency, local authority severe weather assessment teams and other agencies may join virtually. Emergencies are primarily managed at local level with local authorities working closely with the An Garda Síochána, the HSE, and where necessary the Defence Forces, Civil Defence, the Voluntary Emergency Services and NGOs. Met Éireann deliver detailed weather briefings to the group, while local authorities provide the NECG with real-time updates from around the country on the situation and response actions through the Local Government Management Agency and Chief Executive representation. Local authorities and other response agencies may request additional and exceptional support from other public sector bodies via NECG through the NDFEM. Utilities, essential services and key Departments contribute updates creating a composite picture of the event and the sectors where the impacts are most acute. The Government Information Service (GIS) (Department of the Taoiseach) coordinates public communication in collaboration with the communications unit in the Department of Housing, Local Government and Heritage and other state actors.

## **2.3 Response**

Whilst the Principal Response Agencies (PRAs) have a key role in responding to severe weather events, additional coordination capacity is necessary for exceptionally large-scale severe weather emergencies. The process for coordinating

a Lead Government Department (LGD) response is set out in the SEM. The NECG, when activated, rapidly enables:

- Support to the Principal Response Agencies;
- Situation updates on impacts across the country from all sectors;
- Aligned public safety advice and public information;
- Aligning available Defence Forces, Civil Defence resources with the needs on the ground;
- A collective approach to anticipating and dealing with emerging issues; and
- Updating information to individual Ministers and to Government as necessary

The first meeting of the NECG was convened on Wednesday 22 January. In excess of 500 participants attended virtually with all Government Departments, local authorities and agencies represented and briefed on the expected severe weather, the level of severity and the potential for risk to life, property and infrastructure. It was emphasised at this meeting that Storm Éowyn was forecast to be a damaging and destructive storm. Ensuring the safety of all communities was set as the key objective for the group. A press release was issued by the GIS following the NECG meeting on Wednesday 22 January, providing critical public safety information on the impact of Storm Éowyn.

In advance of Storm Éowyn, the NDFEM also activated two NECG subgroups:

- NECG subgroup on Infrastructure
- NECG subgroup on Transport & Education

These groups were activated to ensure that there was the maximum level of whole-of-Government coordination and to prepare pre-emptive public safety measures, co-ordinated and communicated to the public in a timely manner (e.g. closure of educational and childcare facilities, cancellation of public transport, work from home advisory, etc.)

Following a briefing by Met Éireann to the NECG subgroup on Transport & Education on Wednesday 22 January, it was agreed that all schools, colleges, crèches and early years educational settings should close on Friday 24 January as it was anticipated that there would be a Red Level Warning in effect countrywide that day. The relevant Government Departments immediately notified their stakeholders to enable parents, students and teachers to make the necessary preparations.

A second NECG meeting took place in the National Emergency Coordination Centre (NECC), (hybrid; attended by in excess of 600 participants), on Thursday 23 January, to further coordinate preparations in advance of Storm Éowyn and ensure that all necessary measures were in place. A press release was again issued by GIS following this meeting with a press conference held at the NECC, led by the chair of the NECG.

A third NECG meeting took place on Friday 24 January at 9am (while Storm Éowyn was crossing the country) to begin the assessment of disruption and damage caused and to coordinate and prioritise the allocation of all resources from across Government to restore power, water, telecommunications and other services to homes, farms and businesses. A core team from the NDFEM and the OEP attended the NECC in person with all other participants attending virtually.

As the storm tracked across Ireland, the NECG set the key objectives as preservation of life, supporting ESB Networks (ESB-N) and ensuring local authorities and Transport Infrastructure Ireland could commence road clearing operations as rapidly as possible.



*Dublin's M50 Motorway almost deserted during Friday morning rush hour*

It was clear that people across all communities heard the public safety messages issued through the NCEG, taking action to shelter in place; with reports of little traffic across the road network. This action by the public took pressure off emergency services at a critical time and enabled recovery operations to commence rapidly.



ESB-N reported that on Friday 24 January that there were 715,000 homes and businesses without power, with the potential for numbers to rise (the number of customer outages peaked at 768,000). ESB-N and Eirgrid immediately began work to bring as many connections back on-line as possible, using remote links to bring back tripped circuits that were not damaged, and with crews on standby to deploy as soon as it was safe to do so. At the peak, Uisce Éireann reported that there were 130,000 customers (51,000 properties) without water, with a further 750,000 customers (295,000 properties) at risk, if power outages were prolonged.

The HSE reported that arrangements were in place for staffing, the provision of dialysis and end of life care services. The HSE moved quickly to reinforce hospital power supplies and standby generator capacity at critical sites.



Local authority services were stood up with outdoor crews fully deployed as soon as the storm passed to undertake road-clearing operations. Arrangements were put in place on Friday evening to make Defence Forces, Coillte, Civil Defence, and National Parks & Wildlife (teams and equipment) available to ESB-N to help with

timber clearing operations with the aim of restoration of power in the worst affected areas. A press release was issued by GIS following the NECG meeting.

A fourth NECG meeting was held on Saturday 25 January. The key objective remained the restoration of power supply. The meeting heard a detailed report from the local authorities on the clearing of roads and the transport sector provided information on the return of public transport and operations at ports and airports. The meeting was provided with an overview of the initial damage assessment by Eirgrid (high voltage transmission) and ESB-N (electrical power distribution). The initial ESB-N damage assessment operation was assisted by the Air Corps and private helicopter services. The full scale of the damage to the low and medium voltage on the distribution network became evident on Saturday (and the knock-on impacts on water and communications infrastructure) with an emerging picture of a much extended restoration time requiring continued co-ordination by the NECG for the duration of the recovery operation. For this reason, two additional NECG subgroups were immediately established:

- NECG subgroup on Communications Infrastructure; and
- NECG subgroup on Humanitarian Assistance



The NEEG and relevant subgroups continued to meet each day (with GIS issuing NEEG press releases containing important public information). The key priorities of the NEEG remained (i) the restoration of power, water, telecommunications and other services to homes, farms and businesses; and (ii) the provision of humanitarian assistance to those worst affected by Storm Éowyn.

The Humanitarian subgroup began working from Saturday 25 January with local authorities to activate Emergency Response Hubs within local communities. The co-ordination of the humanitarian subgroup is detailed in Chapter 4.

The NEEG response was stood down on 11 February with the Department of Environment, Climate & Communications convening the Interdepartmental Recovery Group to oversee the full restoration of broadband services.

## **2.4 Activation of the Union Civil Protection Mechanism**

The Union Civil Protection Mechanism (UCPM) supports the mobilisation of emergency assistance, when requested, in the event of major disasters both inside and outside EU through DG ECHO.

Ireland was actively working with colleagues in the EU Civil Protection Mechanism through the Emergency Response Coordination Centre (ERCC) from Thursday 23 January, requesting an initial mapping to be conducted including damage assessment through Copernicus (satellite mapping). When severe emergencies occur, national authorities first develop an overview of the situation through a gap analysis, then make requests based on the needs identified. It is essential that a needs assessment be carried out to ensure appropriate and detailed requests can be made for limited shared resources and to ensure that the necessary logistics and transport can be actioned effectively.

The NEEG, working with the sectors affected by Storm Éowyn, prioritised impact assessments at the earliest stage in the recovery phase, once it was safe to deploy frontline staff. Consequently, the NEEG subgroup on Infrastructure identified the need for large capacity generator support which was relayed through the Common

Emergency Communications & Information System (CECIS) on the afternoon of Saturday 25 January.

On 27 January, the UCPM RescEU stockpile was activated by the Commission, with three x 512 KvA and 10 x 27.5 KvA generators offered, which were accepted on the 27<sup>th</sup>, with logistical arrangements continuing with Romania offering a large military aircraft (Civil Military Cooperation). A further offer of one x 100 KvA and three x 150Kva Generators from Denmark was also accepted and delivered. An offer of a 100 KvA generator was also made by Luxembourg and accepted. The generators received were coordinated by the NDFEM and deployed based on the priorities identified through the infrastructure subgroup.

We are sincerely thankful for the solidarity demonstrated during this historical storm by the colleagues in the ERCC, the Commission, and all M.S especially Denmark, Romania and Luxembourg.

## **2.5 Conclusion**

The exceptionally severe impact of Storm Éowyn which led to large-scale damage to the low voltage power network with cascading impacts to essential services and critical infrastructure necessitated the activation of the NECG. The Review Steering Group are satisfied that the NECG provided an appropriate structure for collaborative working across Departments, with national agencies to support the local response by the Principal Response Agencies and ESB-N.

The Department of the Taoiseach reinforced the mandate of the NDFEM to coordinate the response which was actively supported by GIS and the OEP.

As well as providing strong leadership during the local response, the Local Government sector ensured that the NECG was fully briefed at all times during the response. The horizontal and vertical coordination mechanism evident from the earliest stage of the response worked well and should be reinforced for future responses.

## 2.6 Recommendations

### 2.6.1 Sharing of Experience

The NDFEM, the Department of Taoiseach and the Office of Emergency Planning have participated in many NECG responses, with a cadre of experienced staff who understand the LGD coordination mechanism. It is important that this experience is shared with all NECG participants.

### 2.6.2 Maintaining Relationships

The NDFEM and Met Éireann staff work closely together monitoring for potential severe weather. It is essential that this close working relationship is maintained.

### 2.6.3 Transitioning Roles

The Department of Housing, Local Government & Heritage led the NECG response well into the recovery phase. The SEM provides for a Transition of the LGD role in the recovery phase. In future responses, it is recommended that if the LGD, OEP or the Department of the Taoiseach recognise the conditions have emerged for a transition of NECG chair, they will propose to the NECG that an alternative Government Department or Agency should undertake the lead role in the recovery phase.

### 2.6.4 Subgroups

The NECG is a single structure that is activated for emergency scenarios with a national impact. Public safety and support of the frontline response are the key objectives at the early stages of an NECG response. The activation of task specific subgroups under the NECG allows the response to be adapted and focused rapidly. The subgroups listed below formed for the response to Storm Éowyn reflect the key issues that arise during almost all emergencies at national scale:

- Coordination of Humanitarian Assistance;
- Public Transport & Education;

- Critical Infrastructure;
- Communications Infrastructure; and
- Emergency Communications.

These groups should be activated for all NECG responses to severe weather emergencies. If a subgroup is not required, it may be stood down by agreement through the main NECG meeting.

### **3 Chapter 3: Review of the Communication of Safety Advice and other relevant information to the Public during Storm Éowyn**

#### **3.1 Background to emergency communications structures and procedures – sizes**

The SEM Guidance 2 – Emergency Communications (SEM 2) provides direction on procedures and the approach to communications for national emergency situations - situations in which the NECG is stood up.

Under SEM 2, all LGDs have emergency communications plans in place for their assigned crises, and these form the basis of the communications response when such crises occur.

When the NECG is convened, an Emergency Communications Sub Group is convened in parallel.

GIS supports the LGD and the OEP in public communications and in dealing with the media while the NECG is convened. This includes marshalling necessary information, preparing messages and providing advice.

#### **3.2 Messaging priorities**

##### **3.2.1 Messaging ahead of and during the storm**

Ahead of, and during the height of the storm, public communication focused on public safety messaging as a priority. Government departments, relevant agencies, Met Éireann and utility providers sought to raise awareness of the scale and seriousness of the Red Weather Warning and the high likelihood of extensive damage being caused. The focus of communications at this point was on urging the public to respond appropriately to a Red Weather Warning by staying indoors, sheltering in place, avoiding unnecessary travel and taking action to protect themselves and their properties. The public were also urged to make preparations for the possibility of losing electricity supply or other utilities.

### **3.2.2 Messaging following the storm**

Following the passing of the storm, the focus of communications shifted from a major weather event to the response and recovery phase of the crisis.

When the scale of damage became apparent, public messaging pivoted to focusing on the impacts of the storm; recovery response operations; and actions being taken to restore power, telecoms and water supplies and other services.

A focus was also placed on generating awareness of the supports and services available to those affected and the humanitarian response being provided.

A key part of the messaging was to make clear the scale of the issue and length of time to rectify the situation. This allowed those affected to plan on an informed basis.

Safety messaging also continued, with a particular emphasis on the risks and hazards caused in the aftermath of the storm, for example in relation to road damage, fallen electrical wires, generator use, farm safety, etc.

## **3.3 Whole-of-government NECG communications**

As outlined in SEM 2, NECG communications efforts during Storm Éowyn represented a whole-of-Government approach and were focused on providing a clear explanation of facts as well as reassurance with regard to the response.

Daily NECG meetings provided context and information to guide the communications and priority messaging. These meetings were attended by communications representatives from the LGD and GIS as well as communications colleagues from other relevant Departments, agencies and utility providers.

During each NECG meeting, a request was made for important public information and safety messaging to be shared by email or via the chat function. This was reviewed for inclusion in press releases and other communications.

From 22 January to 10 February, GIS coordinated and issued daily press releases following the NECG meetings, along with daily speaking points for use by spokespersons nationally and locally.

Mirroring the emergency communications subgroup structure, GIS established a contact list of communications personnel from all Government Departments and relevant agencies, each of whom was required to provide updates for the daily press release and speaking points.

This included:

- **The Department of Housing Local Government and Heritage (DHLGH)** as the LGD, DHLGH worked closely with GIS on the overall messaging approach including providing input from the Chair of NECG and the Minister for Housing.
- **ESB-N** provided up-to-date data on the number of electricity customers affected, reconnections, and the number of on-island and off-island crews employed during the recovery phase. ESB-N also provided important public safety messaging in relation to electricity infrastructure.
- **The Local Government Management Agency (LGMA)** coordinated input on the local emergency response groups and community hubs. At the height of the response, there were 380 emergency response hubs in operation, assisting people with basic needs such as water, hot food, phone charging, broadband access, shower facilities and study space.
- **Uisce Éireann** advised on the number of premises affected by water outages and efforts to bring water services back on stream.
- **The Department of Environment, Climate and Communications (DECC)** provided updates on telecoms restoration, mobile and internet services.
- **The Department of Social Protection (DSP)** provided information on the Humanitarian Assistance Scheme available to those affected by the storm.
- **The Department of Health and the Health Service Executive (HSE)** offered updates on impacted health services.
- **The Department of Agriculture, Food and the Marine (DAFM)** updated on farm safety, animal welfare issues and forestry issues.
- **The Department of Education** provided information on school closures and modifications to the CAO application deadlines and process.
- **The Department of Further and Higher Education** provided information on the impacts on further and higher education institutions.

- **The Department of Children, Equality, Disability, Integration & Youth** provided information on the impacts on crèches, early learning centres and IPAS accommodation centres.
- **Met Éireann** provided information on weather conditions and warnings.
- **The Road Safety Authority** provided road safety information and advice.
- **The National Transport Authority** provided information on public transport operations.
- **The Department of Transport** provided information on the impacts on roads, transport and logistics infrastructure
- **The Department of Enterprise, Trade and Employment**
- **The Department of Rural and Community Development**
- **The Department of Defence**
- **The Department of Foreign Affairs**
- **The Department of Public Expenditure, NDP Delivery and Reform**
- **The Department of Finance**
- **The Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media**
- **The Department of Justice**
- **An Garda Síochana**
- **Eirgrid**

The daily NECG press release and suggested speaking points were provided to Government Departments and Ministers, NECG member organisations and local authorities to allow for consistent and coherent public messaging through whatever means of communication was available given the damage to communications infrastructure post storm.

### **3.4 Local Authority Communications**

As principal responders, local authorities, as part of their Severe Weather Response Plans, followed their local crisis communications plans in disseminating information to the public locally. This included through social media, local radio, local print media and via stakeholder communications, including to councillors and community groups.

### **3.5 Channels and methods of communication**

A range of communications channels were employed in the Storm Éowyn response.

It must be noted that the loss of power, telecoms and broadband in affected communities posed a significant communication challenge by restricting the channels available to reach those most impacted.

In those areas that were worst affected, prolonged power and telecoms outages meant that residents had no access or limited access to TV, radio or online communications, leaving many reliant on car radio and word-of-mouth.

### **3.6 Media engagement**

As outlined previously, daily press releases issued following each NECG meeting.

These press releases provided weather warnings and updates, information on the storm's impact on critical infrastructure, updates on recovery and clean-up operations, public safety advice, information on public services availability and on supports available, including the Humanitarian Assistance Scheme.

Each press release gave an update on the number of homes, farms, and businesses that remained without power, the number of premises without water supply, and the number of customers without fixed and mobile telecom services.

The press releases were also responsive to issues and events that arose during the recovery phase, such as a request for mobile generators under the EU Civil Protection Mechanism.

Alongside the whole-of-government NECG press releases, targeted sectoral updates were shared by other NECG members including ESB-N, An Garda Síochána, Gas Networks Ireland, the Road Safety Authority, local authorities and by individual government departments.

### **3.7 Media interviews and briefings**

The Chair of the NECG acted as the primary NECG spokesperson throughout the storm and aftermath, taking part in numerous national media interviews.

In addition, Met Éireann, ESB-N, Irish Water, local authorities and others engaged directly with the media, providing information, taking part in interviews and demonstrating on-the-ground efforts to restore services.

A Government press conference took place ahead of the storm on January 23. This included the NECG Chair as well as representatives from the local authorities, Met Éireann, and An Garda Síochána.

Following the storm on January 27, a press conference was held with the Ministers for Environment, Climate and Communications, and the Chair of the NECG to update on the whole-of-Government emergency response following Storm Éowyn.

On January 31, senior officials from across relevant Government Departments, local authorities, response agencies and utility providers participated in a technical briefing for media on the whole-of-government emergency management structures and response to Storm Éowyn.

During the storm response period, ESB-N issued 50+ press release, took part in 300+ national and local interviews, responded to 250+ media queries, and had 1,000+ engagements with the media.

### **3.8 Local media**

Local media was a very important communications channel during this time, particularly local radio. Local authorities and utility providers engaged with the media based in affected areas as well as in neighbouring counties to ensure they were making all efforts to get messages to communities.

Local radio was a very important channel of communications providing specific local messages, including giving information on where Emergency Response Hubs were located. Local radio was often the only available information source in severely impacted locations.

### **3.9 Digital communications**

A dedicated Storm Éowyn web section was established at [Gov.ie/StormResponse](https://gov.ie/StormResponse) to provide a single source of up-to-date information to the public.

The ESB-N Power Check website was invaluable in providing information to those affected by power outages. The website had 12 million page views during the period of the storm and response.

Social media was used by government departments and all agencies and utility providers involved in the response to communicate with the public. Social media allowed for the gauging of sentiment and identifying issues arising, and to respond to both in an efficient manner. For example, paid social media advertising was put in place to ensure greater awareness of the availability of the Humanitarian Support Scheme.

Local authority websites and social media were updated with local-level information and provided direction to emergency numbers for utilities. Local authorities using the MapAlert service were able to keep members of the public up to date in relation to service disruptions through this service.

### **3.10 Outreach and engagement**

Given the communications challenges posed by lack of power and connectivity, the Emergency Response Hubs proved an important contact point within communities, allowing for face-to-face information sharing.

As well as taking 270,000 inbound calls, ESB-N customer service also conducted outreach calls to vulnerable users and provided information on the supports available, including the Emergency Response Hubs and the Humanitarian Assistance Scheme. Volunteers from across ESB-N were trained and redeployed to call centres ensuring adequate resourcing.

In addition to this, communications were undertaken by government departments and agencies with key stakeholders to provide important messages to key targets. For example, the Department of Education communicated directly with schools regarding school closure arrangements.

Visits by Ministers to impacted communities to assess for themselves the damage caused by the storm, and the local response efforts, was welcomed by impacted communities.

## 3.11 Recommendations

### 3.11.1 Communications is an essential part of the response in rapidly evolving situations

Under SEM 2, each LGD is to have a communications plan in place for their assigned emergencies. Storm Éowyn has demonstrated that it is important that this plan allows for agility and is flexible enough to allow communications approaches and messaging to respond to specific situations and circumstances, and to adapt as these change.

More agile and streamlined processes should be considered to allow for rapidly evolving scenarios, taking account of the priority information to be communicated, to whom the information should be communicated and the available channels to reach audiences.

As an important part of response and decision-making, it is important that communications is at the table for operational discussions in fast evolving situations.

The above should be considered in any review of the SEM Framework or SEM 2 Guidelines.

### 3.11.2 Prepare for limitations on communications channels

Connectivity issues relating to lack of electricity, phone and broadband proved a considerable issue in the communications response to Storm Éowyn.

In the context of this event, and considering other types of emergencies, it is recommended that, as part of their communications plans for emergency scenarios, each LGD undertakes an analysis of the likely impact on communications channel availability and identifies what communications channels can be stood up or reprioritised.

It is also important to consider internal / cross-NECG communications channel availability, for example in scenarios where email is unavailable.

### **3.11.3 Communicate ahead of time for resilience and readiness**

Storm Éowyn has demonstrated the importance of individual and community resilience during emergency events.

The public should be equipped with knowledge about how to prepare for emergency events and encouraged to build resilience and readiness. In this context, a longer-term emergency readiness programme would be useful to prepare the public for emergency scenarios. This could include for example, wide distribution of a household advice and information booklet or other resources and/or the development of an information and advice website/app. A more long-term approach could include wider outreach and engagement efforts via relevant stakeholder groups or an education programme.

### **3.11.4 Communications materials should be readily available**

In line with their communications plans, LGDs should prepare relevant communications materials and templates to have ready to deploy and make available if a crisis occurs.

In the case of severe weather, which is the most frequent emergency type experienced, it may be useful to prepare a communications toolkit for local authorities and other bodies with a suite of advice and template assets. Materials should be prepared for all relevant communications channels and in line with accessibility standards and language requirements.

### **3.11.5 Communicate clearly on emergency response responsibility**

As outlined in SEM 2, NECG communications should take a whole-of-government approach and provide reassurance with regard to a co-ordinated government-led emergency response.

Given the number of agencies and utility providers involved in the response to Storm Éowyn, including utility providers who needed to communicate on their services and directly with customers, there was potential for confusion in relation to the role of the NECG in coordinating the national response.

There are also reports from local authorities that the public had some difficulty in knowing which organisation or agency had responsibility for which service and who could provide them with information or support during the storm response.

It is recommended that clear information is available on the work of the NEEG and how it operates to coordinate all relevant bodies in responding to emergency situations. Clear and coherent information on responsibilities and helplines/contacts should also be provided at all points

#### **3.11.6 Outreach systems are needed to reach vulnerable and isolated people**

Structures and systems should be explored to ensure communication is possible with vulnerable and isolated people in the event of an emergency where typical channels of communication are unavailable.

This would include structures to identify such people along with systems of outreach.

#### **3.11.7 Operational systems are an important support to public communications**

The operational systems integrated into the ESB-N PowerCheck and Uisce Éireann websites, along with customer contact centres, were invaluable to ensuring the public could get ready access to household level information about their power and water supply. Similarly, these systems allowed for ready access to broader information on the numbers without power and water for national and government level messaging.

It is important that the public and businesses can have timely access to accurate information about when their services are likely to return in order that they can put in place contingency measures and make appropriate plans. Systems should be put in place to allow for this and where return timings are uncertain or not possible, it should be made clear that a definitive return time is not yet available and guidance about what this

means should be provided, e.g. that customers should prepare to be without service for a period of time.

Compared to power and water, information was less readily available in relation to telecommunications and broadband outages as they are provided by numerous commercial service providers. It is recommended that efforts are made to address this and ensure greater transparency of information in future.

#### **3.11.8 Communications units should be resourced adequately to respond**

Across Departments, agencies, local authorities and utility providers, the response to Storm Éowyn required significant resourcing, including extended weekday working time and work over weekends. This was true too for communications staff and spokespersons.

It is important that emergency planning take consideration of the need to ensure sufficient communications resourcing, including the need to have trained, experienced spokespersons available for a prolonged period of time. Alongside building in contingency to increase resources during crises, there is also a need to ensure adequate equipment for communications connectivity, for example, power banks, hotspot tethering, standby mobile phones with dual sims for different networks and satellite communications.

## **4 Chapter 4: Humanitarian Support in Communities**

This chapter overviews the mechanisms for providing humanitarian support to communities affected by severe weather emergencies. In response to Storm Éowyn, local authorities led on the coordination of Emergency Hubs to assist communities in severely affected locations. This chapter contains:

- The coordination and operation of Emergency Hubs;
- Household & Community Resilience;
- Caring for vulnerable persons in an emergency;
- An overview of the Department of Social Protection Scheme for Humanitarian Assistance;
- Role of An Post; and
- Crowd events in severe weather.

### **4.1 Activation of Emergency Hubs**

Following the completion of a damage assessment by ESB-N, reported to the NECG on Saturday 25 January, it became clear that the damage to the low voltage network was severe in many parts of the country. ESB-N indicated that many customers would be without electricity for an extended duration.



Rossinver Youth and Community Project, Located near Lough Melvin in Co Leitrim where an Emergency Response Hub was established

Given the hardship faced by many communities, the local authorities moved to establish Emergency Hubs. A subgroup on Humanitarian Assistance, was established under NECG, chaired by the Department of the Taoiseach, to support local authorities in responding to the needs of people who were significantly impacted by the storm.

Local authorities in impacted areas:

- Established Emergency Response Hubs to assist people with basic needs such as water, hot food, phone charging, broadband access, shower facilities etc. Selection of locations was determined by availability of essential services including power, water and broadband. At peak there were over 380 hubs in operation throughout impacted areas;

- Managed up to 18 Local Coordination Groups to coordinate available supports and assistance;
- Offered helplines for those in need of assistance and to provide advice and direction to supports available, including the Department of Social Protection's Humanitarian Assistance Scheme; and
- Sourced/provided supports and equipment for those most in need.

Many of these hubs were operated by local voluntary groups in community and sporting facilities. All local authorities shared available resources between them, and a central national database was established to support this work. Local authorities ensured that all appropriate local and national organisations were coordinated in responding to individual and community needs and, most importantly, that the needs of the most vulnerable were prioritised.

The activation and support of Emergency Hubs became a key objective of the NECG. It was recognised that engagement with the voluntary and community organisations was necessary given the large numbers of people who required assistance. The Review Steering Group recognise the invaluable role played by the Civil Defence and local volunteers which was coordinated through local authorities.

It is vital that the roles of community volunteers and supporting voluntary organisations be harnessed to ensure a rapid response in future emergencies. This will require guidance on how local authorities, NGOs and community and voluntary organisations can work together to prepare in advance of future severe weather emergencies. The focus of this guidance should be on early activation, defined roles for Emergency Hubs, coordination by local authorities and how community organisations can be supported through existing schemes.

## **4.2 Household & Community Resilience**

Communities across Ireland have shown a strong capacity to prepare for and respond to emergencies engaging with the Principal Response Agencies and also adapting community resources rapidly to assist those most in need. It is clear that this aspect of community response works best when there is structure and leadership from local responding agencies and through the NECG.



The extended duration of electricity outages following Storm Éowyn have shown that there is a need to provide detailed guidance on household resilience and preparedness in the SME sector to address the risks posed by storms, flooding and severe weather. A balanced approach on individual, household and SME preparedness is required, acknowledging the responsibilities of public sector organisations to respond to emergencies and keep essential services and critical infrastructure operating. Many EU countries are preparing guidance on household resilience based on an assumption of 72 hours without access to food, water and electricity.

Work is underway to formalise the Emergency Hub concept that emerged during Storm Éowyn, aiming to harness community strengths during severe weather emergencies.

The OEP runs a “Be Winter Ready” campaign annually, highlighting actions that households, motorists, business and the agriculture sector can take to prepare for winter conditions. The current annual “Winter Ready” platform provides a central point for further co-ordinated development in this area. This programme should be adapted to address household and community resilience

### **4.3 Vulnerable Persons**

During the response to Storm Éowyn, the NECG identified the need to prioritise humanitarian assistance to vulnerable persons who had no electricity for an extended duration. The Principal Response Agencies made contact with vulnerable persons using existing lists in each agency, through Emergency Hubs and with the

assistance of NGOs and community organisations. Persons with special medical needs were contacted by the HSE while ESB-N also made contact with customers. The impact of the storm on telecoms and data infrastructure made contacting vulnerable people difficult. An Post staff delivering post provided a direct link to vulnerable persons living in remote locations.

The Review Steering Group have examined a number of possible approaches to sharing information and assisting vulnerable persons following a severe weather emergency. The issue of data protection was discussed extensively. While data protection is not an absolute barrier to sharing information on vulnerable persons, there is a high degree of reluctance by organisations to take on additional responsibility for data sharing of any personal detail on vulnerable persons. Concerns were raised about the identification of vulnerable individuals with highlighted uncertainties regarding legal obligations, administrative complexities and the need to resource this work in parallel with a severe weather response.

A number of organisations identified the difficulty in managing and keeping lists of vulnerable persons updated. The Review Steering Group also discussed how vulnerability was defined, noting that this varies between agencies. Many members of the group felt that any person without electricity supply for an extended duration (over 3 days) is vulnerable with increasing levels of vulnerability where that person lives alone, has an underlying health condition or has a disability.

Additionally, there are persons who self-identify as vulnerable during an emergency, who may not previously have been identified. Lists tend to become outdated rapidly leading to scarce resources being deployed ineffectively.

While the review subgroup were clear on the learning and recommendations in relation to most elements of the humanitarian response, it was agreed that this matter requires further exploration and discussion through the GTF on Emergency Planning. It is not possible to make definitive recommendations on this issue in this review.

## 4.4 Department of Social Protection Humanitarian Scheme

The Humanitarian Assistance Scheme was activated on 23 January 2025 to assist householders affected across the country by Storm Éowyn. Up to 9 April 2025, the Community Welfare Service registered over 80,000 claims.

The Humanitarian Assistance Scheme Stage I was available to address essential needs in respect of shelter and sustenance in the immediate aftermath of the storm, when people were without power and other utilities.

Almost 34,000 claims were awarded with a total of almost €8.2 million being paid in respect of Storm Éowyn related claims. For the duration of the power outage, people who could not store or cook food were supported with the additional cost of food. This scheme does not provide a general compensation payment for damage or losses incurred as a consequence of a weather event.

The average payment amount for claims relating to Storm Éowyn is €224.03; however, the amount an individual person receives depends on their individual circumstances.

A number of variables determined the amount a person was entitled to including the household composition, the length of time the household was without power and/or water, and the type of expenditure incurred for which financial support was requested.

The majority of payments made to people to date as a result of Storm Éowyn have been to meet the additional cost of feeding their families in the immediate aftermath of the storm where people remained without power and/or water.

In recognition of the unprecedented nature and extent of the event that was Storm Éowyn, Stage I applications remained open until Friday 24<sup>th</sup> April – an extended deadline recognising the duration and impact of this storm.

## 4.5 Role of An Post in Response to Storm Éowyn

During the response to Storm Éowyn, An Post became involved in assisting the Principal Response Agencies, making direct contact with persons affected by Storm Éowyn in remote areas.



An Post has indicated to the Review Steering Group that its focus is on response to need as it emerges among customers, particularly linking with older or vulnerable customers. Given that 'vulnerability' might develop or change during a crisis, this link to communities could provide a strong additional support for the Principal Response Agencies and other NGOs.

Following the response to Storm Éowyn, An Post has indicated a willingness to support Community Support Centres established as part of a co-ordinated response to a national or local emergency, *namely*:

- Participation in local co-ordination groups;
- Distribution of leaflets to inform the community about available services;
- Establishing dedicated phone lines to provide information about community centres (emergency hubs) and other support services; and
- Checking on the well-being of older and vulnerable customers during their delivery routes, connecting vulnerable people to support and assistance as needed.

## 4.6 Crowd Events

A storm coinciding with a large crowd event (weekend music festival or large sporting event) poses significant risk to people traveling to and attending the event. While it is clear that event organisers are responsible for persons attending an event, the responsibility for travelling to attend an event falls to an individual or to the transport operator.



*Severely damaged stand at Burrishoole GAA Club*

The timing of an advanced warning plays a key role in determining the protective actions event organisers and individuals can take. It is normally possible to cancel sporting and other large crowd events in advance of a forecasted storm or an adverse weather event.

Sporting and event organisers would generally be expected to take a responsible and common sense approach in the run up to a forecasted storm. For licenced events, public authorities should include a condition to planning for weather impact including full closure and appropriate notification. However, the great bulk of public events are not licenced and there is no obvious mechanism, other than workplace health and safety legislation, that could be used to require an event organiser to cancel an event due to the anticipated severe weather conditions.

In the current model, the public authorities may be advising against an event, but the decision to proceed or cancel rests with the event organiser. These types of situations may be complex in that, for large scale events, public authorities, including transport operators, will generally be involved directly in getting people to and from events or managing transport issues.



*Connacht GAA Air Dome, destroyed by Storm Éowyn*

There has been a significant and appropriate shift over the past two decades towards a risk management approach to event planning. It is recommended that, where not already the case, the responsibilities of the event organiser to consider weather impacts is included in such risk assessments in line with the general duty of care obligation on all event organisers.

## **4.7 Conclusion**

The scale of the impact of Storm Éowyn on the electricity network, with cascading effects on essential services and infrastructure, led to widespread hardship in communities, particularly in remote locations. The peak of 768,000 customers without electricity supply, with week's long interruption to power and water supplies,

necessitated a humanitarian response at a scale well beyond any previous severe weather event.

The activation of Emergency Hubs during Storm Éowyn enabled some basic humanitarian assistance to be provided, working with local communities and voluntary organisations. The concept of an Emergency Hub needs to be further developed and reinforced so that such Hubs can be activated at short notice, providing a predefined level of support.

Local authorities proved to be best placed to coordinate and where necessary directly provide such Hubs. It is clear that local authorities cannot provide hubs in every community, there are a range of community organisations that can be supported to provide Hubs where necessary.

The DSP and DETE (with Red Cross) schemes provide humanitarian support when severe weather emergencies occur. Humanitarian assistance does not replace the need for insurance and is not a form of direct compensation for loss.

## 4.8 Recommendations

### 4.8.1 Community Support Centres

The Review Steering Group recognises the value in activating Emergency Hubs in the aftermath of Storm Éowyn to coordinate and deliver humanitarian assistance at the scale necessary. The operation of Emergency Hubs was led by local authorities but also were operated locally by community and voluntary groups. This concept is currently being developed in the form of Community Support Centres.

### 4.8.2 Community Support Centre Activation Guide

Given the experience of Storm Éowyn, the Review Steering Group recommend that a guide to the activation and operation of Community Support Centres be progressed with urgency. This Guide should be developed as soon as possible in working draft format so that it is available for any future responses. The Guide should address the following areas:

- Selection and preparedness of Centres at key locations
- Activation Mechanism
- Interface with local authorities via Local Co-ordination
- Key Agencies
- Support Measures

### 4.8.3 Activation of Humanitarian Sub-Group

The NECG should activate the humanitarian subgroup for exceptional severe weather events, supporting the local authority response.

### 4.8.4 Humanitarian Support Schemes

The DSP and DETE schemes will continue to operate as outlined in this chapter. The activation and operation of these schemes should integrate with the Local Co-ordination Group, with information provided on access to these schemes available at Community Support Centres, ensuring that people in need of

assistance have direct access to these schemes in the shortest possible timeframe.

This is in keeping with the Programme for Government Commitment to develop an Extreme Weather Event Assistance Scheme for homes, community organisations, farmers and businesses, which when initiated, will provide a more direct and speedy pathway to sector specific assistance.

#### **4.8.5 Household Resilience**

A programme, similar to 'Be Winter Ready' should be put in place to support household resilience and to encourage preparedness within communities with a planning assumption for the loss of essential services for 72 hours. This will allow responders to focus on the people most in need during exceptionally severe and widespread events

#### **4.8.6 Vulnerable People**

A further exploration of the area of vulnerability, the identification of vulnerable persons and the management of personal information is warranted.

#### **4.8.7 Public Events**

It is recommend that event organisers should cancel events in areas where an Orange Wind Warning threshold is forecast. Event sites and funfairs with temporary structures of all kinds may need to be considered for closure at a lower threshold, which should be set by the event organiser at the event planning stage. All event organisers should have arrangements in place to monitor winds speeds at the site of an outdoor event.

## **5 Chapter 5: Resilience of Critical Infrastructure and Essential Services**

This chapter explores the damage caused across the critical infrastructure sectors by Storm Éowyn and the resulting disruption of essential services. It considers how the Government, in collaboration with private and semi-state sectors, can enhance resilience against future challenges to ensure the continuity of vital societal functions and services.

The damage caused by Storm Éowyn highlighted the dependencies and interdependencies among various sectors. Notably, the loss of electricity emphasised these interconnections, as disruptions to the electrical supply negatively impacted the Drinking Water, Wastewater, Digital Infrastructure, Health, and Transport sectors. As a result, many rural and remote communities experienced a reduction in essential services from all of these sectors.

### **5.1 Understanding Critical Infrastructure and Critical Entities**

A modern society relies on its infrastructure, including critical infrastructure (CI), to support vital societal functions. Any disruption to critical infrastructure or its operators, known as critical entities, can significantly impact our society and the delivery of essential services that individuals, households, and businesses across the country depend on.

The recently published National Climate Change Risk Assessment highlights that the impact of natural hazards on critical infrastructure is expected to worsen due to climate change, which is projected to lead to more destructive storms and flooding emergencies. Recognising the necessity to protect critical national infrastructure, the EU has introduced a Directive on Critical Entities Resilience (CER). This Directive aims to enhance the resilience of critical entities providing essential services through a risk management approach that prioritises preventive measures and improves the capacity to withstand disruptions when they occur. The CER Directive outlines the responsibilities of the Government, Regulators, and critical entities in enhancing our collective resilience.

## 5.2 Critical Entities Resilience (CER) Regulations

In October 2024, the Tánaiste and Minister for Defence signed the European Union (Resilience of Critical Entities) Regulations 2024. These regulations outline 11 sectors that are essential for the functioning of society. These sectors are: Energy, Transport, Banking, Financial Market Infrastructure, Health, Drinking Water, Wastewater, Digital Infrastructure, Public Administration, Ground-Based Space Infrastructure, and Food Production, Processing and Distribution.

The CER Regulations require critical entities, in each sector, to conduct risk assessments and implement appropriate and proportionate measures to ensure their resilience. Additionally, they must report any significant disruptive incidents to their designated competent authority. The requirements of the CER Regulations do not apply to critical entities in the Digital Infrastructure sector. Entities in the Digital Infrastructure sector are expected to have requirements at least equivalent to those requirements under the CER Regulations under the forthcoming National Cyber Security Bill, transposing the NIS2 Directive.

Each critical entity is responsible for implementing its own resilience measures. The competent authorities listed in the table below will oversee the Regulation within their respective sectors.

The Department of Defence is currently collaborating with the competent authorities to develop a National Strategy for the Resilience of Critical Entities. This strategy is set to be published by the Minister for Defence in the first quarter of 2026.

## 5.3 Competent Authorities

The table below identifies the competent authorities designated for each of the 11 sectors.

| Sector                          | Competent Authority                      |
|---------------------------------|------------------------------------------|
| Energy                          | Commission for Regulation of Utilities   |
| Transport                       | Irish Aviation Authority                 |
|                                 | Commission for Railway Regulation        |
|                                 | Marine Survey Office                     |
|                                 | National Transport Authority             |
| Banking                         | Central Bank Ireland                     |
| Financial Market Infrastructure | Central Bank Ireland                     |
| Health                          | Health Information and Quality Authority |
|                                 | Health Products Regulatory Authority     |
|                                 | Minister for Health                      |
| Drinking Water                  | Environmental Protection Agency          |

|                                                             |                                                   |
|-------------------------------------------------------------|---------------------------------------------------|
| Waste Water                                                 | Environmental Protection Agency                   |
| Digital Infrastructure                                      | Commission for Communications Regulation          |
| Public Administration                                       | Ministers of Government Departments               |
| Space                                                       | Minister with responsibility for the space sector |
| Large-Scale Production, Processing and Distribution of Food | Minister for Agriculture, Food and the Marine     |

## 5.4 Impact of Storm Éowyn on Critical Infrastructure

The successful delivery of essential services relies on resilient infrastructure and effective business continuity management. Storm Éowyn exposed vulnerabilities and highlighted interdependencies, in various areas including the electricity network, water service infrastructure, and communications networks. This also encompasses infrastructure that connects local communications networks to core networks, known as backhaul services.

## 5.5 Electricity Infrastructure

The loss of power to 768,000 customers, resulting from damage to the electrical transmission and distribution network following Storm Éowyn, was on a scale not previously seen. This disruption resulted in a loss of power to circa 30% of all electricity customers. While faults were widespread across the entire network, the majority of the damage was experienced on medium and low voltage network lines. This reflects the configuration of the network with significantly more network lines operating at lower voltages, in much closer proximity to homes, farms, buildings, trees and vegetation.

### 5.5.1 EirGrid

EirGrid as Transmission System Operator (TSO) manage the flows of electricity across Ireland, ensuring that power is safely delivered from generation sources to the distribution network for use in homes and businesses. EirGrid's key objective in responding to storms of this nature is to ensure that the power system as a whole remains secure and stable throughout the event while operating in line with their

operational and safety protocols. Maintaining the resilience of the 220 kV system is crucial for a secure and stable power system.



During the storm, 103 transmission faults occurred across 39 transmission circuits, primarily in the West and Northwest regions. These faults included one 220kV line and one 400 KV line. The majority of circuits were returned to service either during or immediately after the storm. A total of 15 transmission circuits remained out, or were subsequently forced after the storm, including one 400 kV line. EirGrid worked with ESB Networks to optimise the prioritisation of circuits necessary for the system's security and support restoration of demand.

ESB-N deployed its crews and partner contractors to effect restoration as soon as it was safe to do so. Restoration of the Higher Voltages (HV) takes precedence in the restoration phase as without it no power flows into the lower voltages.

### **5.5.2 ESB Networks**

The electricity system comprises transmission and distribution networks, and includes all substations, overhead lines, and underground cables that are used to bring electricity to Ireland's 2.4 million domestic, commercial, and industrial customers. It includes approximately 160,000km of overhead network, 28,000km of underground cables, and around 800 substations (including both customer-owned substations and ESB-N owned substations).

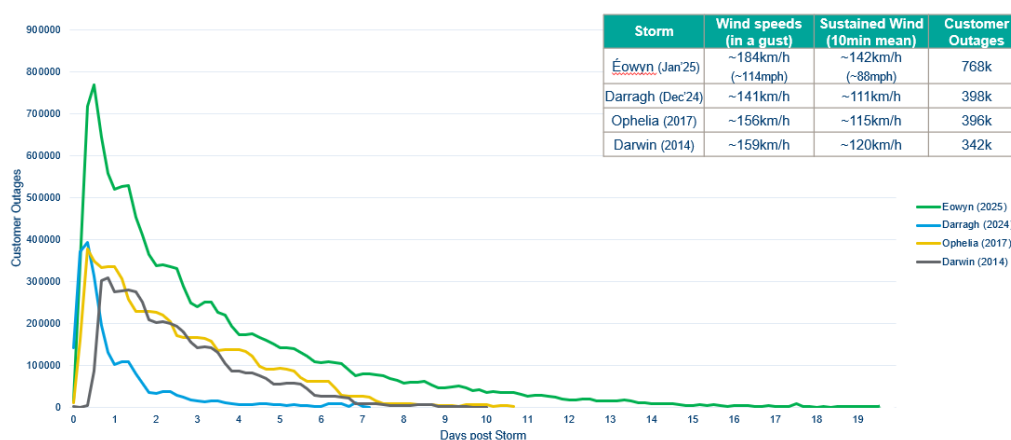
ESB-N is the electricity distribution system operator (DSO), distribution asset owner (DAO), and onshore transmission asset owner (TAO) in Ireland. ESB-Ns' role in storm and large weather events is to ensure safety of the public and restore power to affected customers as soon as possible.

Storm Éowyn was the largest storm ever experienced by ESB-Ns, and it followed less than two months after the previous largest storm to impact electricity supply, Storm Darragh, in December 2024. At its peak, approximately 768,000 customers lost electricity supply during Storm Éowyn. The scale of damage to the network was unprecedented and required extensive restoration efforts.

A notable difference when comparing the characteristics of Storm Éowyn to the two previous largest storms experienced by Ireland is the area of the country that was covered by the Red Warning. During Storm Éowyn, the Red Warning was nationwide, covering the entire country, whereas in Storm Ophelia and Storm Darwin the impacts were more localised, bringing the red weather warnings to specific parts of the country.

Almost 70% of customers had their power restored within the first 72 hours; with almost 90% of customers regaining supply, one week after the storm crossed the country. All customers were restored by 11 February; 18 days after the storm crossed the country.

Figure 2 shows the comparison of Storm Éowyn, with previous significant storms; Darragh, Ophelia and Darwin.



At all times, ESB-N prioritises the safety of the public, and particularly during a large weather or storm event that causes damage to the electrical network, ESB-Ns' crews will prioritise making the network safe for members of the public. This includes making fallen, low hanging and damaged network lines safe. In some instances, these overhead lines, if they are still live following a storm, may need to be switched out of operation until they can be repaired. Calls to ESB-N Customer Call Centre relating to storm damage of this nature are identified and recorded on the ESB-N Network Management System (NMS) as Extreme Danger or Hazard calls. During Storm Éowyn, over 4,900 Extreme Danger calls were logged to ESB-N.

ESB-N had a large number of damage assessors patrolling the network across the country. These resources were supported by drone operators and 6 helicopters to ensure hard to access areas were surveyed. In total over 12,500 damage assessment forms were completed, covering faults identified on the low and medium voltage network that needed repairs, with a small volume completed for faults on the 38kV network.



Throughout the entire duration of Storm Éowyn, from before the storm made landfall through to when the last customer was restored, ESB-N ensured communications with customers was prioritised. The 200 staff within the National Customer Contact Centre were supported by an additional 200 volunteers from across the business,

including the activation of the backup customer contact centre, with over 80 of the volunteer agents focusing on communications with vulnerable customers. The team of 80 call agents were put in place to make direct calls with registered vulnerable customers. ESB-N provided information on restoration timelines with the customers and, in support of the NECG's humanitarian subgroup, ESB-N referred information relating to vulnerable customers, whose power had not been restored, to the HSE or An Garda Síochána on a county by county basis each day, in line with GDPR policies. In addition, dedicated ESB-N points of contact were assigned to all local authorities where coordination centres were in operation.

ESB-N maintains a single point of contact for communication with critical infrastructure customers during storms, with a dedicated email address to manage this engagement, providing regular updates throughout the restoration efforts. The type of sites that are managed within this direct point of contact include supplies to Acute Regional Hospitals, AirNav, Coastguard Radio, TETRA and critical infrastructure sites such as water and wastewater treatment plants, telecommunication sites, and local radio station supplies. Unlike other storms, during Storm Éowyn the Department of Education was also a key customer, with schools becoming a high priority as the restoration efforts continued.

The dependencies and interdependencies across various sectors were highlighted during, and throughout Storm Éowyn, and updates to ESB-N critical infrastructure customers were communicated daily. Through this single point of contact, ESB-N worked with these customers who each provided the order of priority of their sites which allowed ESB-N to escalate this to the local area Storm Manager, who then made efforts to deploy the repair crews accordingly.

The team communicated estimated restoration time updates and managed the escalation of over 1,800 of these high priority sites.

EirGrid has conducted an after action review following Storm Éowyn. ESB-N has also carried out a comprehensive review following Storm Éowyn.

While enhanced grid resilience forms part of EirGrid's and ESB-N climate adaptation initiatives, EirGrid is also working closely with ESB-N to address specific lessons learned from the 2025 storm season. Both ESB-N and EirGrid are currently updating their operational procedures as part of 2025/26 Winter Preparedness initiatives.

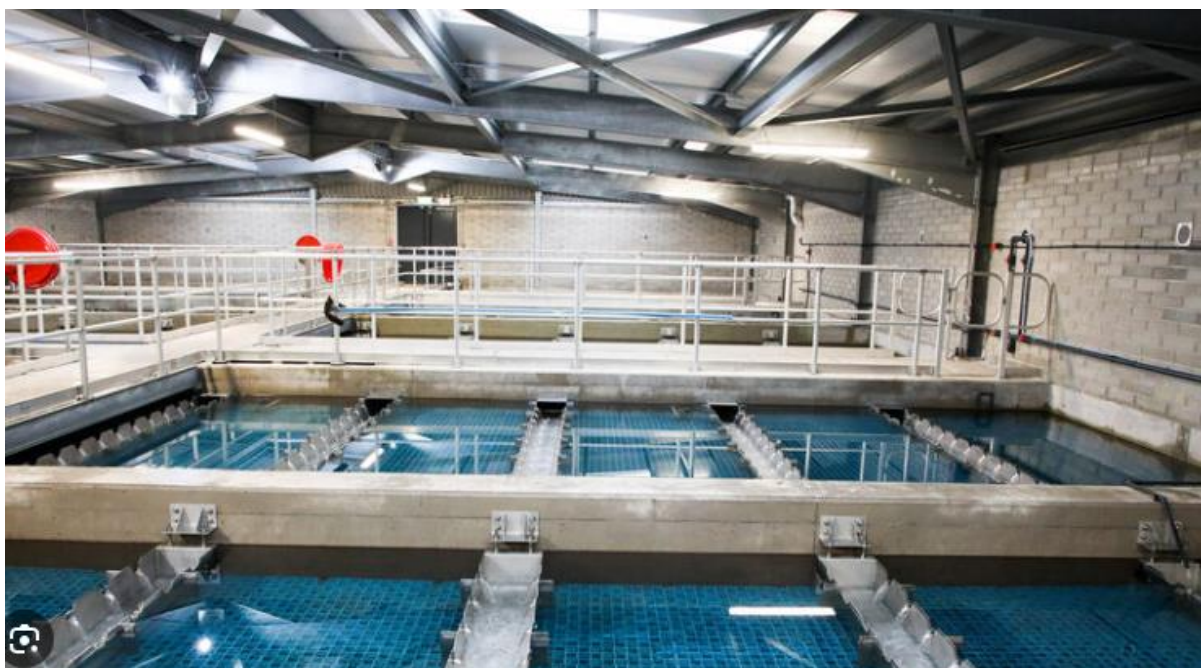
## **5.6 Gas Infrastructure**

No interruption to gas supply occurred during Storm Éowyn. Loss of mains electricity at some Gas Network Ireland (GNI) installations resulted in a switch over to backup diesel or gas generators. Additionally, telecommunications failures interrupted the availability of telemetry from some sites. Telemetry is the automated gathering and transmission of data from remote sites to a central monitoring location. The majority of the large gas installations had a backup communication channel; however, in ten cases, both primary and redundant channels were lost.

Gas Networks Ireland intend to survey gas installations for any risk posed by falling trees, vegetation and flying debris and plan appropriate preventive measures. Additionally, GNI will review existing Severe Weather Plans to ensure learnings from recent extreme weather events are captured.

## **5.7 Drinking water & Wastewater**

At the peak of this storm, over 130,000 customers across 51,000 premises were without water, with a further 750,000 Customers across 295,000 properties considered at risk of supply disruption. In the aftermath of the storm, eleven precautionary Boil Water Notices were issued, affecting approximately 11,500 Customers. The storm also impacted many group water schemes and domestic wells that rely on mains electricity supplies to provide water for use in households, farms, and small businesses. Across Uisce Éireann's infrastructure in total, 286 Water Treatment Plants (WTPs) and 293 Wastewater Treatment Plants (WWTPs) were impacted by Storm Éowyn.



Uisce Éireann is the largest consumer of energy in the Public Sector and depends heavily on electricity to provide water and wastewater services. There is backup generation capacity available at major plants, as well as mobile generation capacity that can be deployed on a priority basis. Through pre-emptive deployment of backup generators, water supply to approximately 146,000 premises (395,000 customers) was maintained with onsite generation. Generators were also deployed at critical wastewater plants. As power outages had the most significant impacts, Uisce Éireann utilised established protocols with ESB-N to identify priority locations for power restoration. Uisce Éireann also identified locations that would not be reconnected for some time and were not suitable for the installation of generators. For customers serviced by these plants, alternative water supplies, including bottled water, bulk containers and tankers, were deployed.

Uisce Éireann has an ongoing programme to make sites 'generator ready', ensuring that assets can be connected quickly to a mobile generator, to maintain service if mains power has been lost. To date, this programme has primarily focused on managing this risk at Treatment Plants. As a result of learnings from Storm Éowyn, this programme is being extended to look at additional asset classes including reservoirs, and water and wastewater pumping stations. In 2025, Uisce Éireann intends to add an additional 100 sites to this programme, followed by a further circa 500 in 2026/2027.

## 5.8 Communications Infrastructure

This section deals with both voice and data connectivity issues that occurred across mobile and fixed services. ComReg estimates that Storm Éowyn's impact on the national telecoms user base was the largest in its recorded history.

Overall, the Emergency Call Answering Service (ECAS) – 999/112, operated well over the period of the storm and was available throughout. While the ECAS was always accessible, there may have been cases where end users had difficulty connecting due to decreased mobile coverage or damage to fixed lines directly after the storm.

- Restoration of telecommunications services was largely concurrent with the return of power to all customers by ESB-N by 11 February, 2025.
- Mobile services were restored to most users (less than 1% of the national userbase impacted) by 7 February, and all users by the 11 February
- Fixed services were mostly restored (less than 1% of the national userbase impacted) by 2<sup>nd</sup> February, and by 19 February less than 0.1% of customers were without services.

### 5.8.1 Fixed Services (voice and data)

The Commission for the Communications regulation (ComReg) sets out how telecommunications providers must report significant security incidents to them via Decision Instrument D08/24. Decision Instruments are formal documents issued by ComReg to implement decisions and outline the obligations of providers.

- According to data provided by ComReg approximately 281,000 users of fixed network services were without connection for a period at the peak of Storm Éowyn,
- Per ComReg, users of fixed network services are fixed voice (Public Switched Telephone Network, Integrated Services Digital Network and Voice over Internet Protocol & fixed broadband subscriber lines.

Storm Éowyn proved to be a challenge for the physical resilience of pole- based infrastructure, with poles brought down by high winds and roadside treefall. Lines

were also impacted, by being cut directly by treefall and brought down with poles. The scale of the damage made repair difficult; over 6,000 poles were damaged, along with more than 1,500 km of fibre and copper in both the access and transmission networks. Repair was also complicated by obligations on operators to manage access with landowners and road closures with local authorities.

Other fixed networks, for example where cable is ducted or eave-flown, as well as mobile telecommunications infrastructure, demonstrated higher physical resilience during Storm Éowyn.

### **5.8.2 Mobile Services**

According to data provided by ComReg, approximately 2,052,100 users of mobile network services may have had degraded or interrupted connectivity for a period at the peak of Storm Éowyn.

Mobile networks were heavily impacted by power loss. Service deteriorated after the first 24 hours without mains power and following the depletion of backup battery systems, with peak outage levels occurring over the weekend following Storm Éowyn. Backup battery systems on mobile infrastructure were insufficient for the duration of power loss, and operators experienced physical access issues in supplying & maintaining generators to many sites.



The recovery of mobile service was effectively concurrent with power restoration. Only six mobile phone masts, out of a national base of around 8,300 experienced structural damage.

The loss of mobile sites and backhaul networks underscored the dependence on mobile telephony for communication. Many organisations providing essential services reported difficulty contacting critical staff. Local authorities and public transport operators who contact staff with mobile phones found it challenging to make contact and deploy staff rapidly. Such challenges could include that their staff were living in areas where the mobile service was degraded, and/or the domestic power supply was unavailable and were unable to charge their mobile device.

Responsibility for the Communications function moved during the summer of 2025 and the new Department of Communications, Culture and Sport is now working with ComReg, industry and other Government stakeholders to improve response coordination and mitigate the impacts of power loss, particularly on mobile networks.

## 5.9 Terrestrial Trunked Radio TETRA

TETRA stands for Terrestrial Trunked Radio, it is a secure and resilient digital two-way radio communications system used by our PRAs. It provides reliable voice and data transmission for mission-critical services such as our PRAs, offering features like high security, interoperability, and emergency functions. In the immediate aftermath of Storm Éowyn, TETRA base station sites were impacted mainly in the West Midlands and Northern Regions due to infrastructure damage and/or power loss following the depletion of on-site battery backups. As per the TETRA network design, a number of pre-designated TETRA sites, which cover large geographic footprints in the affected areas, known as boomer sites, transitioned into a fall-back mode called local site trunking (LST), due to a loss of transmission backhaul. LST allows radio systems affiliated to the boomer site to communicate with each other but not with any other stations, such as Regional Control Centres or the National Emergency Operations Centre. Once these sites lost mains power, they reverted to battery backup and/or generators.



Prolonged mains power loss overnight on 24 and 25 January resulted in the depletion of battery backup on some TETRA sites and transmission backhaul which resulted in additional TETRA sites going out of service on 25 January. 91% of vehicle and mobile coverage and 85% of handheld portable coverage remained nationwide.

TETRA Ireland's restoration efforts focused on priority sites in Connemara, North Mayo, Donegal, Cavan, and Monaghan (North and West regions), providing vehicle/mobile coverage and then restoring overlapping and hand portable coverage. The restoration efforts were targeted based on feedback from on the ground emergency services. By 29 January, TETRA Ireland had restored normal levels of vehicle/mobile coverage nationwide.

The OGCIO has initiated a procurement process to obtain satellite based backhaul connectivity to supplement both the TETRA Ireland network and wider data connectivity in the event of emergencies similar to Storm Éowyn.

## **5.10 Air Transport**

The most significant impact on aviation services stemmed from the loss of telecommunications connectivity. This disruption led to the closure of the North West portion of AirNav Ireland's controlled airspace, known as the North Oceanic Transition Area (NOTA).

The loss of telecommunications connectivity to key communication and airspace surveillance sites was variable and unpredictable. In some instances, services were restored only to be lost again a few hours later due to power outages. Additionally, certain radars were shut down when wind speeds temporarily exceeded the maximum allowable thresholds.

AirNav Ireland coordinated with relevant stakeholders, including UK NATS, the Irish Aviation Authority (IAA), and various airlines, to address the situation. As a result of the disruptions, NOTA airspace was closed for 24 hours, forcing aircraft that would typically transit through this area to seek alternative, less efficient routes. This change had detrimental effects on fuel consumption and arrival times.

Close coordination with ESB-N, through the NECG Critical Infrastructure subgroup, helped prioritise the restoration of power to key sites, including third-party telecommunications infrastructure that affected AirNav operations.

Work has begun, in collaboration with telecommunications providers, to identify the specific exchange sites that AirNav rely on and to assess the feasibility of enhancing power resilience, including the implementation of backup power solutions at these

locations. Additionally, discussions are ongoing to improve communication resilience from AirNav to these exchange sites.

## 5.11 Road and Rail Transport Infrastructure

The transport sector was severely impacted, with all public transport services suspended during the Red Weather Warning with subsequent delays in return to full service while transport corridors were made safe by the removal of fallen trees, power lines and debris. This sector did return to full service rapidly following tree clearing operations.



Local authorities and Transport Infrastructure Ireland, as well as Irish Rail crews, cleared debris and fallen trees within 24 hours making the majority of transport routes safe to operate. There was a high degree of coordination among the public transport operators, the local authorities and ESB-N during this early phase of recovery.

## 5.12 Health Infrastructure

The HSE currently has approximately 4,400 buildings across 2626 different sites. Priority sites include Acute Hospitals, Residential Facilities (including Elderly Care, Mental Health Care, and Long-Term Residential Care). Other sites include primary care facilities, ambulance stations and administrative buildings.

The HSE experienced some disruption to outpatient services during the period of the Red Weather Warning on 24 January. While significant elements of the HSE estate were impacted as a result of loss of power, generator backup supply ensured the continuation of the provision of care. The widespread loss of water and access to digital infrastructure was impactful, particularly in community and primary care services.

Several acute sites were impacted by the loss of power and switched to generator backup. The provision of critical services continued uninterrupted while HSE estates management worked with ESB-N to restore power to these sites. All these sites have at least two ESB-N supplies, either of which can fully power the site. The HSE also has backup power supply available on site.

Some smaller units, including community residential houses, ambulance stations, and administrative blocks, were without power for several days. Larger residential units were equipped with portable generators when no permanent backup generators were available.

While many sites suffered some disruption to their water supply, only one Model 3 site was reported to be at immediate risk of losing its supply completely. HSE estate management worked with Uisce Éireann and ESB-N to prioritise the restoration of power to the affected Uisce Éireann facility. Additionally, contingency arrangements were initiated, with support of Fire Services, to refill the hospital's water tanks until full pressure was restored.

Storm Éowyn resulted in severe and prolonged loss of various communications networks. For the HSE this impacted several acute hospital sites and, while local systems within the hospital continued to operate on the internal network, the ability to connect to national or indeed regional systems was lost for a period.

Following a review of the HSE's primary backup power generation infrastructure, HSE Estates have initiated planning for a replacement program. This is intended to replace older generators, many of which are at least 25 years old, having originally been installed as part of the mitigation measures for Y2K. The new modern units will be of a greater capacity with duplication of resources on site to allow for a prolonged period of operation on backup power and will take account of planned decarbonisation of sites. The works will involve the design and build of improved infrastructure to include generators, fuel storage as well as associated switchgear and uninterrupted power supply (UPS). In addition, as sites are decarbonised, the HSE plans to retain existing dual fired heating and combined heat and power systems as a further contingency.

## **5.13 Public Administration Sector - Principal Emergency Services**

### **5.13.1 Fire Services**

The Fire Services rely on the Managed National Digital Radio Service (MNDRS), which TETRA Ireland operates. TETRA is the primary medium for voice communications for the Fire Services with Regional Communications Centres. Fire Services are mobilised via the Public Switched Telephone Network (PSTN) and Mobile Network (GSM) and use TETRA to provide secure voice from appliances at the scene of an incident, to control rooms.

In the worst affected areas in the aftermath of Storm Éowyn, some stations lost all mobilisation capacity and voice communications. This level of disruption was not experienced in any previous severe weather event. Fire Services, working with the National Mobilisation & Communications System office and the NDFEM, are examining a number of measures to improve the resilience of voice and mobilising systems. This will include considering the use of satellite broadband to provide additional redundancy and replace PSTN, which is becoming a legacy technology. Fire Services are continuing to invest in generator capacity, which will be supported in the Fire Service Capital Programme 2026 – 2030.

### **5.13.2 HSE National Ambulance Service**

The HSE National Ambulance Service (NAS) relies on TETRA and Mobile Broadband to mobilise ambulances by sending details of the casualty to the data terminals on the vehicles. In addition, the National Emergency Operations Centre (NEOC) utilises the same systems to identify the location of ambulances in real time.

During, and in the aftermath of Storm Éowyn, the NAS experienced significant TETRA disruption across several locations, most notably in the Clifden and Castletownbere areas. Other regions, such as the Northwest, Northeast, and Midlands, experienced sporadic outages, resulting in pockets of coverage outages for specific periods.

A review of call statistics for the period from January 24 to 26, 2025, shows a 19% increase in emergency calls nationally compared to the same period in 2024. Notably, call volumes in the Connemara area decreased relative to previous years, which we believe is attributable to people taking precautions and remaining indoors during the storm.

As part of HSE's National Ambulance Services' learnings from Storm Éowyn, NAS are actively exploring the integration of additional communication bearers that do not rely on the same infrastructure as TETRA and cellular networks. If implemented, this should improve resilience and help maintain continuity of service when faced with similar impacts to service provision.

### **5.13.3 Irish Coast Guard (IRCG)**

The Irish Coast Guard operate 23 primary remote radio sites for Very High Frequency (VHF), High/Medium Frequency (HF/MF), Digital Selective Calling (DSC) and Navigational Telex (NAVTEX). There are also approximately 50 secondary sites for paging alerting.

Storm Éowyn mainly affected the remote VHF radio sites on the West Coast, with interruptions to distress radio coverage on the Galway, Mayo, Sligo and Donegal coasts. Interruptions to 112 phones in Valentia & Malin required the diversion of all 112 calls for these areas to the Marine Rescue Coordination Centre (MRCC) in Dublin. IRCG issued a Radio Navigation Warning and put out a safety message on

Ocean FM radio station concerning the absence of a distress watch on the NW coast.

Most outages were due to loss of service from third party telecommunications providers. Faults were attributed to a combination of microwave dishes being blown off alignment and/or prolonged loss of electrical power at these telecommunications sites.

The TETRA system used by the IRCG did experience a partial loss of service, affecting all three Coast Guard Control rooms.

Services continued at risk until full duplication of telecommunication routes was re-established and electrical supply fully restored. Overall, the service to mariners using electronic communications provided by the IRCG, whilst impacted, remained largely operational with basic services restored in reasonably short time period.

After the storm abated, IRCG conducted a nationwide survey and identified damage across 13 radio sites and approximately 30 VHF antennae required replacement. Additionally, there was a service wide formalised debrief conducted across Coast Guard Operations, Volunteer Services and Engineering & Logistics. This included a review of Coast Guard Coastal Unit incident preparedness.

## **5.14 Department of Agriculture, Food and the Marine**

### **5.14.1 Horticulture**

Storm Éowyn resulted in unprecedented levels of damage for some growers in the horticulture sector. The Department of Agriculture, Food and the Marine engaged with Teagasc and other stakeholders to assess the extent and significance of damage caused to this critical infrastructure in the sector. A targeted re-opening of the 2025 Scheme of Investment Aid for the Development of the Commercial Horticulture Sector was facilitated to deal only with growers proposing investments in response to the damage caused by the Storm. New materials and/or new specialised horticultural plant/equipment/structures, including polythene covers for polytunnels, were eligible for consideration of grant aid under the Scheme. Support was targeted to alleviate the greatest impact to the sector and to allow growers

affected by the storm to submit applications for grant aid to assist in rebuilding their business infrastructure.

#### **5.14.2 Meat Processing**

Power and internet outages caused by Storm Éowyn disrupted operations at several slaughter plants across the country. These disruptions led to delays in animal processing, while electronic systems used for traceability and certification were temporarily impacted. In response, officials from the Department of Agriculture, Food and the Marine worked throughout the immediate aftermath of Storm Éowyn, and engaged with stakeholders including meat processors, in restoring inspection services and keeping food businesses informed during the storm. Measures were implemented to ensure that processing could resume promptly once power was restored thus minimising the impact at farm level.

#### **5.14.3 Farms**

In March 2025, a special three-week tranche of the Targeted Agricultural Modernisation Scheme (TAMS 3) was opened to support farmers after Storm Éowyn, providing grant aid for PTO backup generators , sheep, bovine and equine fencing, wood/biomass chippers and mulchers. The scheme supports new installations and helps farmers become more resilient to future weather events by supporting investment in equipment that can restore power quickly after storms. Plans to introduce grant aid support under TAMS 3 for the replacement of roofs damaged during storms were also recently announced. The application process for this specific investment will be available later this year. In the meantime, farmers have been urged to carry out a structural assessment of their farm buildings.

#### **5.14.4 Forestry**

Storm Éowyn caused extensive damage to trees both on farms and in forestry plantations. A Forest Windblow Taskforce was established in the immediate aftermath of Storm Éowyn, with the express purpose of ensuring that storm damaged forests are managed safely and appropriately. The Taskforce comprises stakeholders representing forest owners, forestry companies, sawmillers, Teagasc, Coillte and others, and is meeting on a regular basis. It is informing the Department

of Agriculture, Food and the Marine's, and the wider sector's, response to Storm Éowyn, with particular emphasis on dealing safely with the large areas of forest that have been blown down. This includes the prioritisation of felling licences for windblown trees, and examination of the issues arising in relation to the harvesting, haulage and sawmilling of the blown trees. The Taskforce members have developed an action plan. The action plan serves as a guide in tackling the harvesting, haulage, training, supply chain, marketing and replanting challenges caused by the storm events. Subject to the approval of the Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation, support will be provided through a reconstitution grant scheme to assist those private forest owners affected by the storm.

## 5.15 Recommendations

The recommendations acknowledge the work already under way to enhance the resilience of essential services in Ireland.

### 5.15.1 Immediate Actions by Operators of Essential Services

As the development of Critical Entities Resilience is time-bound by regulation, the operators of essential services must take immediate actions to mitigate known vulnerabilities ahead of the next storm season. It remains the responsibility of all organisations impacted by Storm Éowyn to put in place clear and practical arrangements to ensure the continuity of essential services. Electricity, Gas, Communications, Water and Wastewater undertakings should report these through their lead government department to the GTF on Emergency Planning. All Government Departments and Agencies should continue to report on their winter preparations directly to the GTF on Emergency Planning at the October meeting, as has been the practice.

### 5.15.2 Regulatory Measures

The CER Regulations were signed into law in October 2024. Since then, competent authorities for each sector have been appointed to provide oversight. Over the next two years, critical entities, once identified, will be required to conduct a risk assessment, taking into account key national risks, implement appropriate mitigation measures against the identified risks, and report any incidents. Critical entities in the Digital Infrastructure sector are excluded from the requirements of the CER Regulations but are expected to have at least equivalent requirements on them under the forthcoming National Cyber Security Bill, transposing the NIS2 Directive.

Delivery of the Strategy for the Resilience of Critical Entities, (target for delivery is Q1 2026) ([Critical Entities Resilience \(CER\) Regulations](#))

### 5.15.3 Oversight

Under the CER Regulations, the Minister for Defence is responsible for preparing the National Critical Entities Resilience Strategy. The Department of Defence will

coordinate the development of this national strategy together with the relevant competent authorities. The GTF on Emergency Planning, chaired by the Minister for Defence, will operate as a cross-government forum providing inter-departmental oversight of the process. The work to strengthen the resilience of critical infrastructure remains the responsibility of critical infrastructure operators with appropriate oversight by the national competent authorities.

#### **5.15.4 Critical Infrastructure Sectoral Groups**

The Department of Defence has established an energy sector group as a pilot programme to assist in maturing the resilience arrangements for Ireland's critical entities. This group has engagement from the Electricity and Gas subsectors. The Department of Defence will develop an additional sectoral group to cover the water and wastewater sectors and other sectors as required. Progress in these groups will be reported to the GTF on Emergency Planning. Additionally, as the NIS2 Directive addresses resilience in the digital infrastructure and communications sphere, the Department of Defence will work with the National Cyber Security Centre (NCSC) to ensure that physical resilience is factored into requirements in the digital infrastructure sector, which includes communications.

#### **5.15.5 Local Critical Entities Group**

This chapter has not addressed local interactions with operators of essential services. However, local authorities play a crucial role in responding to severe weather events. As the lead agencies for managing these incidents, local authorities should consider establishing a local critical entities group. The purpose of this group is to foster inter-agency relationships with operators of essential services ahead of future severe weather events and to create an emergency contact list. This group should include operational contacts from agencies such as Uisce Éireann, ESB-N, GNI, local authority broadband officers and their networks, as well as representatives from regional and national telecommunications infrastructure companies as relevant. The group should be chaired by the emergency planning officer of the local authorities. It is acknowledged that this initiative may be established in some local authorities.

#### **5.15.6 Backup Power**

Disruption to Gas/Electricity Supply is a key risk identified in the national risk assessment. The cascading impacts of the disruption to the electricity supply following Storm Éowyn highlight the need for all operators of essential services to ensure adequate backup power generation is available. While power to the majority of affected customers was restored within 1 week, complete power restoration following Storm Éowyn took 18 days. Whilst it is not envisaged that every element of critical infrastructure be designed to be available for an indefinite duration without mains power, major subsystems within critical services must be designed to endure long periods without mains electrical power. Detailed guidance on backup power generation should be developed for operators of essential services through the sectoral groups established by the Department of Defence and the NCSC.

#### **5.15.7 Coordination of Critical Infrastructure Operators through the NECG**

During any crisis with a potential impact on the operators of essential services, the chair of the NECG must consider the establishment of a critical infrastructure subgroup. The purpose of the group will be to coordinate with the operators of essential services for the purpose of informing the NECG of the details of any disruption to essential services and to advise on restoration times and cross-cutting issues.

This recommendation must be included in all lead government departments crisis plans for the NECG.

#### **5.15.8 Vegetation and Forestry Management**

In the context of protecting key electricity infrastructure and limiting the impact of future storms, legislative measures should be progressed to:

- provide for enhanced proactive vegetation management measures to protect the electricity and telecommunications network, including powers to address vegetation that presents risks to the electrical network;

- to included establishment of height limitations for roadside vegetation and the powers and responsibility to enforce same, and,
- provide for the establishment and maintenance of Forestry Corridors to improve resilience and operational safety of the electricity and telecommunications network.

## 6 Chapter 6: Implementing the Review Recommendations

Storm Éowyn tested both local and national preparedness for responding to severe weather events. The findings indicate that the response was effective in safeguarding the public during the storm. However, the prolonged restoration period following Storm Éowyn led to very difficult conditions for communities and responders in many parts of the country. Lessons have been identified to improve the humanitarian response which will require more integrated working between local responders and communities, supported at a central level. A working draft “Guide to Community Support Centres” has been developed during the review process, setting a consistent approach for the humanitarian response in future severe weather emergencies. Local authorities have agreed to implement this measure, working alongside communities.

This review also addresses the need to improve the resilience of critical infrastructure and essential services. Implementing the CER Directive is identified as a key driver to achieving a coordinated approach with responsibility assigned to the relevant regulators and competent authorities under a central structure overseen by the Office of Emergency Planning.

The focus of the NDFEM is on achieving effective coordination during the response to severe weather events. Effective coordination is demonstrated through:

- An early response prioritising public safety;
- Clear public safety advice supported by strong information management;
- Local coordination structures, harnessing community initiatives which can be integrated into the response;
- Clear leadership at local and national level that enables multi-agency coordination; and
- An Emergency Coordination Centre bringing all the responding agencies, essential service providers and supporting Departments into a single structure to ensure effective coordination and anticipate emerging issues.

The Review Steering Group concluded that many aspects of the response worked well, particularly at the early stages in warning the public and activating the necessary coordination structures. As the response moved to restoration and recovery, supporting the worst affected communities became a key issue. This was compounded by the impact of prolonged electricity supply outages on water supply and other essential services. ESB-N, Uisce Éireann and the Local Government sector are conducting detailed reviews on their operational responses that will identify sectoral measures needed to improve resilience.

The longer-term change to climate conditions in Ireland is increasing the frequency of Atlantic storms and flooding emergencies. Early warning, effective coordination, improved resilience and increased community engagement are identified in this review as the areas that require focus and continuous improvement. This chapter closes the review of the coordinated response to Storm Éowyn, committing all participating organisations to implementing the recommendations as soon as possible with oversight of the completion of the recommendations through the GTF on Emergency Planning.

# Appendix 1: Storm Éowyn Review Steering Group

## Terms of Reference

This review is focused on the response to severe weather that impacted communities in many part of the country during Storm Éowyn, with a view to identifying lessons that will help us improve the response for future storms.

This review will address:

- a) the meteorological conditions that gave rise to Storm Éowyn and the forecasting response
- b) the coordination of response measures at local level supported by a whole-of-government response at national level
- c) the assembly and communication of safety advice and other relevant information to the public
- d) the impacts on critical infrastructure and essential services
- e) the ability of critical infrastructure and essential services to withstand high intensity storms and how to recover critical infrastructure rapidly following future storms
- f) the provision of assistance to communities overwhelmed by loss of essential services in the shortest possible timeframe
- g) the transition from response to the recovery phase at national level
- h) how to develop household resilience, community resilience and business continuity in the commercial sector
- i) recommendations on the change necessary to improve response, infrastructure resilience and humanitarian assistance
- j) areas of the response that worked well and should be promoted and reinforced

This review will be conducted in accordance with sections 6.15/ 6.16 of the SEM. All recommendations of this review will be submitted to the GTF on Emergency Planning for approval.

## Appendix 2

### Department of Social Protection Humanitarian Assistance Scheme

The Government provides assistance to households and families affected by severe weather emergencies through the Humanitarian Assistance scheme operated by the Department of Social Protection (DSP). This scheme is managed by the Community Welfare Officer in the local community through the network of DSP Intreo Offices.

The Humanitarian Assistance Scheme has been activated 16 times in the past two years in response to severe weather emergencies.

The Department of Social Protection adopts a three-stage approach;

Stage I is available to people while they are directly impacted by the storm. It targets people who need immediate supports. This stage of humanitarian assistance is to help people with the essentials, *such as* food, water, shelter and warmth.

Stage II supports generally involve the replacement of white goods, basic furniture items and other essential household items following damage from a severe weather event.

Stage III is focused on humanitarian support to help make household accommodation habitable again in the aftermath of a severe weather event. It generally includes funding for work such as plastering, dry lining, relaying of floors, electrical re-wiring and painting.

- Stage I payments are not subject to income limits.
- Stages II and stage III are subject to income limits of €50,000 for a single person; €90,000 for a couple, and €15,000 per dependent child.
- Reduced or a tapered level of support may be provided in cases where a household's income is above the threshold set. The level of payment depends on how severe the damage is as well as a person's ability to meet the repair costs.
- The income test for the Humanitarian Assistance Scheme is more generous than that applied under means tested social welfare payments in

general. The basic principle of the income test is that individuals and families with average levels of income will qualify for assistance, including non-social welfare recipients.

- In relation to large works to be carried out under Stage III of the scheme, DSP has awarded a contract for the provision of loss adjusting services in respect of the scheme to support the assessment of damage to individual households in cases where structural repairs are necessary, and the cost of repair is estimated in excess of €8,000. The affected house is independently assessed by the loss adjuster who will also independently assess the quoted costs of repair and make a recommendation to the department on the amount of support required to return the house to a habitable condition. Future risks and possible remedial measures to protect the household are positively considered within the assessment of repairs. This recommended amount is then subject to the income test to establish the capability of the household to meet those costs. The payment of the agreed amount can be made in stage payments directly to the applicant and interim payments can be made to the customer where deposits are required for the commencement of works. Therefore, the applicant does not have to use their own financial resources to cover payments, within the agreed amount, at any stage of the process.

## **Department of Enterprise, Tourism and Employment**

The Department of Enterprise, Tourism and Employment operates an Emergency Humanitarian Flooding Scheme for businesses. The Scheme is activated for specific flooding incidents. These Schemes are specifically targeted, providing a contribution to small businesses of up to 20 employees, as well as community, voluntary and sporting bodies, which have experienced damage as a result of flooding. A condition of eligibility for these Schemes is that a business must not have been able to obtain flood insurance through any fault of its own. As Storm Éowyn was a windstorm event, the Scheme was not activated on this occasion.

[gov.ie/tithiocht](http://gov.ie/tithiocht)

An Roinn  
Tithíochta, Rialtais Áitiúil agus Oidhreachta



An Roinn Tithíochta,  
Rialtais Áitiúil agus Oidhreachta  
Department of Housing,  
Local Government and Heritage