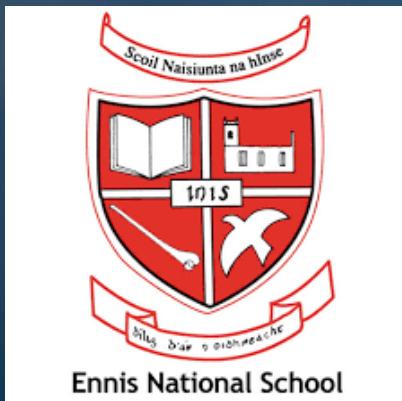


# EFFECTS OF CLIMATE CHANGE- IRELAND

KNOCKANEAN N.S.



ENNIS N.S.



CLARE EDUCATION CENTRE



CLARECASTLE N.S.



MARY IMMACULATE COLLEGE



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# A PICTURE PAINTS A THOUSAND WORDS.....



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# TYPICAL IRISH CLIMATE

## In Short.....

- Mild winters, cool summers, frequent rain, and ever-changing skies — pack a raincoat and sunglasses, just in case!
- **Sunshine:** Not Ireland's strongest feature — about **1,200–1,600 hours per year**, Portugal has over 3000 hours (300 days)
- **Wind:** It's often breezy, particularly along the coasts. Atlantic storms can bring strong winds in autumn and winter.
- **Rain:** Rain is frequent — not always heavy, but often drizzly or showery. Expect **200+ rainy days per year** in many areas. Portugal Porto (North)~120–140 days/year Algarve (South)~40–60 days/year



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# OVERALL IMPACT OF CLIMATE CHANGE IN IRELAND

- There has been a **decrease in the number of frost days** (temperatures below 0°C) and a shortening of the frost season duration. In contrast, there has been an **increase in the number of warm days** (temperature  $> 20^{\circ}\text{C}$ ). This is in line with trends evident for the rest of Western Europe.
- For Ireland, satellite observations indicate that **sea levels around Ireland have increased** by approximately 2-3 mm per year since the 1990s.
- The mean annual temperature for Ireland has experienced an overall increase of 0.9°C over the last 120 years with fifteen of the top 20 warmest years on record having occurred since 1990.
- The last decade from 2006 - 2015 has been the **wettest period** in the period 1711- 2016 and there is evidence of an increasing trend in winter rainfall and a decreasing trend in summer rainfall.

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# MAJOR WEATHER EVENTS IN IRELAND IN LAST 7 YEARS

YEAR	DATE	EVENT
• 2025	Oct 3rd 2025	Storm Amy
• 2025	Jan 21 <sup>st</sup> 2025	Violent Storm Éowyn
• 2024	Sun 21 Jan 2024	Violent Storm Isha
• 2023	Annual	2023 confirmed as Ireland's wettest and warmest year on record
• 2022	July 2022	Highest Temperature Recorded in Ireland since 1887
• 2022	Fri 18 Feb 2022	Violent Storm Eunice
• 2021	Tue 7 Dec 2021	Violent Storm Barra
• 2020	Wed 19 Aug 2020	Violent Storm Ellen
• 2018	Summer	Heatwaves and Drought
• 2018	28 Feb - 4 Mar	Snow Storm Emma

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# IMPACT ON ANIMALS/WILDLIFE

## General Impacts

- **Rising temperatures**
- **Changing seasonal patterns**
- **Extreme weather events (storms, floods)**



## 鸟类 (Birds)

- **Migratory birds** (e.g., swallows, cuckoos) are arriving earlier in spring, leading to mismatches in food availability.
- **Seabird populations** (e.g., puffins, kittiwakes) are declining
- **Habitat loss** from coastal erosion is threatening ground-nesting and cliff-nesting bird species.



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# IMPACT ON PEOPLE

## Weather & Flooding

- **More frequent and intense rainfall** increases the risk of flooding
- **Storm surges and coastal erosion**
- **Damage to property and infrastructure** from storms and flooding

## Health & Wellbeing

- **Rising temperatures** may lead to more heat-related illnesses.
- **Increased pollen levels** from longer growing seasons can worsen asthma and allergies.
- **Mental health impacts** are rising due to eco-anxiety, especially among younger generations.



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## INCREASED AMOUNT OF STORMS AND STORM DAMAGE

- Climate change is increasing the frequency and intensity of storms.
- Warmer air holds more moisture, leading to heavier rainfall during storms.
- Ireland is experiencing more frequent Atlantic storms, especially in autumn and winter. Most recently Storm Amy, Storm Eowyn, Storm Imogen, Storm Ashley
- Storm surges along the coast are becoming more destructive.
- Infrastructure such as roads, power lines, and buildings are under greater threat during severe storms.

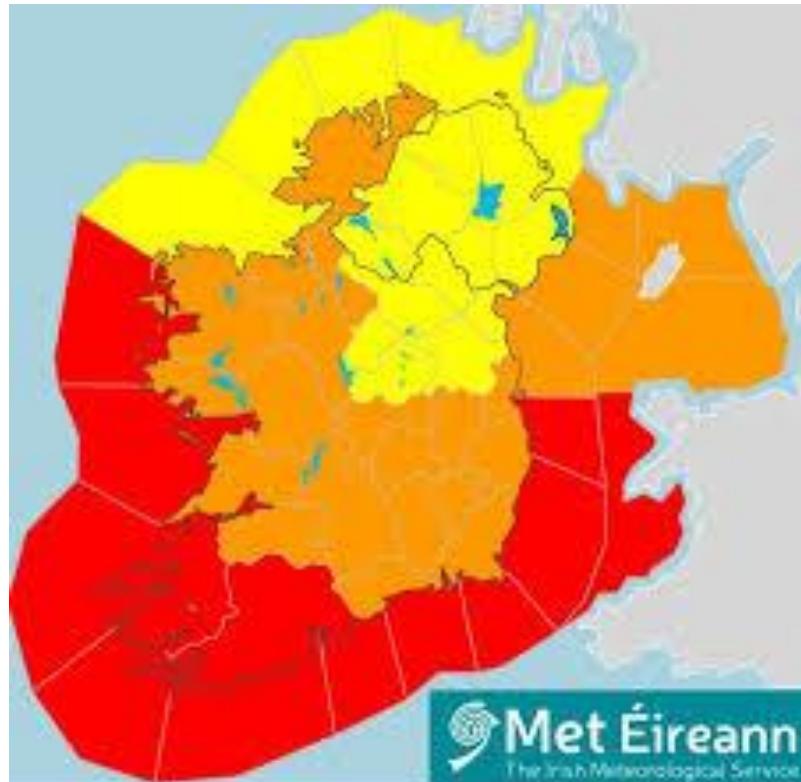


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## INCREASED RAINFALL

- Climate change is causing **heavier and more frequent rainfall** in many regions, in Ireland.
- **Warmer air holds more moisture**, leading to more intense downpours.
- In Ireland, **winters are becoming wetter**, especially in the west and northwest.
- **Flash flooding** is more common.
- **Urban drainage systems** struggle to cope, increasing flood risk in towns and cities.
- **Climate Projections**<sup>\*</sup>: Models suggest Ireland may see warmer, wetter winters and hotter, drier summers by 2050.

# INTRODUCTION OF WEATHER WARNINGS



- Weather Warnings in Ireland - Introduction & History
- Met Éireann is Ireland's national weather service, responsible for issuing weather warnings.
- Official colour-coded weather warnings (Yellow, Orange, Red) were introduced in 2012.
- The system was created to **improve public safety** during severe weather events.
- Warnings are issued for **wind, rain, snow, ice, fog, thunderstorms, and coastal conditions**.
- The colour system helps people **understand the severity** of upcoming weather: The most recent severe example was Storm Eowyn in January 2025 which brought a rare red weather alert for Ireland, threatening winds over 150 km/h and considered one of the strongest storms globally at the time.

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## IMPACT OF STORMS IN CLARE

In 2009, severe storms caused significant flooding at St. Flannan's College in Ennis, County Clare, leading to the temporary closure of the school. Classrooms and facilities were damaged, disrupting the school schedule and requiring costly repairs.



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# IMPACT OF STORMS IN CLARE

In January 2020, powerful storms and high tides caused severe damage to the promenade and sea defenses in Lahinch, County Clare. The storm surge led to flooding, infrastructure damage, and forced the temporary closure of the beachfront and local businesses.













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# IRELAND'S PROGRESS ON CLIMATE CHANGE

- Overall emissions drop In 2024, Ireland's GHG emissions fell by about 2%
- Emissions in 2023 were the lowest in 30 years. A 6.8% drop from 2022, especially pronounced in energy and agriculture sectors.
- Power generation & industry .Emissions decreased by 7% in 2024 in these sectors — good progress in electricity generation and some industrial emissions
- Renewables in electricity & wind capacity.Over 35% of electricity generation is now from wind
- Transport emissions slight decrease.Transport emissions dropped 1.2% in 2024. Partially due to increased biofuel blending

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## VOICES OF EXPERIENCE

When it comes to discussing climate change, older people have one advantage, they have watched it happen and have experienced its impacts.”

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# VOICES OF EXPERIENCE

One of the things I think about when I think about the weather is that when we were growing up and went to school, everybody walked to school. ... If it was bucketing rain you walked to school ...”

“We seemed to cycle every day of the Summer holidays and there didn’t seem to be tempests, or storms, or huge rainfalls that interfered with that sort of existence, you know?”

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# VOICES OF EXPERIENCE

It is frightening what is coming down the track for farmers.”

“The thing I am grateful for is that I am as old as I am ... Looking around at the young farmers I wouldn’t swap places with them for a second because it is getting more difficult between climate change and CAP.”

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# SOME FAMOUS QUOTES ON CLIMATE CHANGE

**Barack Obama:** "We are the first generation to feel the effect of climate change and the last generation who can do something about it.

**"Ban Ki-moon** (Former UN Secretary General): "There is no Plan B because there is no Planet B."

**Sir David Attenborough:** "The truth is: the natural world is changing. And we are totally dependent on that world. It provides our food, water, and air. It is the most precious thing we have and we need to defend it."

**Greta Thunberg:** 'I want you to act as if your house is on fire, because it is"

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