

22 September 2022

Climate Action Regional Office (CARO)  
Atlantic Seaboard South

## *Coordinating Local Government to deliver Climate Action*



Kevin Motherway  
Regional Coordinator  
A/Senior Scientist

Oifig Réigiúnach um  
Ghníomhú ar son na hAeráide  
Rialtas Áitiúil  
Cósta Atlantach Theas

Climate Action  
Regional Offices  
Local Government  
Atlantic Seaboard South



# CARO Establishment

5 year funding from DECC :

- **Build** on Experience & Expertise
- **Drive** Climate Action & Build Capacity within LA Sector
- **Coordinate** Engagement across Various Agencies and Government Departments
- **Translate** Sectoral Efforts to Local Level



# CARO Programme Work



Management & Governance



Adaptation



Mitigation



Communications & Citizen  
Engagement



Training & Education

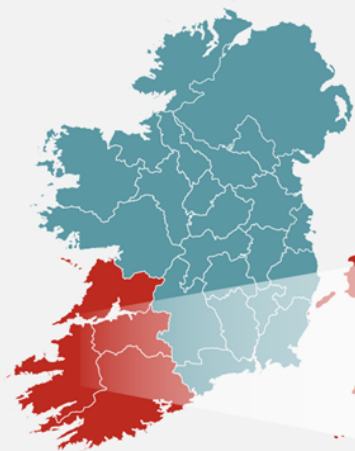


Knowledge Development



# CARO Atlantic Seaboard South

## Atlantic Seaboard South



### Regional Profile

Local Authorities in the Region  
Clare, Limerick City & County, Kerry,  
Cork City and Cork County

**Population:** 1,004,300

**Area:** 18,518 Km<sup>2</sup>

**Length of coastline:** 2,263Km

**Inhabited Offshore Islands: 7**  
(Population: 495)

### Knowledge Hub Development



**Sea Level Rise**



**Coastal Flooding**



**Storms**



**Groundwater Flooding**



**Rural Pluvial Flooding**

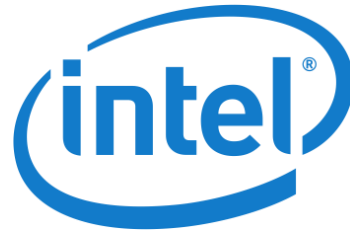
# Climate Action

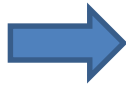
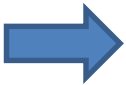
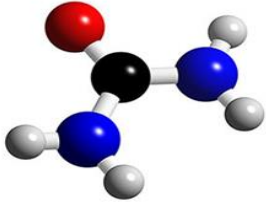
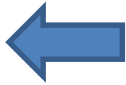
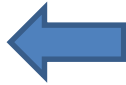
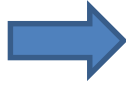
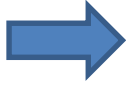
**Climate Mitigation** +

**Climate Adaptation**



# The Intel Parable





# www.climateireland.ie



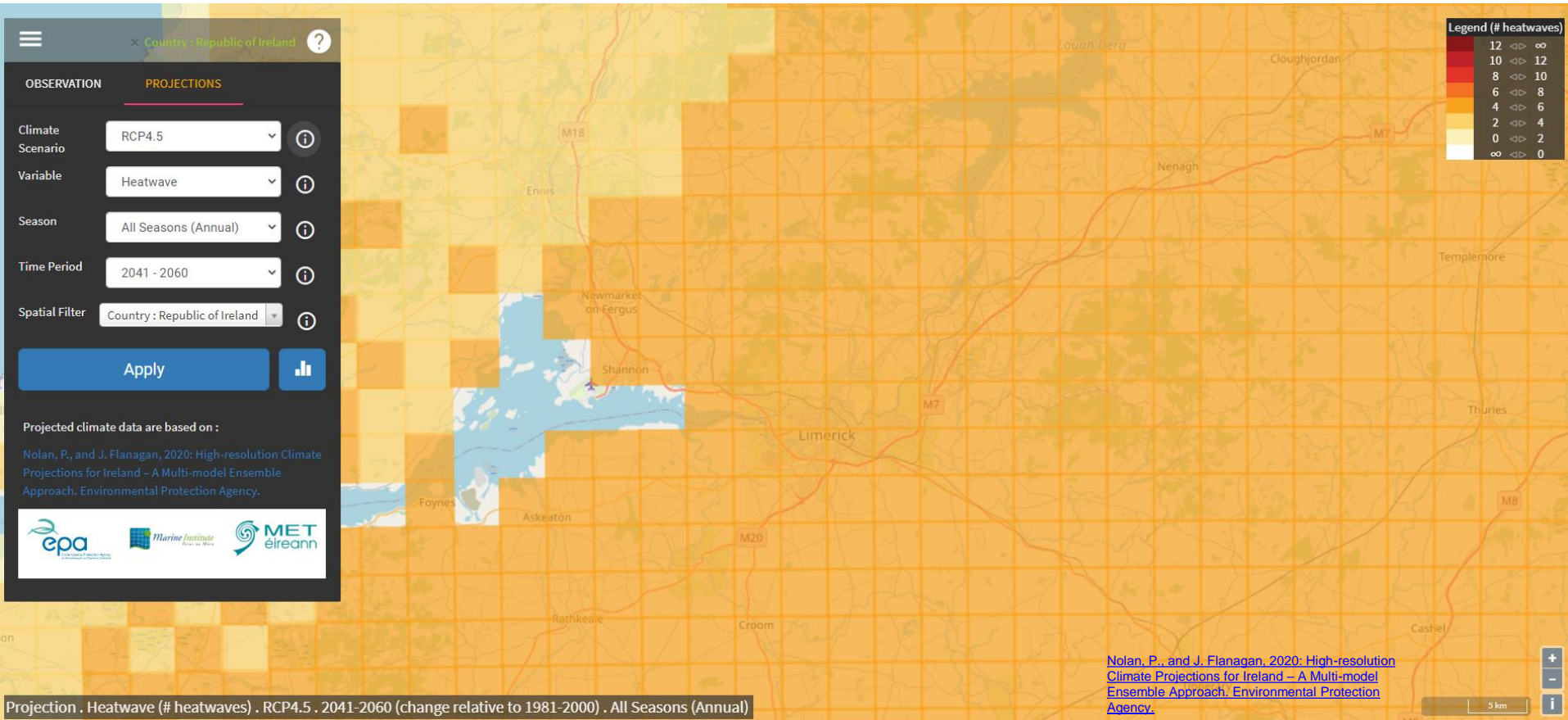
 Climate Ireland



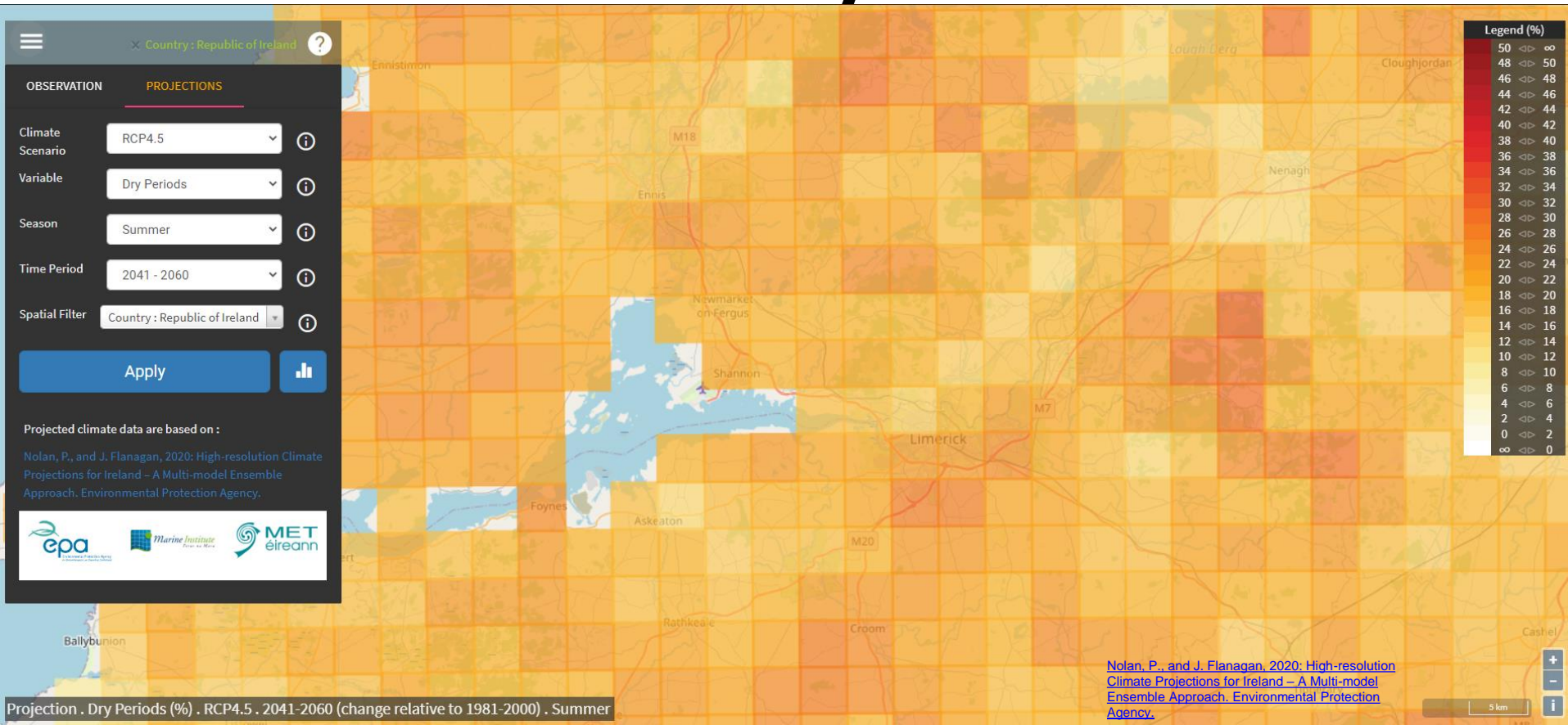
## Ireland's Climate Status Tool



# 2041-2060: 5.3 Heatwaves each Summer



# 2041-2060 Dry Periods (>5 days of <1mm) increase by 27%

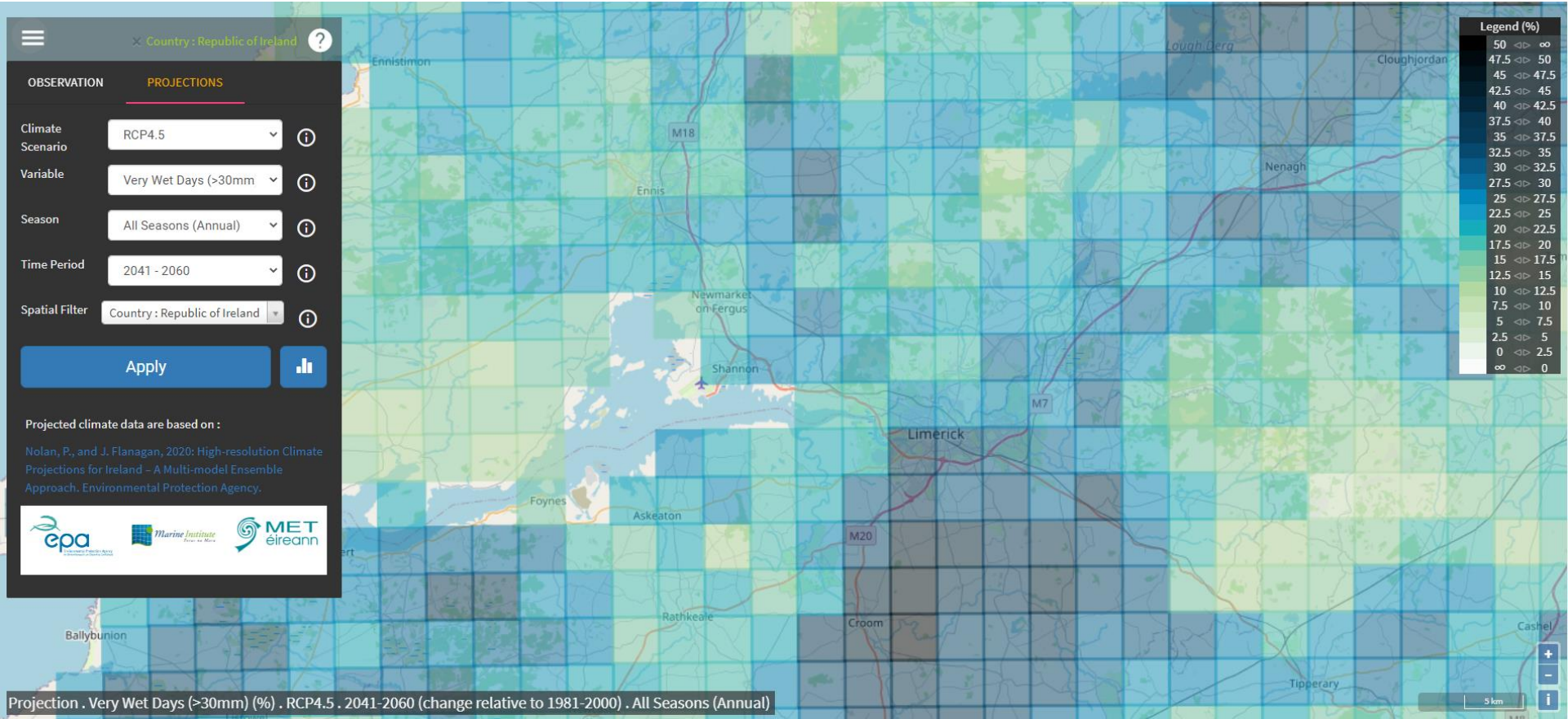


# 2041-2060 Growing Season Start 21 days Earlier

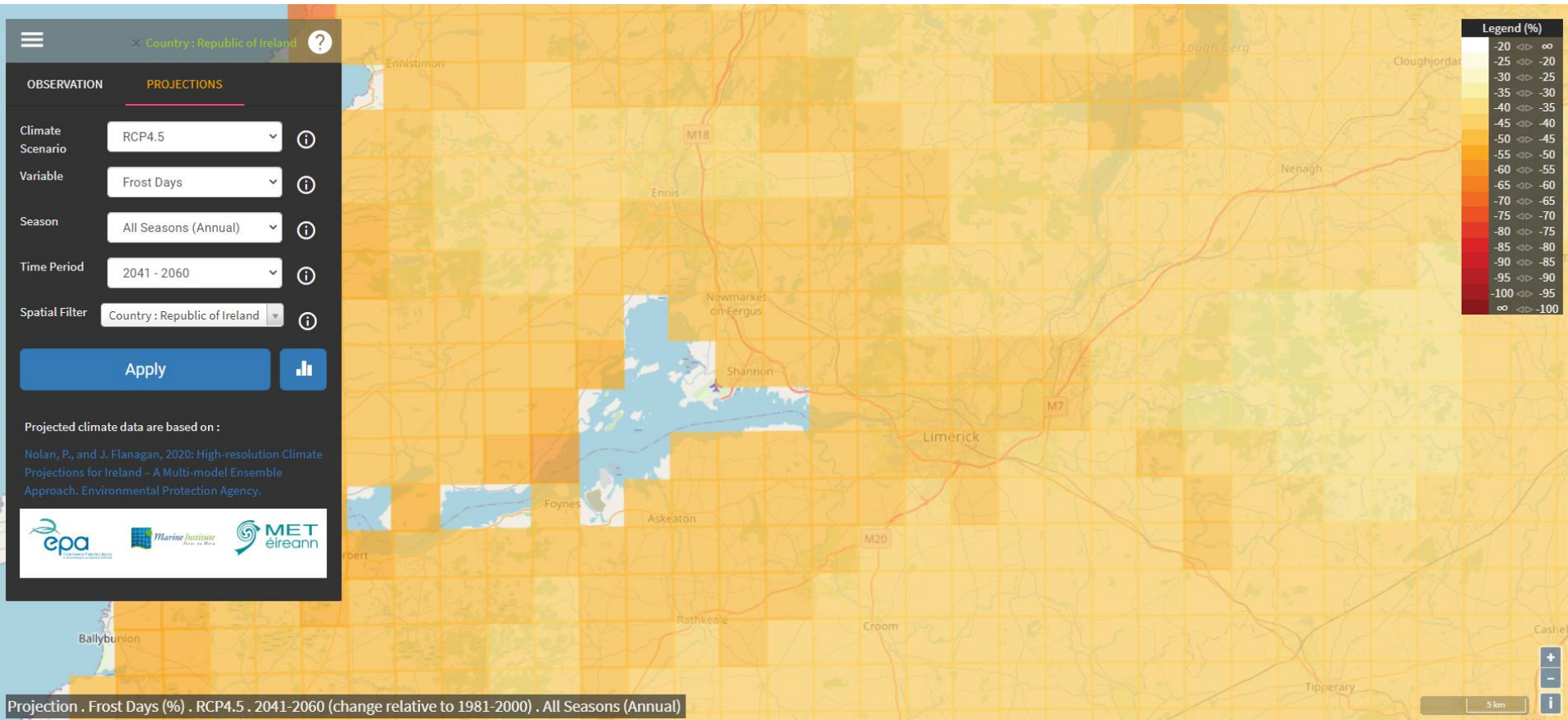
Foynes: lasts 13.4 % longer, 34 day longer grazing season



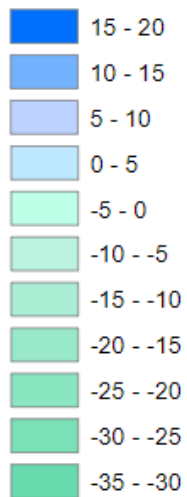
# 2041-2060 Annual Very Wet Days (>30mm) +35%



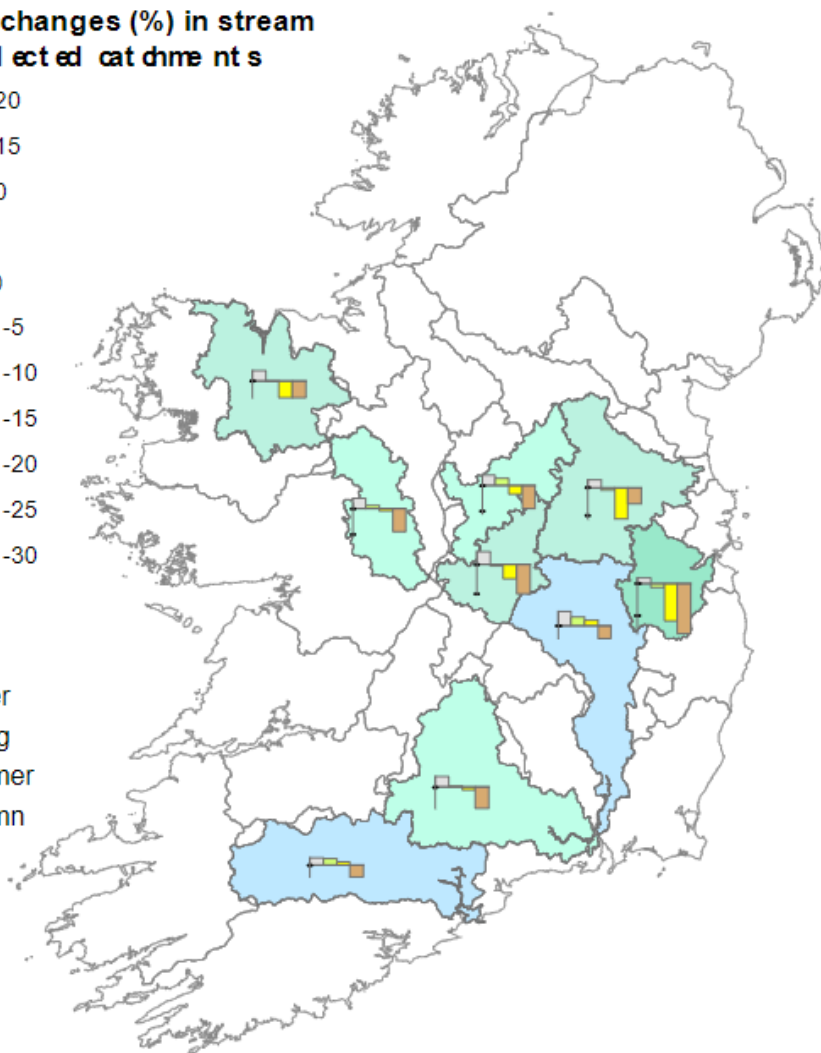
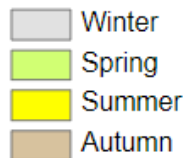
# 2041-2060 Frost Days: -45.9%



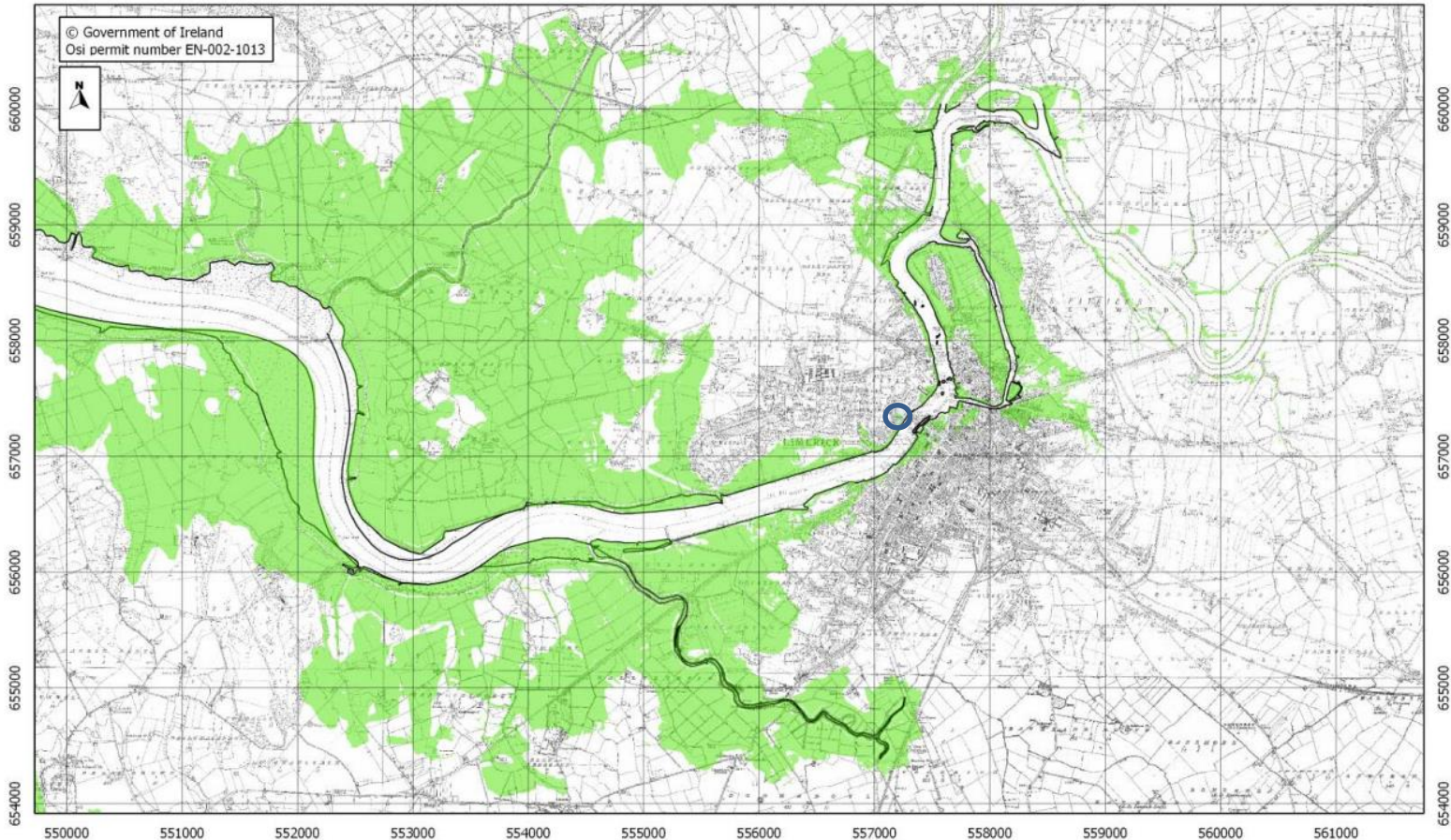
**Seasonal changes (%) in stream  
flow for selected catchments**



5%



© Government of Ireland  
Osi permit number EN-002-1013



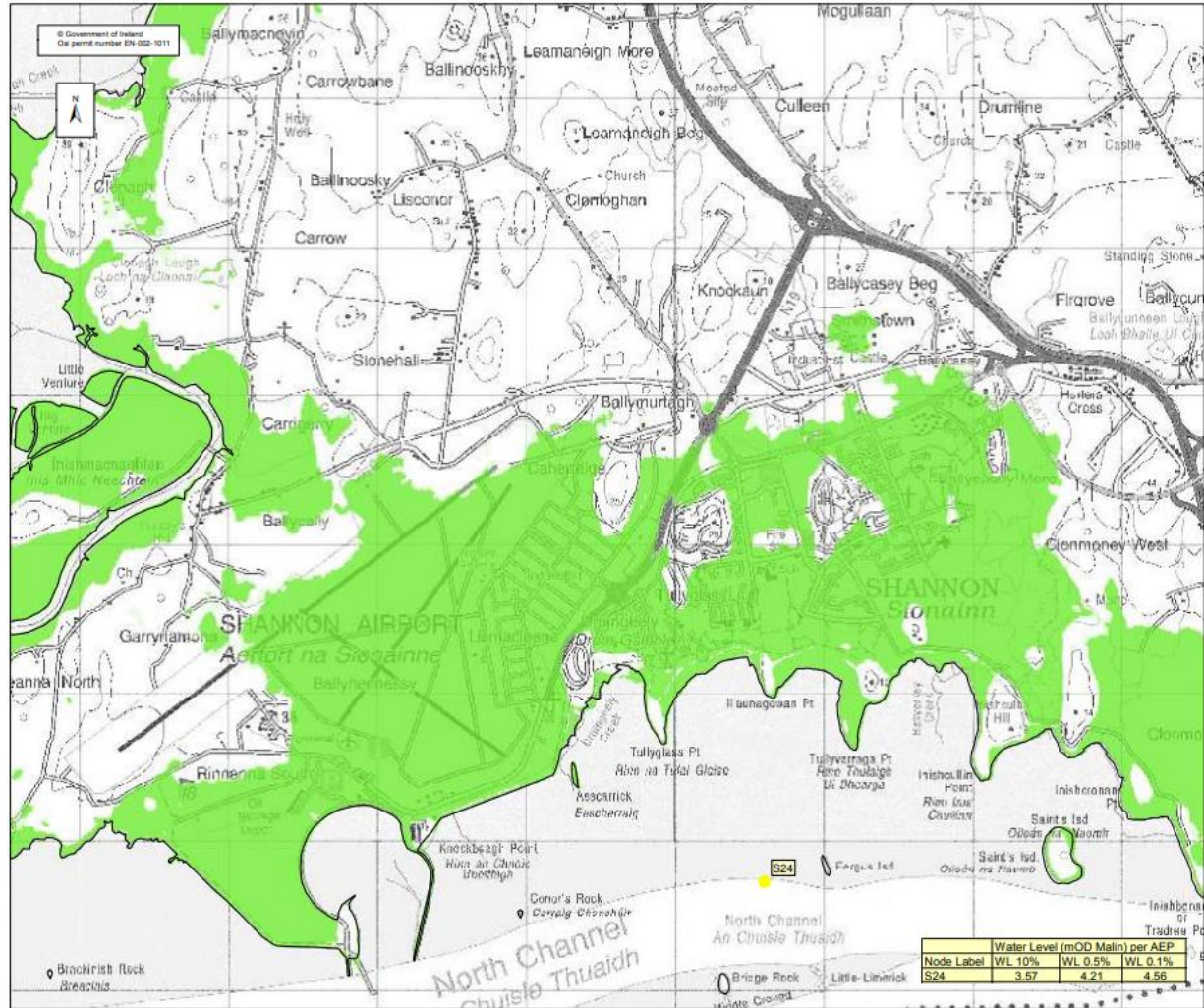
Scale Bar

**USER NOTE:**

USERS OF THESE MAPS SHOULD REFER TO THE DETAILED DESCRIPTION OF THEIR DERIVATION, LIMITATIONS IN ACCURACY AND GUIDANCE AND CONDITIONS OF USE PROVIDED IN THE APPENDIX OF THIS BOUND VOLUME. IF THIS MAP DOES NOT FORM PART OF A BOUND VOLUME, IT SHOULD NOT BE USED FOR ANY PURPOSE.

**Legend**

- 0.5% AEP FLOOD EXTENT
- High Water Mark (HWM)



© Government of Ireland  
 OS parcel number 514 002 1011



Node Label	Water Level (mOD Malin) per AEP		
	WL 10%	WL 0.5%	WL 0.1%
S24	3.57	4.21	4.56



**EXTENT MAP**

- Legend:
- 0.5% AEP FLOOD EXTENT  
(1 in 200 chance in any given year)
  - 0.1% AEP FLOOD EXTENT  
(1 in 1000 chance in any given year)
  - High Water Mark (HWM)
  - Node Point
  - Node Label (refer to table)

USER NOTE:  
 USERS OF THESE MAPS SHOULD REFER TO THE DETAILED DESCRIPTION OF THEIR DESIGNATION, LIMITATIONS IN ACCURACY AND GUARANCES AND CONDITIONS OF USE PROVIDED AT THE FRONT OF THIS BOUND VOLUME. IF THIS MAP DOES NOT FORM PART OF A BOUND VOLUME, IT SHOULD NOT BE USED FOR ANY PURPOSE.



Elmwood House  
 74 Boucher Road  
 Belfast  
 BT 12 6RZ  
 Northern Ireland



Office of Public Works  
 17-19 Lower Hatch Street  
 Dublin 2  
 Ireland

Project:  
**IRISH COASTAL PROTECTION STRATEGY  
 STUDY - PHASE IV**

Map:  
**SHANNON ESTUARY FLOOD EXTENT MAP**

Map Type:	FLOOD EXTENT
Source:	TOTAL FLOODING
Map area:	RURAL AREA
Scenario:	CURRENT
Figure No.:	SH / RA / EXT / 16
Drawn By:	JMC
Date:	JUNE 2011
Checked By:	JMC
Date:	JUNE 2011
Revision:	0

Drawing Scale: 1:25,000      Plot Scale: 1:1 @ A3



# Climate Action: Regional & Local Roads



**CARO is assisting the Local Authority sector by providing guidance and training to adapt to Climate Change impacts by:**

- **Loss of road function**
- **Damage to road infrastructure**
- **Flooding**
- **Increased emergency events**
- **Service outages (e.g. power)**
- **Other social, environmental & economic consequences**

- **Increasing infrastructure resilience**
- **Reduce carbon emissions**
- **Limiting loss of road function**
- **Enhancing management systems and processes**
- **Identify “Lifeline roads”**



An Roinn Iompair  
Department of Transport

# Climate Adaptation: Coastal Erosion & Change



**Loss of wildlife  
and habitats**



**Loss of dwellings  
& infrastructure**

## **Local Authority Challenges identified**

- **Anecdotal increased infrastructure and protected areas at risk**
- **No national inventory of at risk infrastructure**
- **Resources Needed to address Coastal Change at LA level**
- **Skills development needed in LAs**
  - **Recognising and identifying issues**
  - **Securing Resources to manage issues**
    - **Nature based solutions**
    - **Sustainable infrastructure**
- **How to draft coastal management plans**

# A-AAGORA Horizon Project: Coastal Vulnerability

**4-year Project with partners from Germany, France, Portugal, Norway, Finland, Romania and the UK.**

**€10M Budget**

- **Ecological Solutions to manage Coastal Vulnerability**
- **Demonstrator sites**
- **Working with Local/Regional Authorities**
- **Communities**



*“This project will help guide County Cork and other coastal regions throughout the EU to address the challenges together while developing innovative and sustainable solutions that address adaptation and importantly enhance our resilience to a changing climate.”*

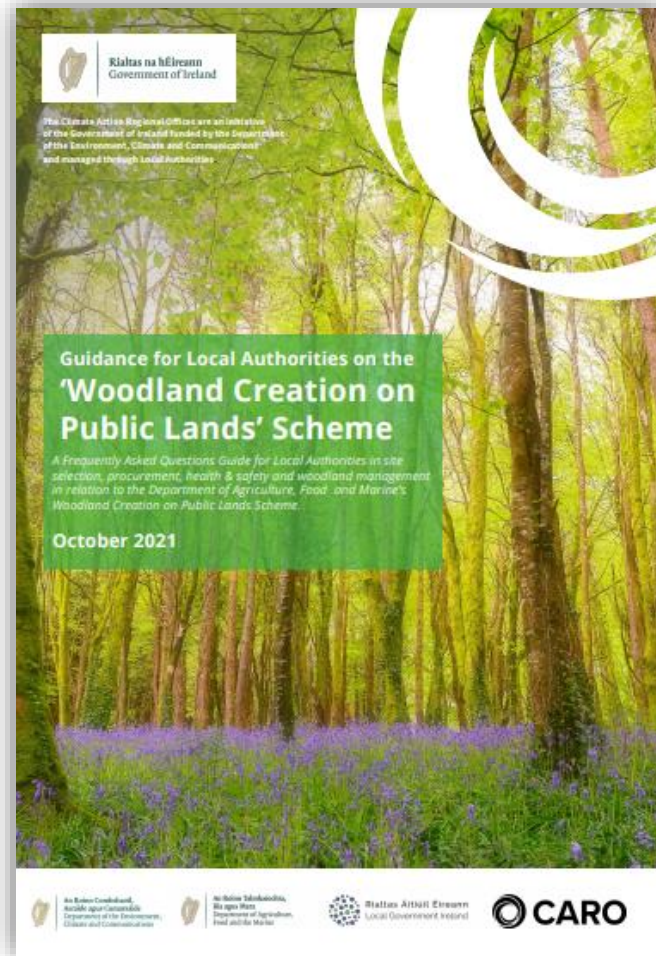
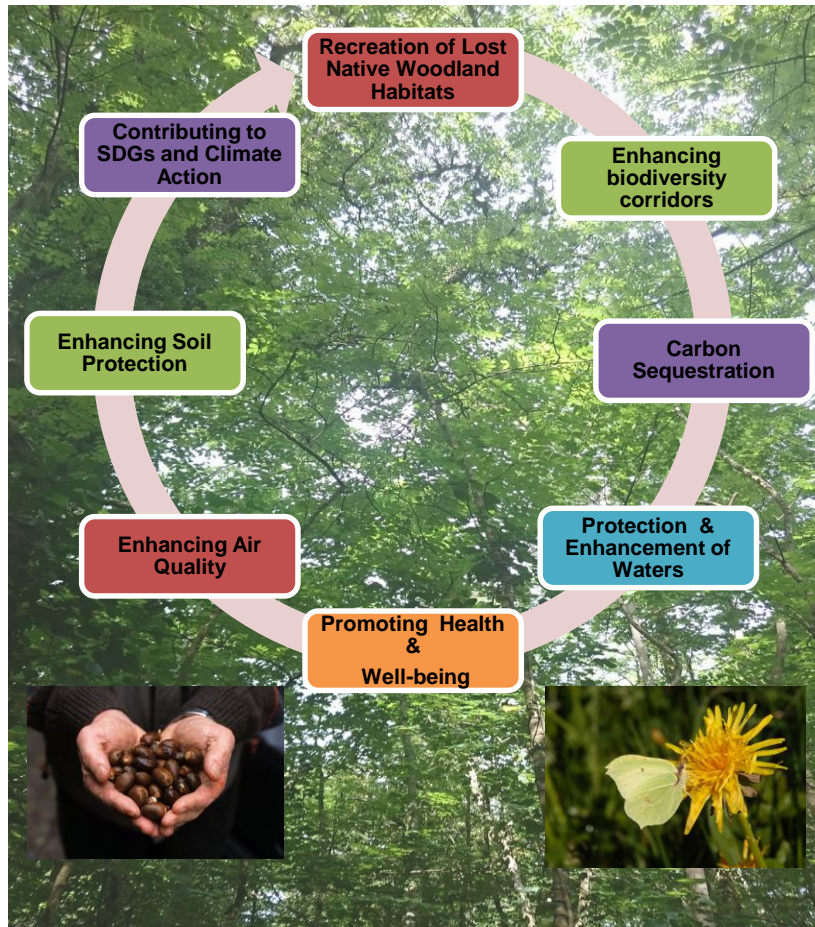
Tim Lucey, Chief Executive Cork Co. Co.



Comhairle Contae Chorcaí  
Cork County Council



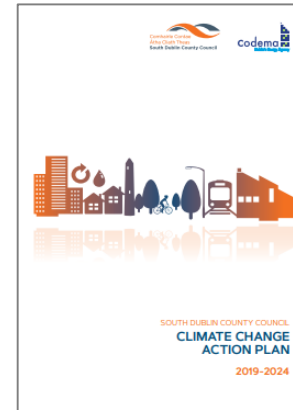
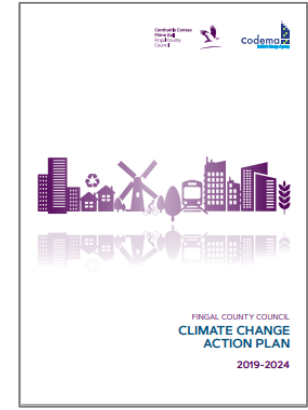
# Woodland Creation on Public Lands Guidance for Local Authorities



# Dublin Local Authority Climate Action Plans

## Main aspects

- Each plan is unique to its functional area for 4 LAs.
- Unified in approach to climate change adaptation and mitigation, and commitment to lead by example.
- 5 key areas:
  - Energy and Buildings
  - Transport
  - Flood Resilience
  - **Nature-Based Solutions**
  - Resource Management



# Progress on NBS actions in Climate Action Plans (2021)

Dublin Metropolitan CARO Region for 4 LA plans (2019-2024)

<b>Local Authority</b>	<b>No. of NBS Actions</b>	<b>Complete</b>	<b>Ongoing</b>	<b>Postponed</b>	<b>Not started</b>	<b>New</b>
Dun Laoghaire Rathdown	39	1	27	3	6	2
Dublin City	41	2	35	0	4	0
Fingal	19	0	16	0	3	0
South Dublin <sup>^</sup>	33	2	29	0	2	0

# Conserving carbon sinks and habitats



I am a **Giant Redwood** tree  
as gaeilge **Mórghíúis dhúdach**  
botanical **Sequoiendron giganteum**

  I have a trunk diameter of **138** cm  
I have a height of **31** m  
I have a leaf area of **764** m<sup>2</sup>

**I AM IMPORTANT BECAUSE:**

EVERY YEAR I PRODUCE ENOUGH OXYGEN FOR <b>35</b> days		EVERY YEAR I STORE <b>1800</b> litres OF WATER	
EVERY YEAR I REDUCE AIR POLLUTION BY <b>325</b> kilograms		EVERY YEAR I STORE <b>8.1</b> kilograms OF CO <sub>2</sub>	

In total I have stored **7500** kilograms of carbon.  
equivalent to **252,523** car kilometers.



 **dlr a climate for trees**  
FURTHER INFORMATION AVAILABLE HERE

This environmental friendly TreeTag is printed on 100% recycled paper.

 **dlr**  
Comhairle Contae Chaitheamhairc





# Conserving carbon sinks and habitats

Wetlands – saltmarshes threatened globally



# Restoring degraded ecosystems



**SAND DUNES**

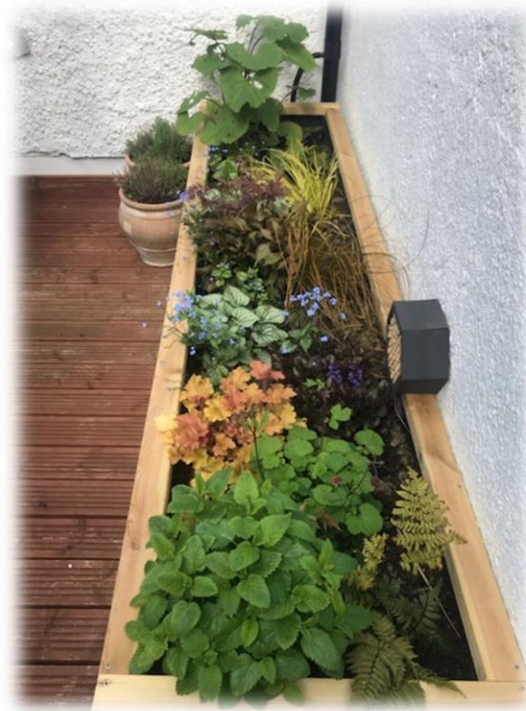
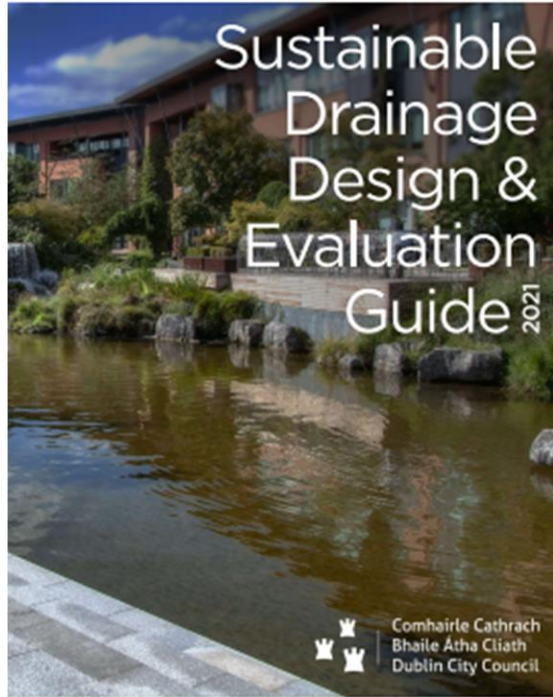
**THEY PROTECT US,  
LET'S PROTECT THEM**

**SAND DUNES ARE FRAGILE,  
TO HELP PROTECT THEM, PLEASE STAY OFF THE DUNES**

**CARO**   **FIND OUT MORE: [WWW.CARO.EU](http://WWW.CARO.EU) #PROTECTOURDUNES** 

# Sustainable Urban Drainage Systems (SUDS)

Controlling storm water quantity and quality



# CARO Pilot Green Roof project with UCD, IGBC, DLR and FCC

To measure the ability of green roofs in Dublin to control for the urban heat island effect (promote transpiration) and to slow stormwater runoff



# LA Climate Mitigation: Energy Management

- 33% reduction by 2020 achieved
- 50% reduction by 2030 on-track
- Energy Performance Officers assigned
- Fleet efficiency management and electrification programme
- New LED Public Lighting
- Retrofit of Local Authority Housing Stock
- In CARO ASBS Region:
  - Energy and carbon savings equivalent to planting 2.2 million trees
  - kWh reduced equivalent to 9,000 Houses
  - ISO 50001 international accreditation standard for energy management
- CARO Providing energy management tools to assist Local Authorities in achieving savings in fleet management, housing, offices and other buildings



*“It matters what you do  
Matters what you say  
It matters that you lead the way  
It matters what you think  
It matters what you know  
There is no other place to go”*

*This is our home*  
Magne Furuholmen

*Go raibh míle maith agaibh go léir.....*

*Thank you all*

**Oifig Réigiúnach um  
Ghníomhú ar son na hAeráide  
Rialtas Áitiúil  
Cósta Atlantach Theas**

**Climate Action  
Regional Offices  
Local Government  
Atlantic Seaboard South**

