# Climate Action
# Training 2024

## Climate Adaptation

native events

Julie's Bicycle
CREATIVE • CLIMATE • ACTION

www.greenarts.ie
We are part of the GREEN ARTS INITIATIVE

19 November 2024

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# Housekeeping

- Auto-captioning
- Chat and Q&A functions
- Webinar feedback questions at the end
- Recording and slides available post webinar on Arts Council climate action webpage

https://www.artscouncil.ie/Arts-in-Ireland/Climate-action/Arts-Council-resources-and-supports/

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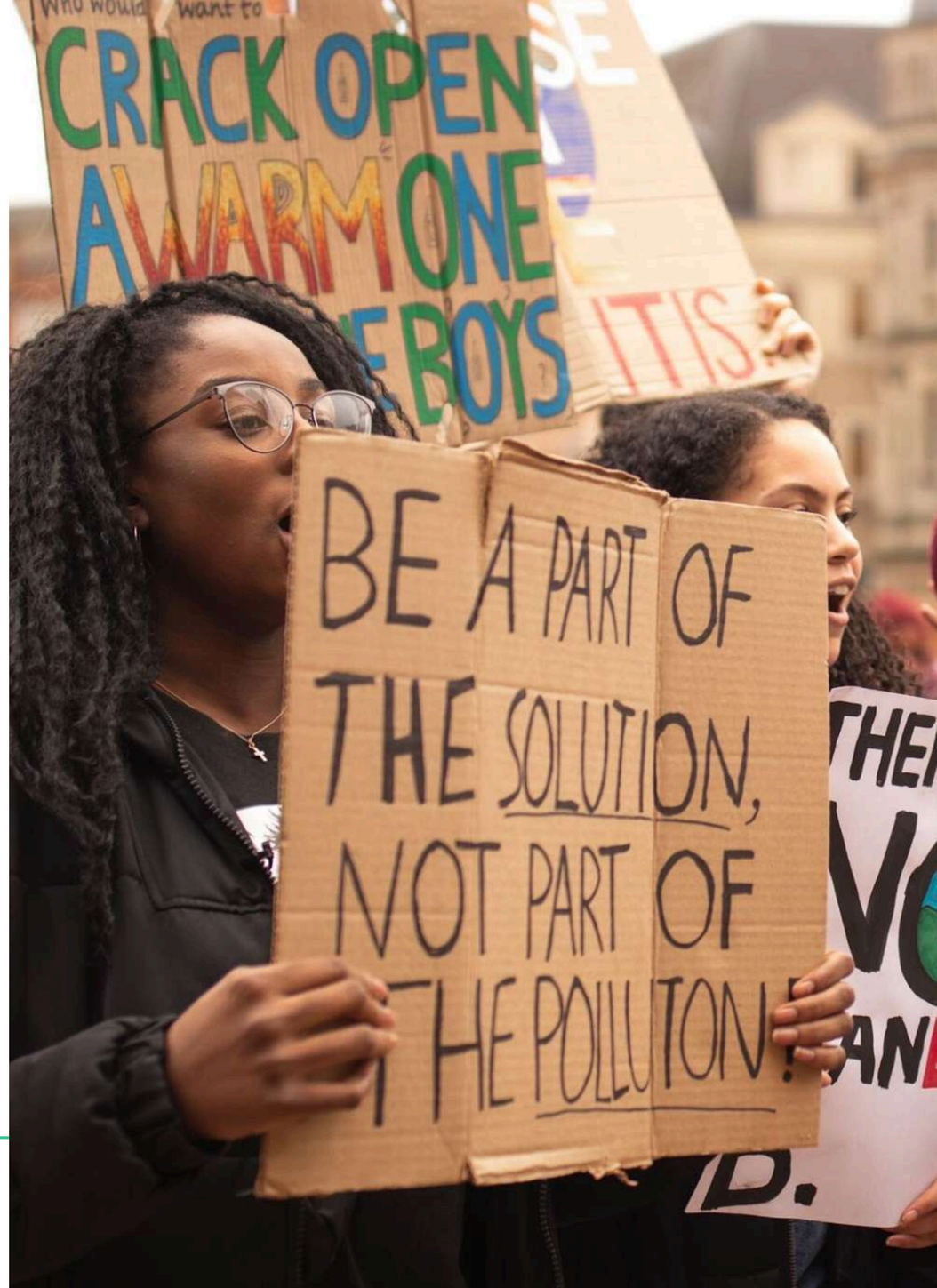
## Our team today:

Megan Best

Catriona Fallon

Aine May Hughes



# Summer series training webinars:

4 June
Getting Started
SFOs and Arts Centres - non festival

11 June
Getting People on Board
SFOs and Arts Centres - non festival

18 June
Developing Action Plans
Public-facing buildings + bigger energy users

2 July
Nature & Biodiversity

25 June
Understanding & Measuring Impacts

18 June
Developing Action Plans
Office-based organisations + production companies

9 July
Buildings Energy

16 July
Materials & Procurement

Recordings and materials at
https://www.artscouncil.ie/Arts-in-Ireland/Climate-action/Arts-Council-resources-and-supports/

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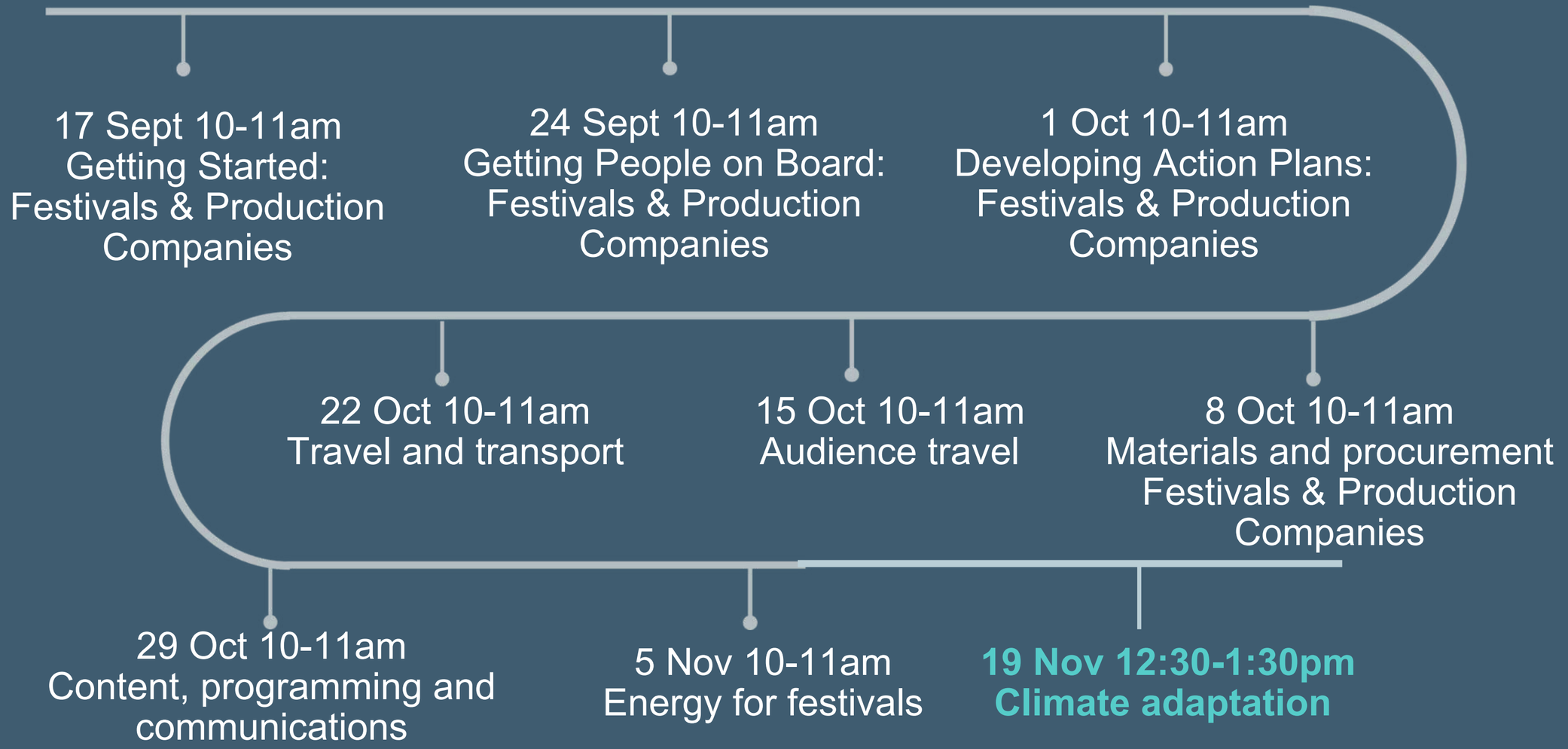
# Autumn series training webinars:

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If you didn’t join the previous sessions you can access the recordings and slides at:

https://www.artscouncil.ie/ArtsinIreland/Climateaction/ArtsCouncilresourcesandsupports/

# Adaptation - Examples of events cancelled / postponed?

Have you / your organisation ever needed to cancel, or postpone an event due to extreme weather? Eg.

- Wind
- Flooding
- Heat
- Heavy Rain
- Red weather warning

# What is the focus of today’s session?

# What will we cover?

- What is Climate Adaptation?
- International Context
- National Context
- Context for the arts sector
- Practical approaches
- Creative Examples
- What can you do
- Toolkits & Resources

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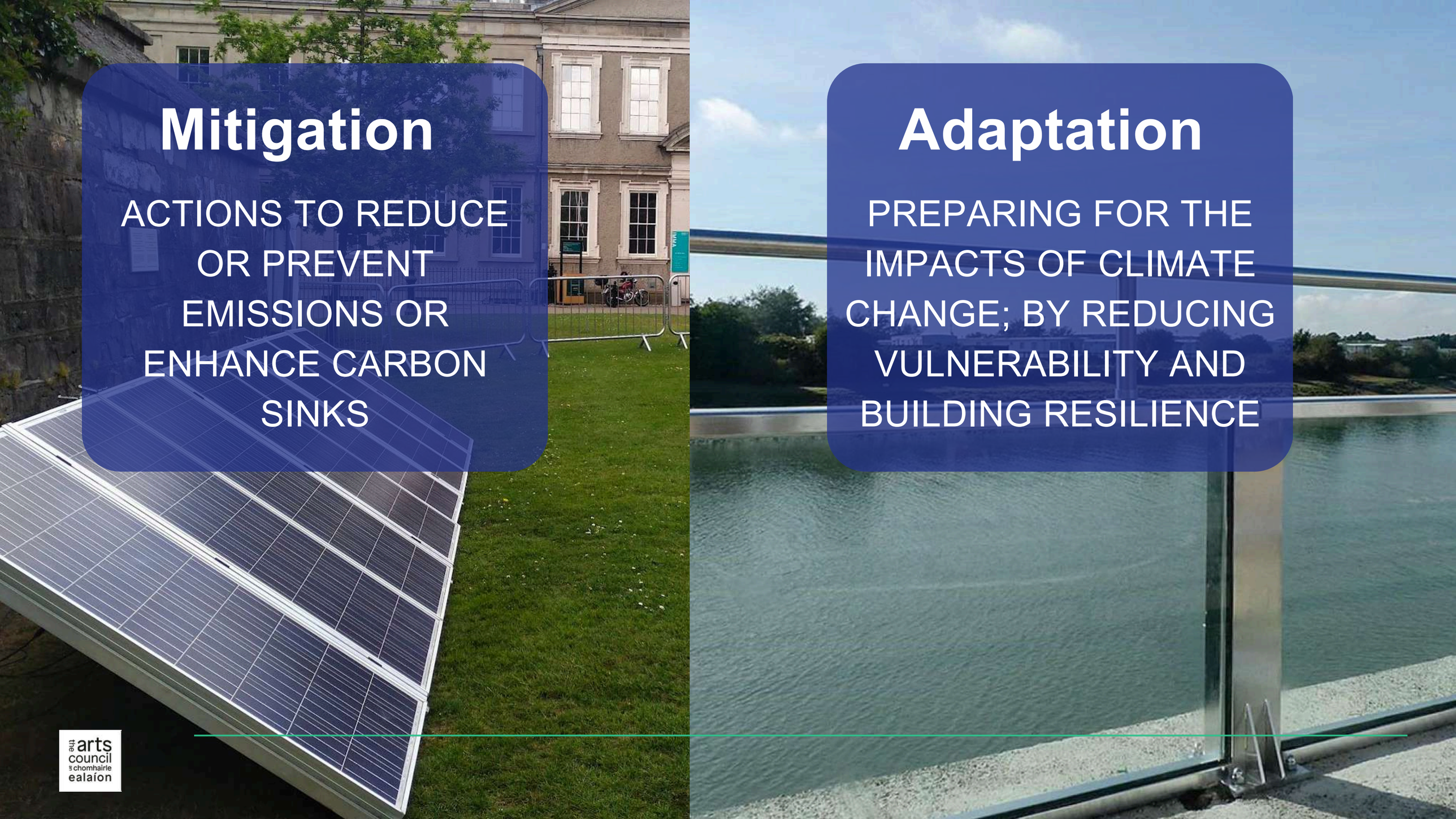
# What is Adaptation?

Adaptation: the shifts we need to make now and in the future to reduce vulnerability and build resilience against the impacts of climate change.

*Image Source: The Port of Galway*



# Mitigation

ACTIONS TO REDUCE OR PREVENT EMISSIONS OR ENHANCE CARBON SINKS

# Adaptation

PREPARING FOR THE IMPACTS OF CLIMATE CHANGE; BY REDUCING VULNERABILITY AND BUILDING RESILIENCE

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# What do we need to adapt to?

Less predictable growing seasons

Flooding

Worsening inequalities

Displacement

Stronger storms

Sea level rise

Reduced soil health

Longer droughts

Heatwaves

Warmer oceans

Economic Instability

More intense and frequent wildfires

Stresses to ecosystems

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# Adaptation and mitigation are both urgent!

- The sooner we adapt the more the world will benefit
- The potential to reduce climate risks through adaptation is higher for global warming levels below 1.5 degrees
- Post 1.5 degrees most adaptation options start declining and risks and unintended consequences increase (IPCC, 2022)

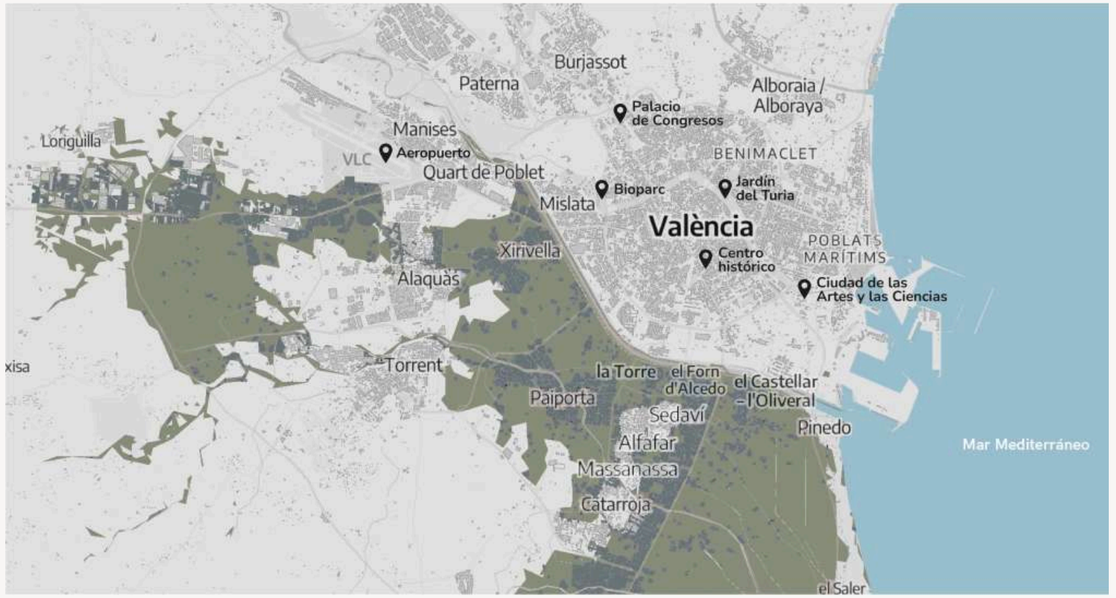

*Línte Na Farraige, Spanish Point, Galway*

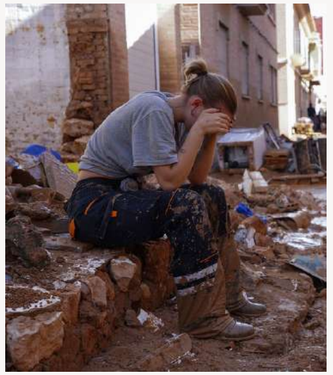
# Adaptation - International Context

# Climate Change Impacts

- Flooding in Valencia
- 29th and 30th October 2024
- More than 300 l/m²
- Equivalent of a year's worth of rainfall
- Confirmed death toll risen to 223
- Further 78 people are still missing

- Mayors had warned about the flooding
- Residents were **caught off guard**
- Alert to cell phones after 8:00pm local time
- Deadliest surge already receding



# Climate Change Impacts

- 2024 potato growing season
- Unprecedented challenges for North-Western Europe
- Climate volatility, economic pressures, and unpredictable market conditions
- Forced farmers to **adapt** quickly
- Total cultivated area in the EU grew by 7%

- Climate issues: Severe storms, intense rainfall, and extended planting times
- Soil degradation - difficult for crops to thrive
- Persistent heavy rains, damaged soil structure, reduced drainage capacity
- Increased vulnerability to soil-borne pathogens
- Unprecedented rise in late blight
- New, aggressive fungal strains

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*Image Source: Potatoes News*

# Adaptation and Cultural Heritage - International Context

**2007** - UNESCO reports addressing the effects of climate change on World Heritage sites, followed by case studies and policy guidelines.

**2015** - UNESCO's World Heritage Committee aligned the implementation of the World Heritage Convention with the UN's 17 Sustainable Development Goals (SDGs)

**2019** - launch of the Climate Heritage Network (CHN) - supporting cultural heritage adaptation to climate change, aligning with the Paris Agreement through a broad cultural approach.

**2021** - COP26, the Glasgow-Sharm el-Sheikh work programme introduced to support the Paris Agreement's adaptation goals, emphasising tangible cultural heritage.

**2023** - UAE Framework for Global Climate Resilience adopted at COP28 - setting a target to protect both tangible and intangible cultural heritage, drawing on indigenous and traditional knowledge.

# The EU Mission on Adaptation to Climate Change

- Aims to support 150 European regions and local authorities
- Climate resilience by 2030
- Resources -
- Adaptation Dashboard
- Social Vulnerability Index
- Highlight funding for adaptation
- Network for exchanging knowledge, experiences, and best practices
- Case studies and adaptation stories

# RescueME project

- Funded by Horizon Europe
- Resilience Landscape Laboratories (R-Labscapes)
- Co-create and test innovative approaches
- Actionable Resilient Historic Landscape (RHL) Framework
- Aims to tackle climate change, pollution and over-tourism
- Tools and knowledge to protect cultural heritage and landscapes
- Leverages data and community involvement

Established in communities -

- Psiloritis (Greece)
- Neuwerk (Germany)
- Cinque Terre & the Islands (Italy)
- València (Spain)
- Zadar (Croatia)

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*Image Source: Heritagetribune.eu*

# Climate Ready Clyde

- Cross-sector initiative funded by 12 member organisations
- Supported by Scottish Government
- Shared vision, strategy and action plan for adapting Glasgow City Region

- Creative Climate Futures - two-year project
- Support local climate action in Glasgow

- Led by Sniffer, working with Creative Carbon Scotland, Community Land Scotland, Glasgow Council for the Voluntary Sector, the Scottish Communities Climate Action Network and Glasgow City Council.

*Image Source: https://climatereadyclyde.org.uk/*

# Climate Ready Clyde

- Working with organisations and local residents
- Two “pioneer” neighbourhoods in Glasgow – Easterhouse, and Gorbals
- Two of the city’s most vulnerable to the impacts of climate change
- Flooding and overheating are more likely
- Underlying social and economic inequalities
- City-wide capacity sharing programme, started in Autumn 2024.


*Image Source: https://climatereadyclyde.org.uk/*

# Adaptation - Context in Ireland

# Climate Change Impacts - Closer to Home


Dunbeg Fort (Co. Kerry), mapping erosion from June 2017 (red line) through April 2018 (blue line). The green line indicates the coastline in 1898.

*Image Source: Rialtas Na hÉireann*

# Climate Change Impacts - Closer to Home

Exposed skeleton remains at Forlorn Point, Kilmore Quay, Co. Wexford and on Omey Island, County Galway (right). Human remains continue to be exposed at this location after severe weather events.

*Image Source: Rialtas Na hÉireann*

# Ash Dieback

- Invasive species - vascular wilt fungus
- Assisted by increased trade to spread across Europe
- Causing widespread dieback of culturally significant native broadleaf
- Estimated extinction by 2032
- February 2024: GAA voted to change the standards for the hurl
- Exploring new materials - bamboo / synthetic fibres

*Image Source: https://www.nationaltrust.org.uk/*

# Body&Soul Festival 2023

- 4,500 people on site
- Electrical storm
- Radio repeater failure
- Evacuating stages and arenas
- Flash flood
- Severe flooding - equipment submerged
- Stage closure

# Glucksman Gallery

- November 2009
- River Lee burst its banks
- Basement of the Lewis Glucksman Gallery at University College Cork
- Flooded with more than ten feet of water
- 187 pieces of art submerged

*Image Source: RTE*

# Adaptation Policy in Ireland

- Climate Action and Low-Carbon Development Act 2015 (amendment 2021)

- Competitive
- Low carbon
- **Climate resilient**
- Environmentally sustainable economy
- By 2050
- Adaptation to the impacts of climate change

Two parallel national plans:

- National Low-Carbon Roadmaps
- National Climate Change Adaptation Frameworks

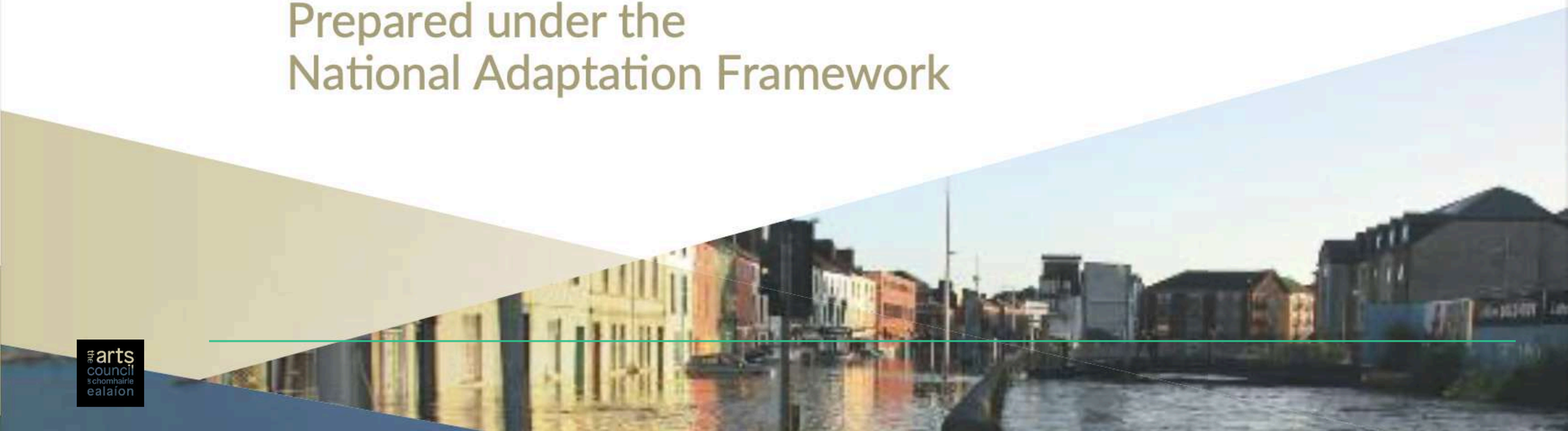
*Image Source: The Port of Galway*

Rialtas na hÉireann
Government of Ireland

# Built & Archaeological Heritage

## Climate Change Sectoral Adaptation Plan

Prepared under the
National Adaptation Framework



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# Risks to cultural and heritage buildings

- Wind-driven rain - increase in abrasion and dissolution
- Higher rainfall and rising water levels - increased moisture content of soils
- Weakened building foundations, subsidence, erosion, landslide
- Long, dry summers with lowered water tables - damage to building foundations
- Increased risk of wildfires and landslides
- Hamper emergency response and restrict access to sites
- Flood waters - erode foundations and damage structural fabric
- Heavy flotsam carried in floods
- Damage to bridges and other historic infrastructure

# Risks to cultural and heritage buildings

- Temperature rise due to climate change is likely to be most severe in cities
- Densely built up areas in Dublin
- More than 4°C warmer at night than green areas
- **Urban heat island (UHI) effect**
- Acts as a risk multiplier
- Buildings in urban centres
- Experience damaging temperature thresholds for microbiological and/or chemical decay mechanisms
- Higher temperatures provide conditions for established pest species to spread and increase in numbers
- Invasive species such as termites may also become established

# OBSERVED IMPACTS

Temperatures have increased by 0.8°C since 1900, an average of 0.07°C per decade.

The number of annual frost days has decreased

The growing season has extended, beginning one week earlier

# PROJECTED IMPACTS 2041 - 2060

Annual average temperatures will rise by 1–1.6°C. Largest increase in the east. Extreme high temperatures increase 2.6°C (summer) and 3.1°C (winter)

The average number of frost days will decrease further by 50% for the medium- to low-emission scenario and by 62% for the high-emission scenario

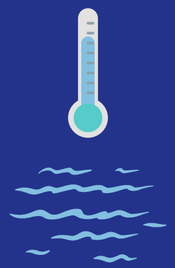
The growing season will extend further by 35–40 days

# OBSERVED IMPACTS

Average rainfall has increased by 5% since the mid-twentieth century

Dry periods have become more frequent
Summers will become drier
The likelihood of an extremely dry summer has doubled over the last century

The temperature and acidity of the sea have increased
Sea surface temperature is >1.0°C higher than in the mid-twentieth century and sea acidity is 30% higher globally



# PROJECTED IMPACTS 2041 - 2060

Intense rainfall will increase
The number of ‘very wet days’ will increase by 30% during winter months

Rainfall volume will reduce by 20% (summer) The number of dry periods will increase by up to 40%

Sea-surface temperatures will continue to rise by 1.9°C (Irish Sea) by the end of the century; sea acidity will increase by 100–150% globally

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# OBSERVED IMPACTS

The sea level has risen by 2–3mm per year around the Irish coast since the 1990s; mean wave heights along the south-west coast have increased by 0.8m per decade

The number and intensity of storms in the north Atlantic have increased by 3 per decade since 1950

Relative humidity values have slightly increased in summer and decreased in winter in the period since 1961

H

# PROJECTED IMPACTS 2041 - 2060

Sea levels will continue to rise by up to 800mm by 2100.
Storm surge will increase
Atlantic coastal retreat rates are likely to increase from current 0.5–1m per year

The intensity of storm activity will increase in the north Atlantic and over Ireland. Extreme wind speeds will increase slightly, particularly in winter

Relative humidity is likely to increase, especially during winter months Relative humidity is likely to decrease in summer, mainly in the south and east

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CLIMATE IRELAND

Data Explorer | Climate Change | Adaptation | Impact on Ireland | Resources

# Climate Ireland

Climate Ireland provides information, advice and support to help Ireland adapt to our changing climate.

**What is Climate Ireland?**

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# Fingal County Council

- Archaeological and heritage assets
- Part of all climate risk assessments
- Including opportunities for integration of cultural heritage
- Adaptive mitigations - green infrastructure, cycle ways, nature-based solutions

- Identify projects and opportunities for collaboration with relevant stakeholders
- To assess and prioritise cultural heritage sites
- Vulnerable to climate change

Comhairle Contae Fhine Gall
Fingal County Council

# Zoom Poll: Adaptation - have you/ your organisation done any of the following?

- Created a climate adaptation approach?
- Consulted any climate adaptation resources?
- Reviewed your Local Authority climate adaptation strategy?
- Reviewed your Local Authority climate action plan?
- Conducted a climate risk assessment?
- Created an extreme weather policy?
- Any other adaptation measures?

In terms of adapting to climate change, the less vulnerable we are, the more resilient we are.

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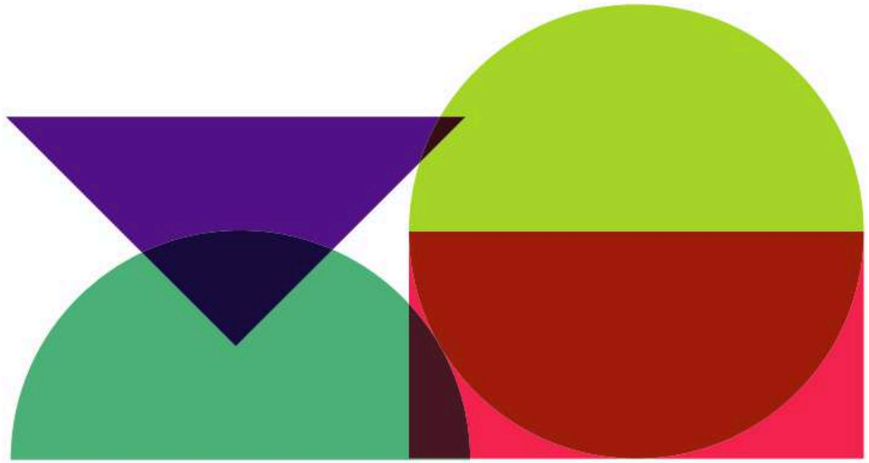
**Cultural Adaptations** was a Creative Europe project, led by **Creative Carbon Scotland** with partners in three EU countries, on culture's role in society's adaptation to climate, and the adaptation issues that cultural organisations need to think about. It ran from October 2018 to March 2021.

www.culturaladaptations.com

# Adapting our Culture



A toolkit for cultural organisations planning for a climate changed future

Cultural Adaptations

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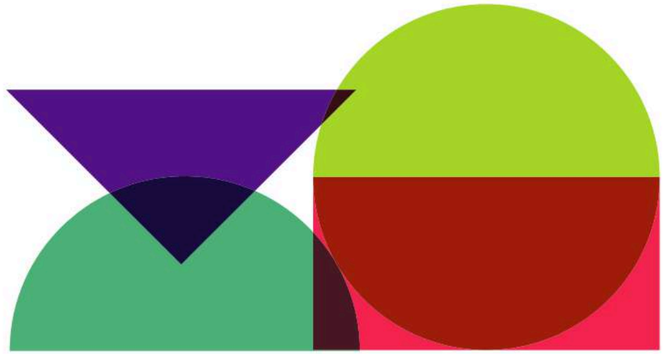
# Adapting our Culture



A toolkit for cultural organisations planning for a climate changed future

Cultural Adaptations

*Much of the information in the following slides has been taken directly from Creative Carbon Scotland's 'Adapting our Culture Toolkit'*

# Why does climate adaptation matter to the arts sector?

When we think of climate change impacts, it is the physical changes we describe (changing heat, rainfall, rising seas, etc) but the secondary impacts (the implications) of these physical changes are often more significant.

***(Creative Carbon Scotland - Cultural Adaptations Toolkit)***

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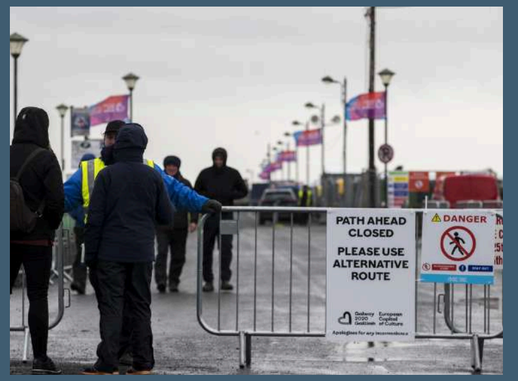
# Why does climate adaptation matter to the arts sector?

We can expect social, economic, political and legislative shifts as a result of climate change, and this will affect all elements of the cultural sector - from how audiences access and experience cultural events, to how funders and insurers work with cultural organisations, and even how staff undertake their job in a safe working environment.” .

***(Creative Carbon Scotland - Cultural Adaptations Toolkit)***




*Galway 2020*

*Crawford College of Art, Cork*

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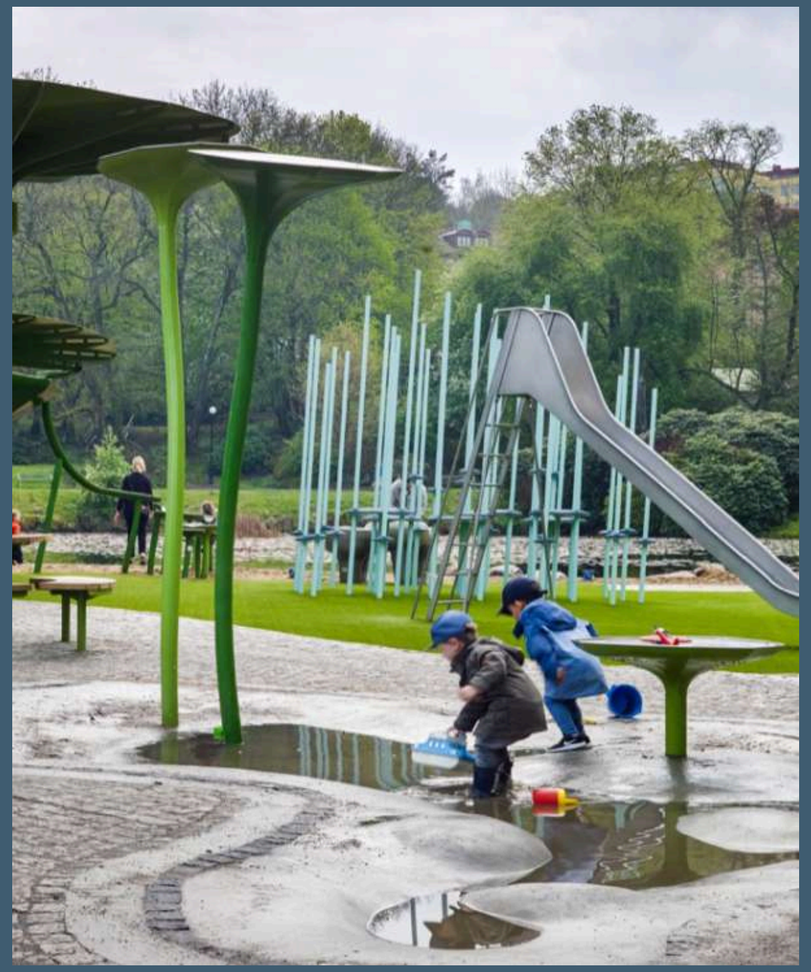
# Why does climate adaptation matter to the arts sector?

- Small cultural organisations will be particularly affected
- Early adaptation can save time, money (and even lives) later
- Cultural organisations influence our wider society



*Regnlekplatsen, The Rain Playground by 02LANDSKAP*
*Gothenburg, Sweden*

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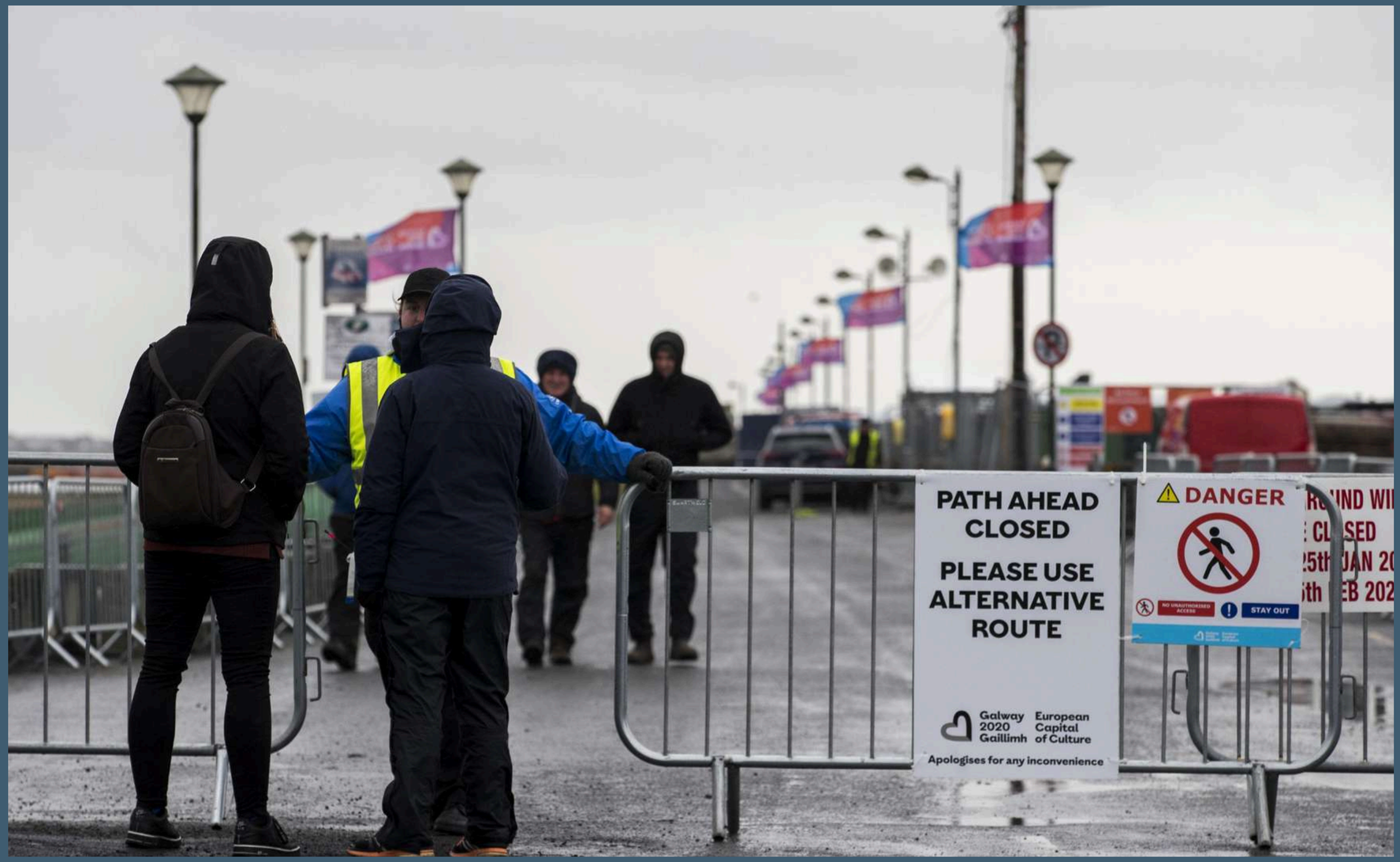
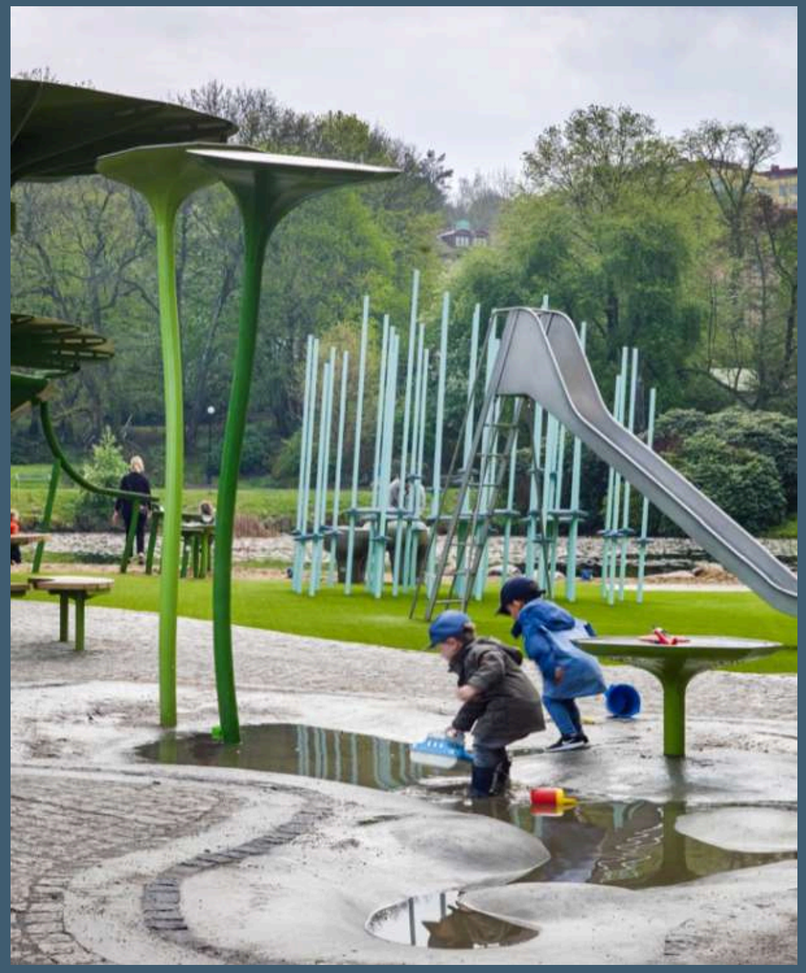
# Why does climate adaptation matter to the arts sector?




*Galwy 2020 - Capital of Culture*

# Reasons your organisation should address climate adaptation

- **Strategic** - A changing climate could fundamentally affect your organisation's ability to undertake activities, and its core purpose.
- **Financial** - With change comes cost. You can save money in adapting early to climate change. You can reduce your financial risk from cancellation or disruption of events.
- **Operational** - Climate change could affect all aspects of your organisation's operations – supply chains and transport, to premises and performances.



*Regnlekplatsen, The Rain Playground by 02LANDSKAP Gothenburg, Sweden*

# Reasons your organisation should address climate adaptation

- **Reputational** - You can help your organisation become resilient to other shocks by adapting to the dynamic problem of climate change.

- **Legal/Compliance** - Building resilience reduces the risks of penalties or disputes arising from contractual or other legal issues. The impacts of climate change could make it more challenging to comply with other existing legal or contractual requirements - such as Health and Safety regulations


*Crochet canopy created by Eva Pacheco and students in Malaga, Spain*

# Developing an approach to Climate Adaptation..

*Consider drawing up a Climate Adaptation Strategy for your organisation using the Adapting Our Culture toolbox*

*(from the Cultural Adaptations Project run by Creative Carbon Scotland).*

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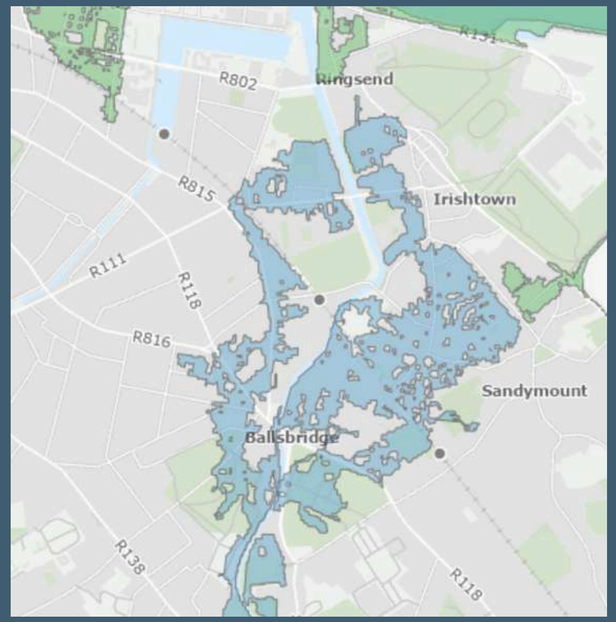
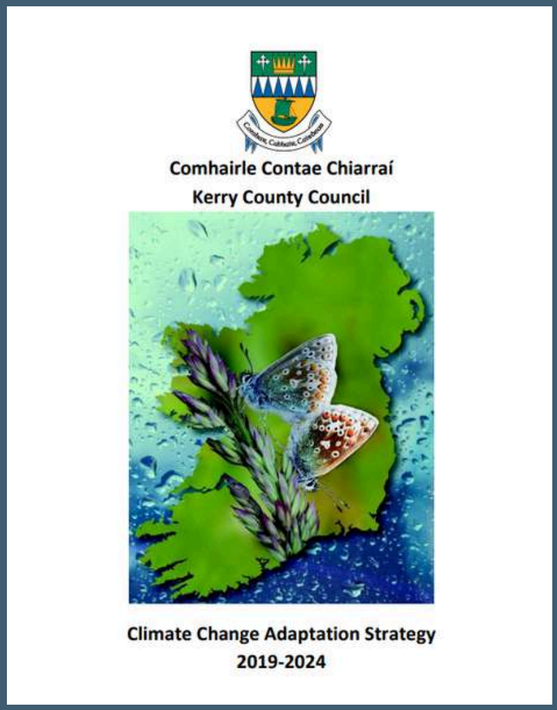
# First Steps in addressing Climate Adaptation for your organisation




Research projected climate impacts in your region.
Identify impacts you have already experienced.

*OPW Flood Maps - https://www.floodinfo.ie/map/floodmaps/*

List existing public projects or adaptation strategies in your region

*Kerry County Council Climate Adaptation Strategy*

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A key part of forming your approach to adaptation is to acknowledge your risks.  Think about:

**Immediate risks:** Begin with risks to your current operations, then think about your current and future artistic programme, followed by the impacts for your wider local community.

We need to consider how changes to our physical environment will have a direct impact on our operations: the ways and means through which organisations deliver their activities.

| B.2 | Heat and large temperature fluctuations | Rainfall and flooding | Storms and extreme weather | Sea level rise and landslides |
|---|---|---|---|---|
| Offices and venues | | | | |
| Staff, freelancers and volunteers | | | | |
| Audiences and participants | | | | |
| Finance and fundraising | | | | |
| Collections and materials | | | | |
| Travel and touring | | | | |

# A key part of forming your approach to adaptation is to acknowledge your risks.  Think about:

**Immediate risks:** Begin with risks to your current operations, then think about your current and future artistic programme, followed by the impacts for your wider local community.

**Implications (secondary risks):** Are there any risks which might arise from the wider social and economic implications of a changing climate? For example, if more public funding goes to addressing climate impacts, is public funding for the arts at risk?

Complete a climate risk assessment for your organisation.

Think about the different impacts of climate change that you've identified. How likely are these things to happen? How big an impact would this have?

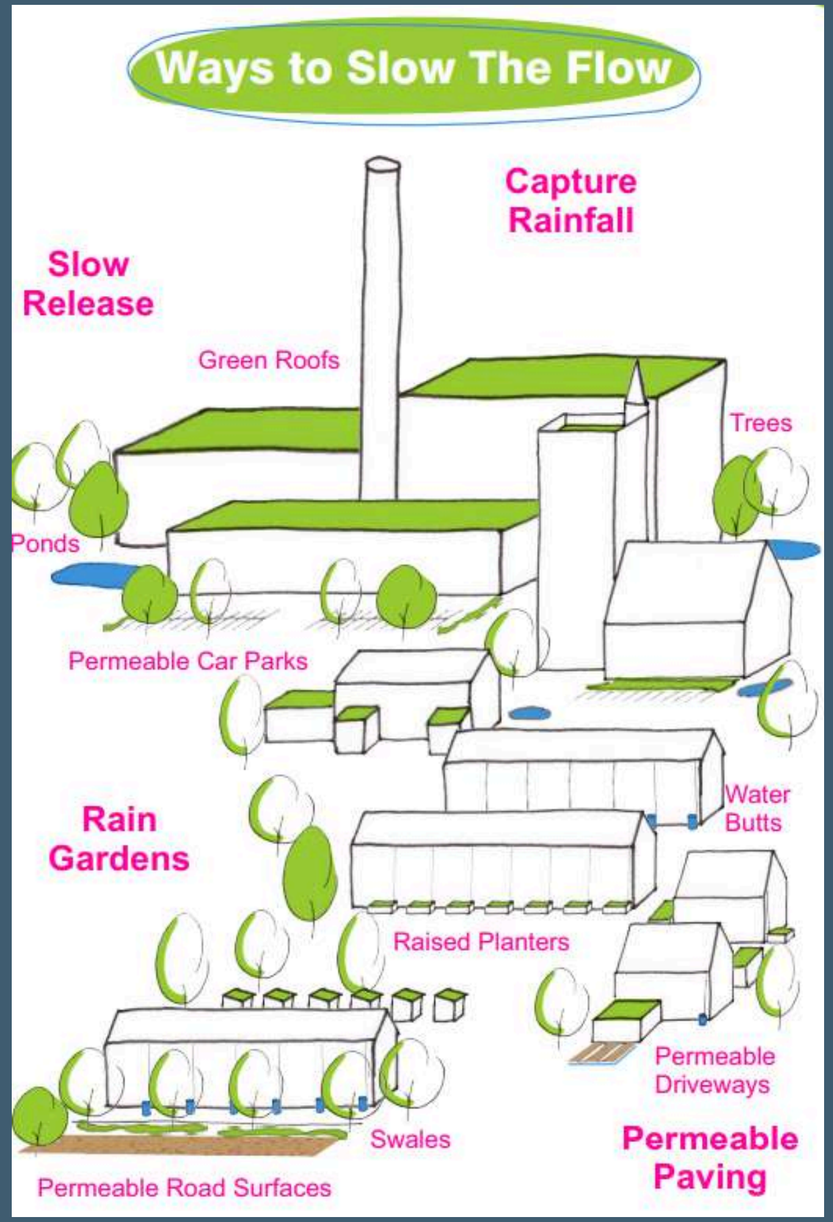
C.1

| Risk<br>What is the climate/hazard, and what is at risk of happening? | Consequences<br>What impact will it have on your operations, artistic programme or local community? | Likelihood<br>On a scale of 1-5 how likely is it that this will happen? | Impact<br>On a scale of 1-5 how significant an impact will this have on your organisation or those you work with? | Risk Ranking<br>Multiply the likelihood x impact to get an over numerical ranking |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

Now think about how you are going to overcome these challenges. These may be **practical interventions** (like creating more greenspace around your building to help cope with increased rainfall) or **managerial interventions** (developing an emergency plan for how to communicate with staff during extreme weather).

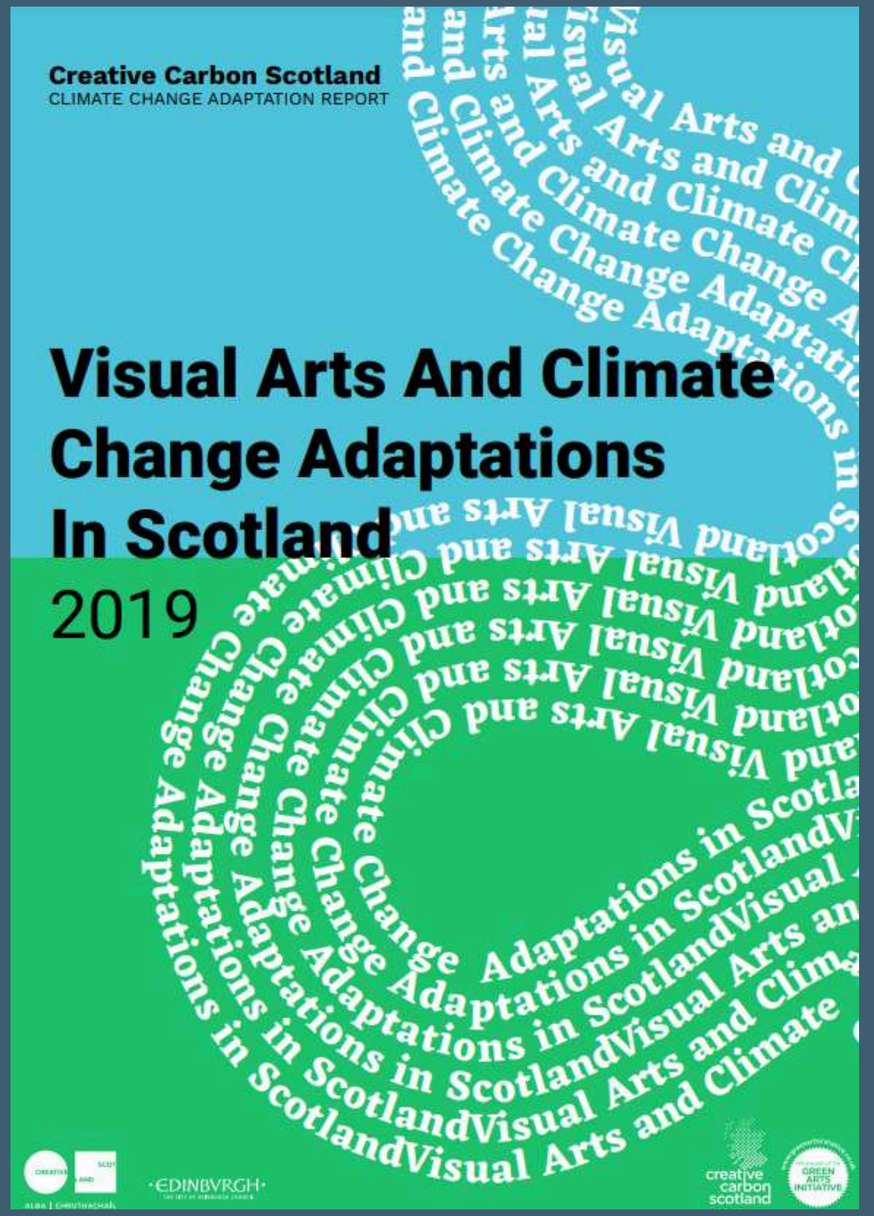
**There are different types of actions:**

- Avoid the risk by preventing the situation occurring
- Reduce the extent of the risk by putting safeguards in place to minimise the impact
- Transform the risk into an opportunity.

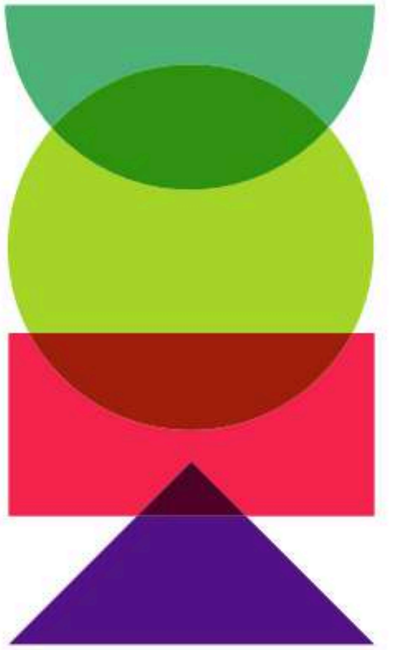



Slow The Flow SuDS Resources - https://slowtheflow.net/links-suds/

# Other sector specific guidance on adaptation....



# How can creative practice transform our approach to adaptation?



## A toolkit for initiating and undertaking Embedded Artist Projects

Cultural Adaptations

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# How can Embedded Artist Projects support climate change adaptation?

Embedded Artist Projects use creative thinking to tackle society's 'wicked problems', for which there is no one solution. Some examples of these:

- Developing new ways to inspire and engage people to act to adapt to climate change
- Developing products or services that help organisations, groups or businesses address climate change risks or seize opportunities.
- Challenging existing paradigms and perceptions that act as barriers to adaptation.
- Helping to involve new actors and audiences in adapting to climate change.

*Corca Dhuibhne Inbhuanaithe, Creative Climate Action Project, Dingle Peninsula (Working with farmers) funded by Creative Ireland*

# The Burney Journey

The Burney Journey: **Creative Approaches to Engaging Flood Risk Communities** was a partnership between SEPA and Creative Carbon Scotland with support from Aberdeen City Council, has been commissioned by SEPA via SEPA's Research and Development Fund.

# The Burney Journey

**The Adaptation Agencies:**
Scottish Environmental Protection Agency
The Dee Catchment Partnership

**The Creative Practitioner:**
Musician and artist, Simon Gall

**The Community Partner**
Fernielea Primary School, Aberdeen

**The Creative Climate Cultural Partner:**
Creative Carbon Scotland

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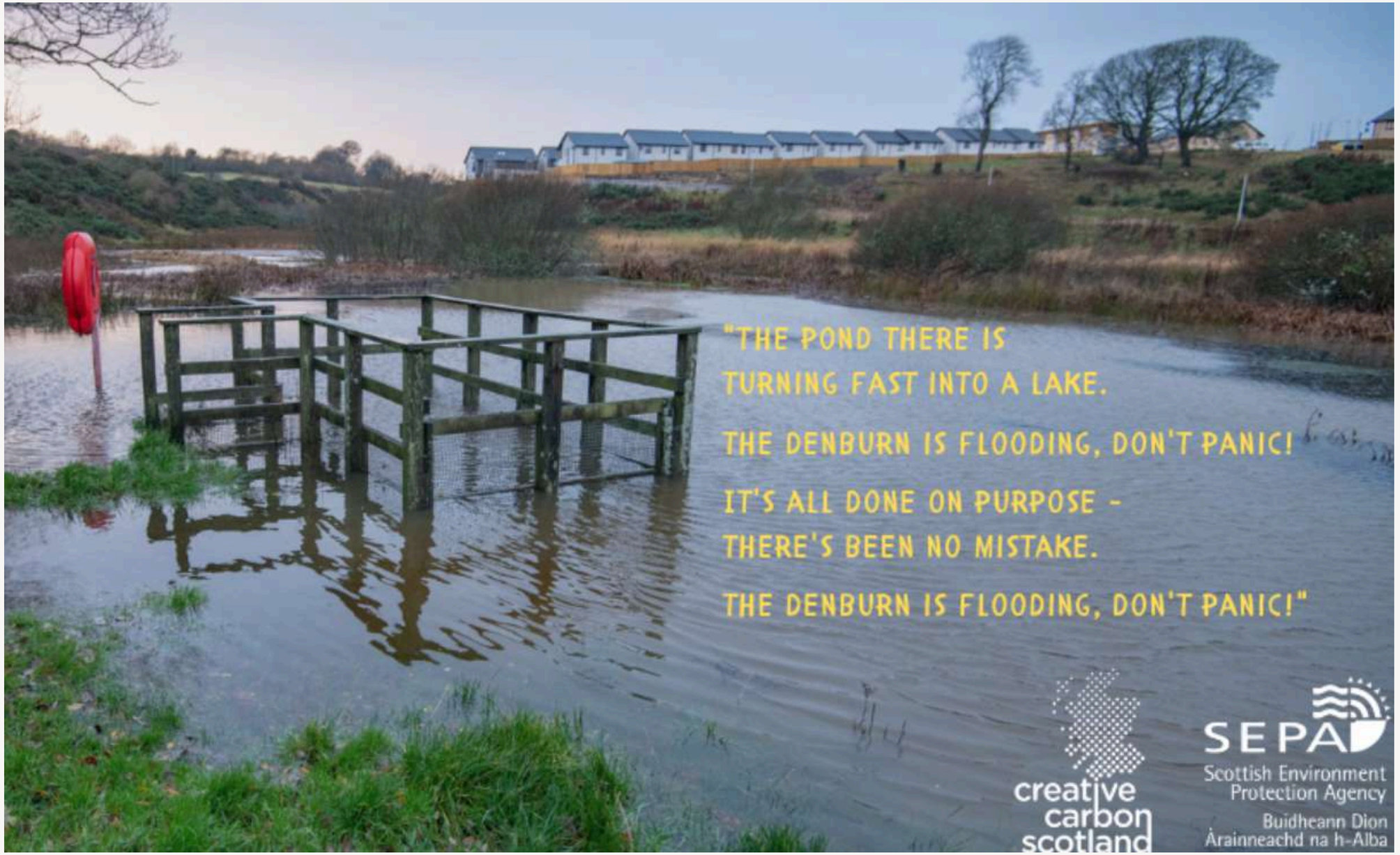


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# The Farming Community adapting to Climate Change...

***Corca Dhuibhne Inbhuanaithe,*** Creative Climate Action Project, Dingle Peninsula, funded by Creative Ireland


**Farmer, Thomas Greaney, *Corca Dhuibhne Inbhuanaithe,*** Creative Climate Action Project, Dingle Peninsula, funded by Creative Ireland

# Zoom Poll: In terms of adaptation, what are you most worried about?

- Extreme weather events?
- Heat and humidity?
- Governance, compliance and insurance implications?
- Changes in funding?

# Adaptation - Creative Approach Examples

# Woodford Folk Festival

- Established 1987
- Traditional Owners members of the Jinibara Nation
- 2,000 local, national and international artists, musicians and presenters
- Based on a vision of inclusive and creative community, culture and tradition
- Former barren dairy farm
- Regenerated with over 120,000 subtropical rain forest trees, orchids, ferns and sedges
- Create a habitat for butterflies and wildlife

*Image Source: https://woodfordfolkfestival.com/*

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# Forest Woodfordia

- Planting Festival
- Celebration of cultural expression through music, dance, art and folklore
- Nurturing of the forested parkland
- Held at Woodfordia in 2018
- Tree planting as shade for campgrounds

- Biodiversity enhancement
- Bamboo for structures
- Biochar
- Soil restoration

*Image Source: https://woodfordfolkfestival.com/*

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# BOOM Festival, Portugal

Wastewater treatment plant -

- Portugal facing systemic droughts
- 16 February 2022, 99.4% of Portugal was under drought
- Water scarcity, poor management, focus on intensive agriculture
- Boomland is home to a new retention basin and pipeline to support regeneration efforts

- Construction of a new onsite wastewater treatment plant
- Stores up to 7 million litres of water
- Treats almost 100% of the water consumed at Boom Festival
- After treatment, these grey waters are used for irrigation
- Support regeneration/reforestation efforts at Boomland

*Image Source: https://www.boomfestival.org/environment/water*

# Creative Climate Action: Agents of Change

## Cascade Project

- Connecting communities to climate change down laneways
- How laneways can adapt to cope with climate change
- Ireland's climate impacts involve water
- Cascade - the water that flows down the buildings lining laneways
- Capacity-building
- Ripple out through communities
- Create connected trails of climate-resilient, cohesive spaces
- Celebrate water

# Creative Climate Action: Agents of Change

## Building Community Resilience Project

- Works with three artists and local communities
- Extend climate and biodiversity awareness
- Increase resilience
- Move towards a shared climate resilience plan for the area
- Creative, collaborative actions
- Walk- & Talk-shops share ideas and understanding
- Bronze, textiles and sound creating the final exhibition

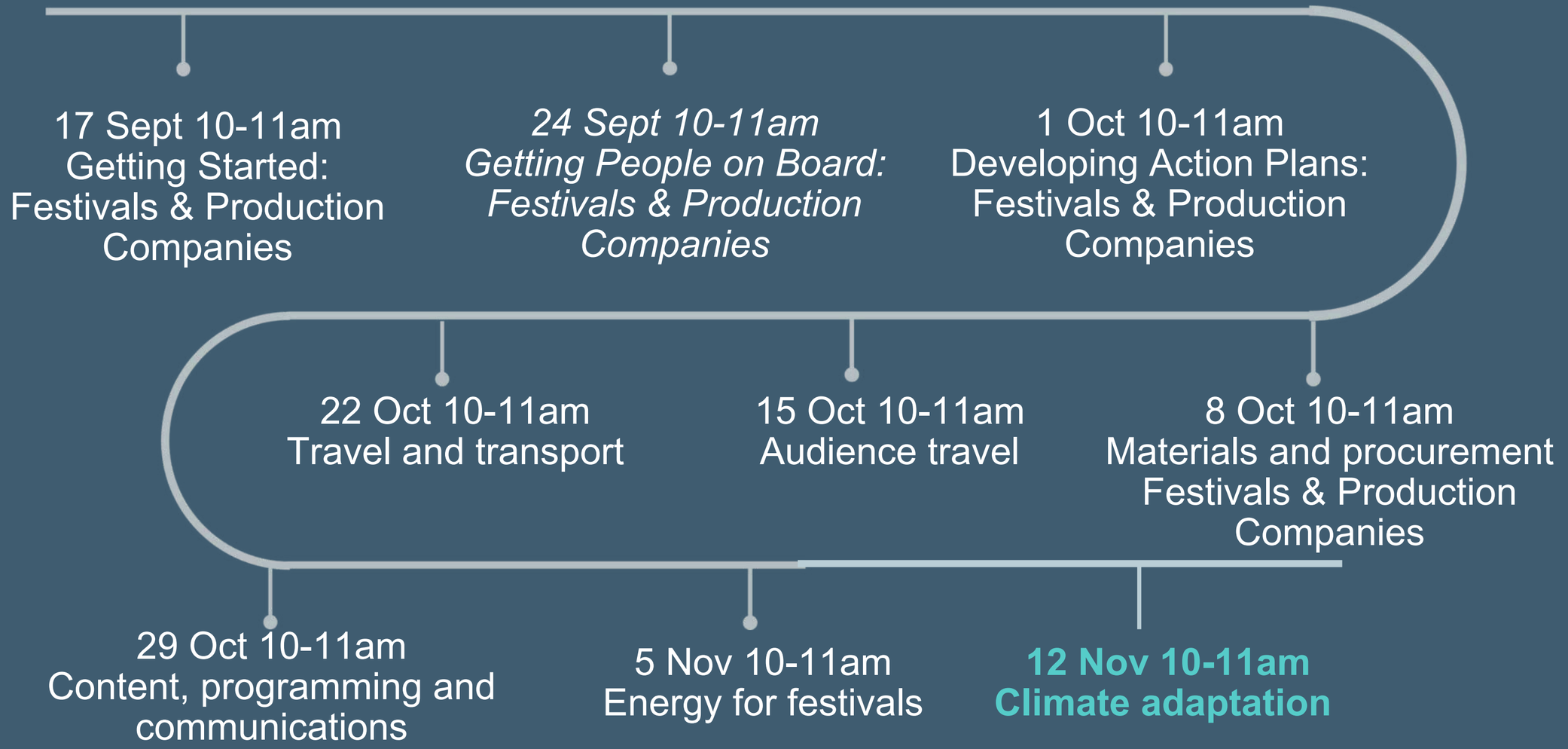
# Creative Climate Action: Agents of Change

**Blue Print Project**

- University College Cork, The Playhouse, Derry City and Strabane District Council, and Mayo County Council,
- Facilitating an art-infused co-creation process
- Flood-affected community in Derry
- Generating risk communication materials
- All-island learning exchange between Derry and Mayo
- A ‘creative co-creation’ toolkit targeting local governments
- Working with communities around climate risk and resilience


https://www.marei.ie/project/blueprint/

# Autumn series training webinars:

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# Q & A

# Thank you!