

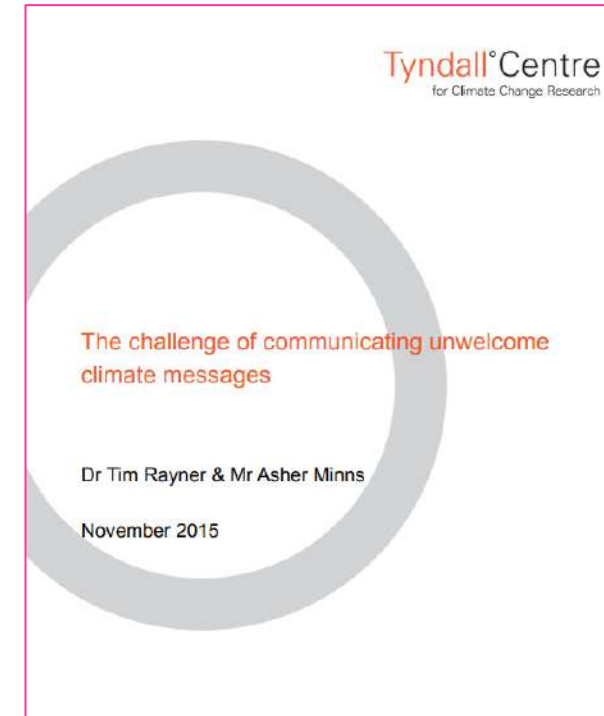
In support of local adaptation action

Asher Minns

a.minns@uea.ac.uk

‘In support of local adaptation action’

At the Local Authority level is where climate ambitions happen in practice. It is in Town Halls that strategies are set, planning permissions granted, decisions scrutinised, local controversies learned-of. Asher Minns will describe his work alongside Norwich City Council and the Norfolk Climate Change Partnership as co-Chair of Norwich Climate Commission and Executive Director of the Tyndall Centre for Climate Change Research. His topic will cover his work with Local Authorities, local communities and third sector organisations, and why adaptation decision-making is more difficult than ‘net zero’ and ideas for how those of us in the research to practice world can support.



NORWICH
CLIMATE
COMMISSION



NORWICH
City Council

Tyndall°Centre
for Climate Change Research

UEA
University of East Anglia

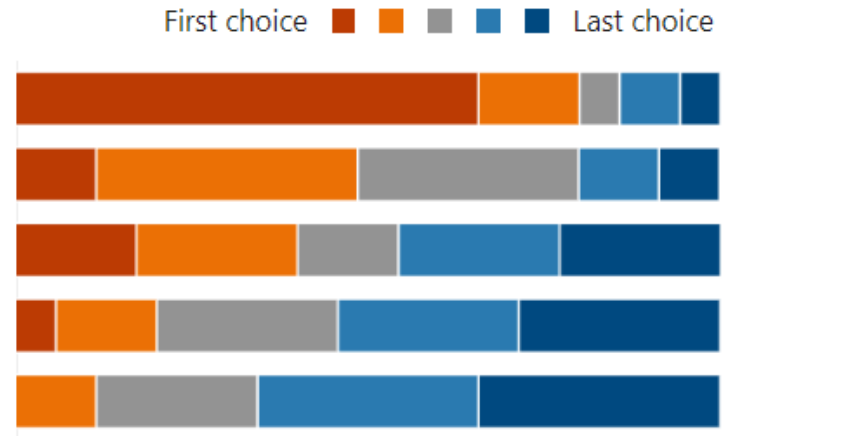
Who do you think are the main audiences for the Norwich Climate Commission?

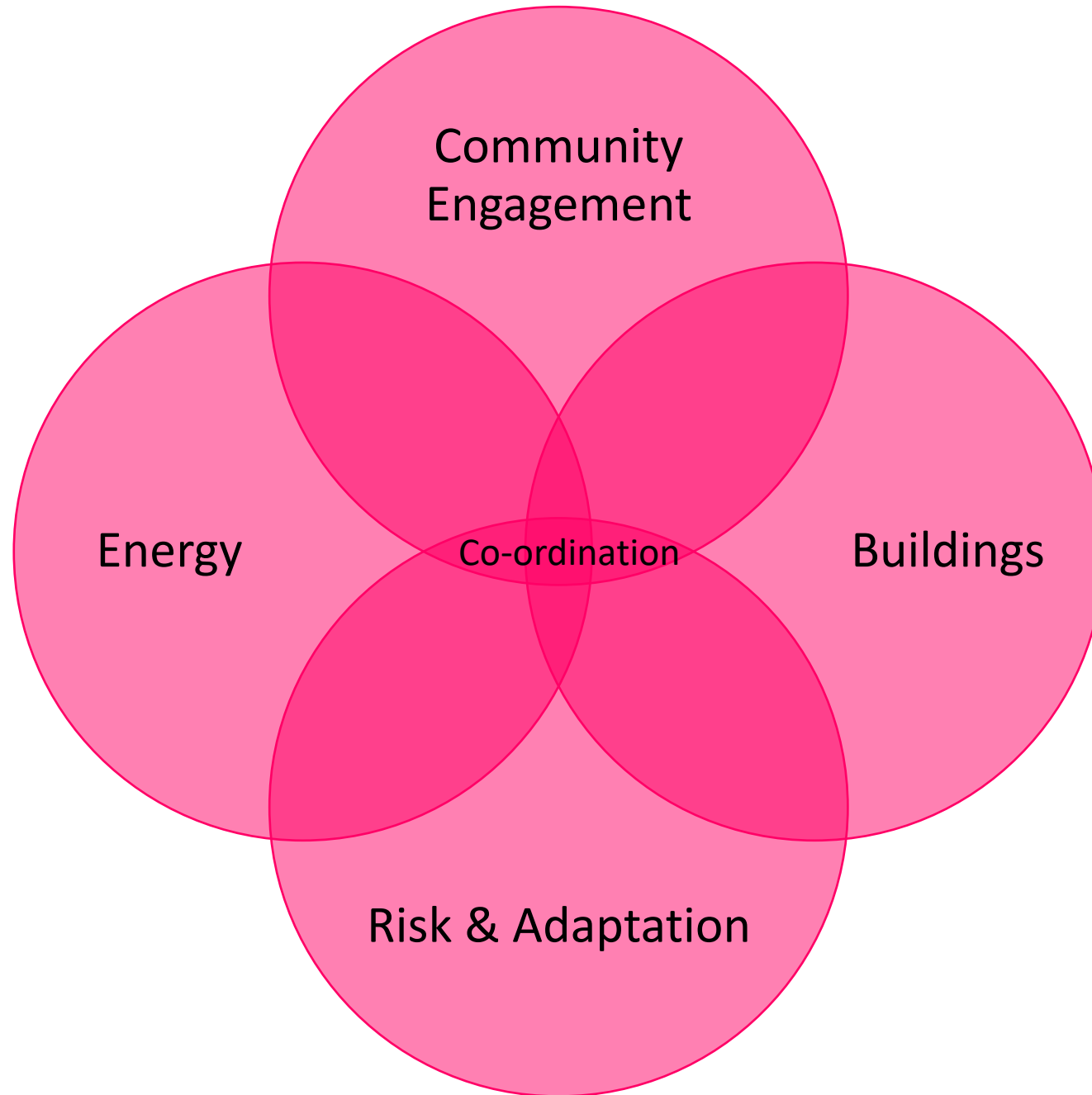
11. Who do you think are is main audience for Norwich Climate Commission? Please put in order of priority.

[More Details](#)

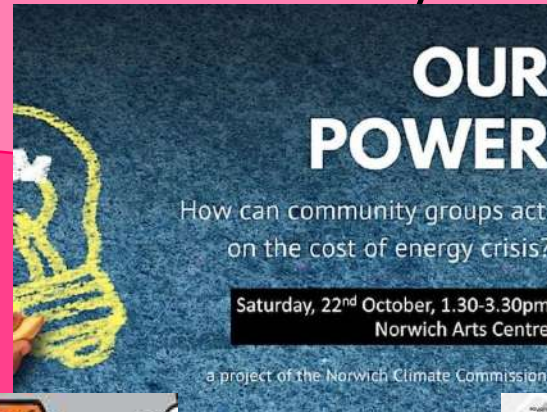
Rank Options

- 1 Norwich Citizens
- 2 Norwich Businesses
- 3 Norwich City Councillors & Offic...
- 4 Youth / Education Institutions
- 5 Local Voluntary & Community O...





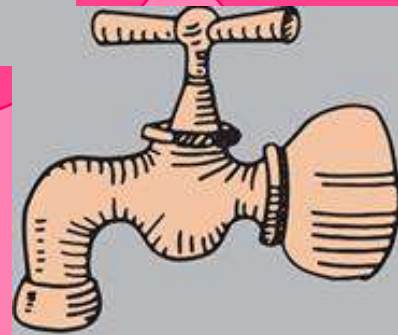
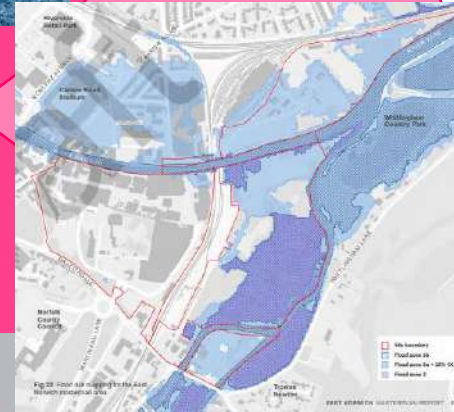
Community



Energy



Buildings



Risk & Adaptation

Norfolk and Norwich climate projections and potential adaptation to the impacts

2022 Working Paper 1

SOPHIE GIRLING
UNIVERSITY OF EAST ANGLIA

The Norwich Climate Commission is an independent advisory body set up to bring actors from the public, private and third sectors together to support, guide and track the impact of ambitious climate change and sustainability actions across Norwich. We are a partnership of Norwich City Council and the Tyndall Centre for Climate Change Research at the University of East Anglia.



Stakeholder Engagement and Public Participation in Climate Commissions: Lessons for the Norwich Climate Commission

2022 Working Paper 2

BOLUWATIFE IYIOLA
UNIVERSITY OF EAST ANGLIA

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Fuel Poverty and the Net Zero Goal in Norwich

2022 Working Paper 3

ESMATULLAH KHYBER
UNIVERSITY OF EAST ANGLIA

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A summary carbon roadmap for Norwich

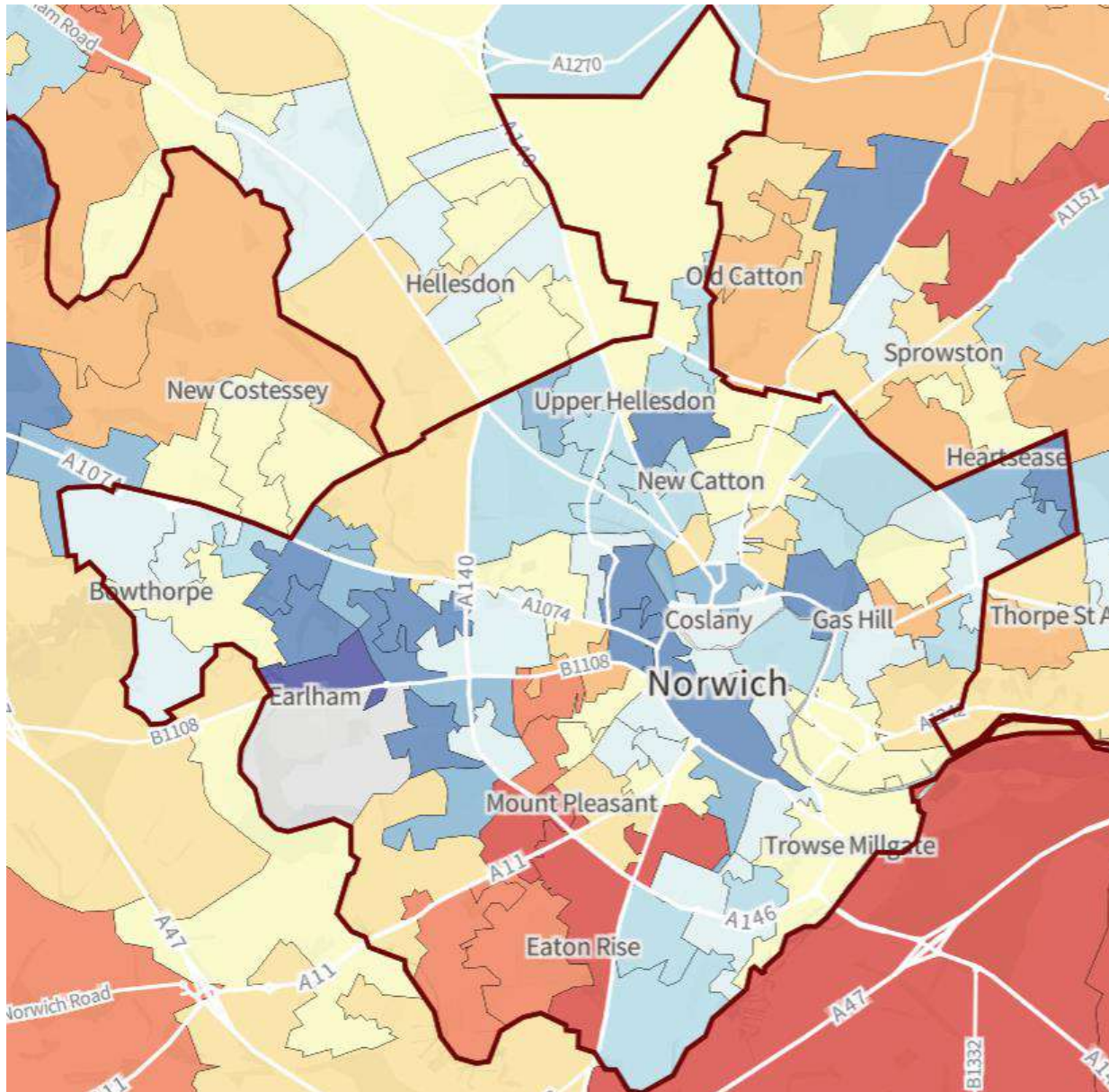
2022 Working Paper 4

ANDY GOULDSON, ANDREW SUDMANT, MILLIE DUNCAN
UNIVERSITY OF LEEDS
PCANCITIES.ORG

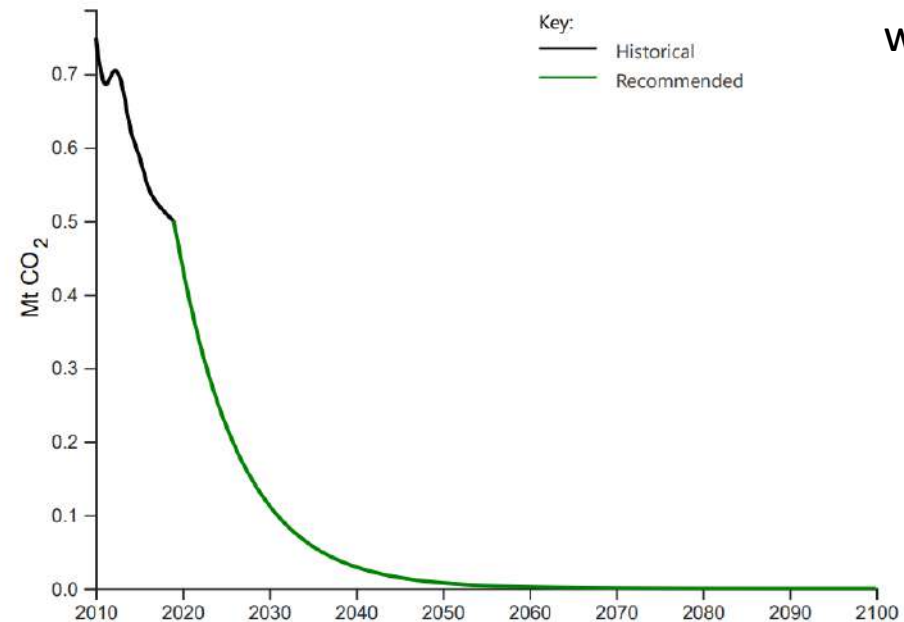
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Every tonne of CO2 adds to global warming



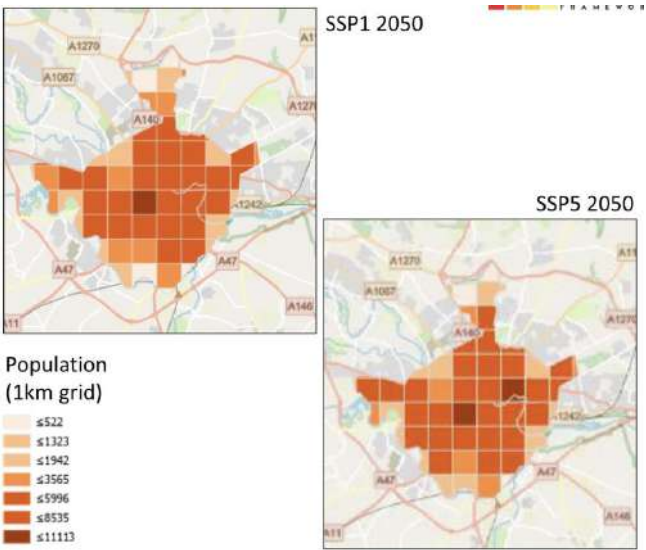
www.carbon.place



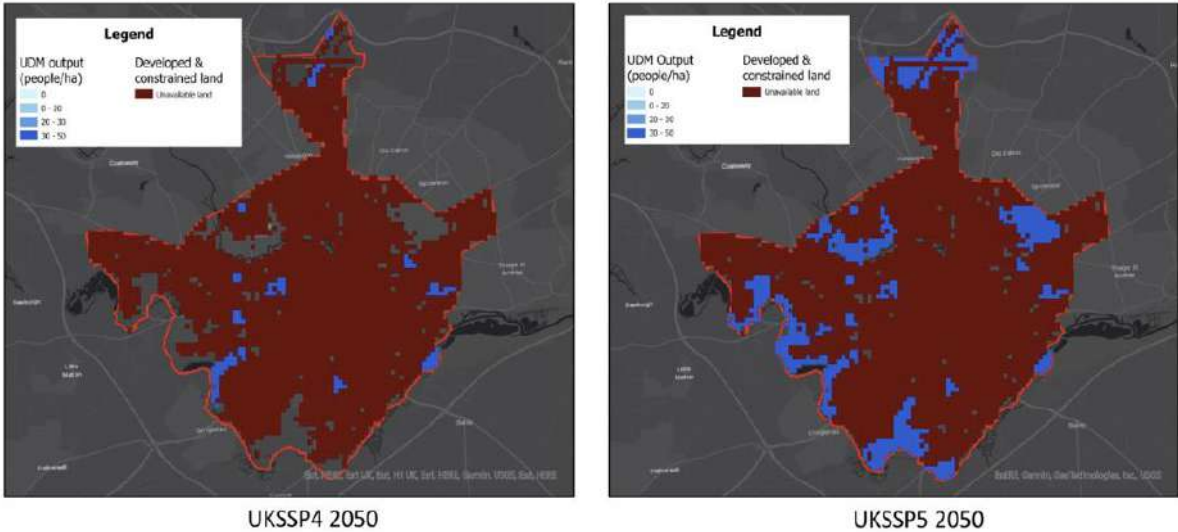
www.tyndall.ac.uk

Every tonne of CO2 adds to climate risk

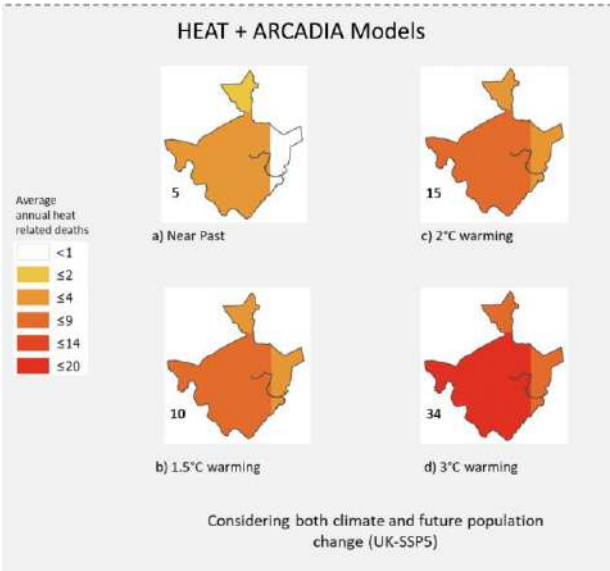
How many people and where will they live?



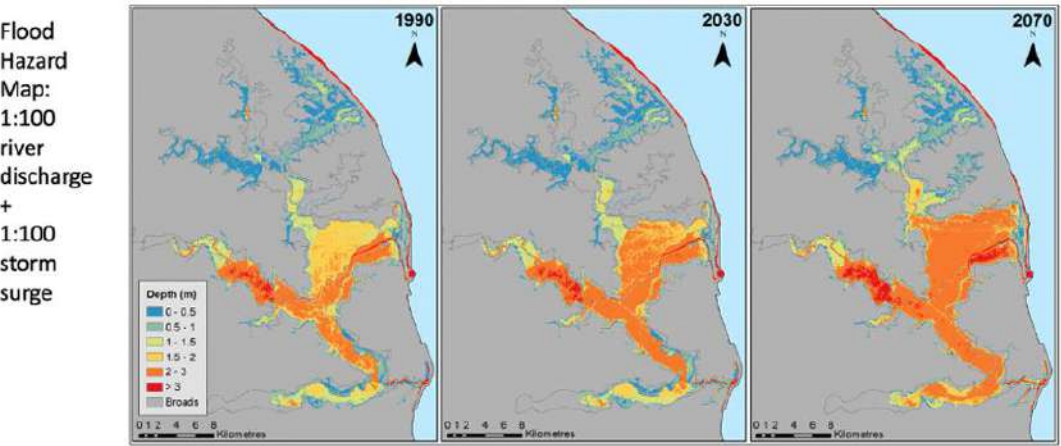
70% of existing buildings will still be in use in 2050



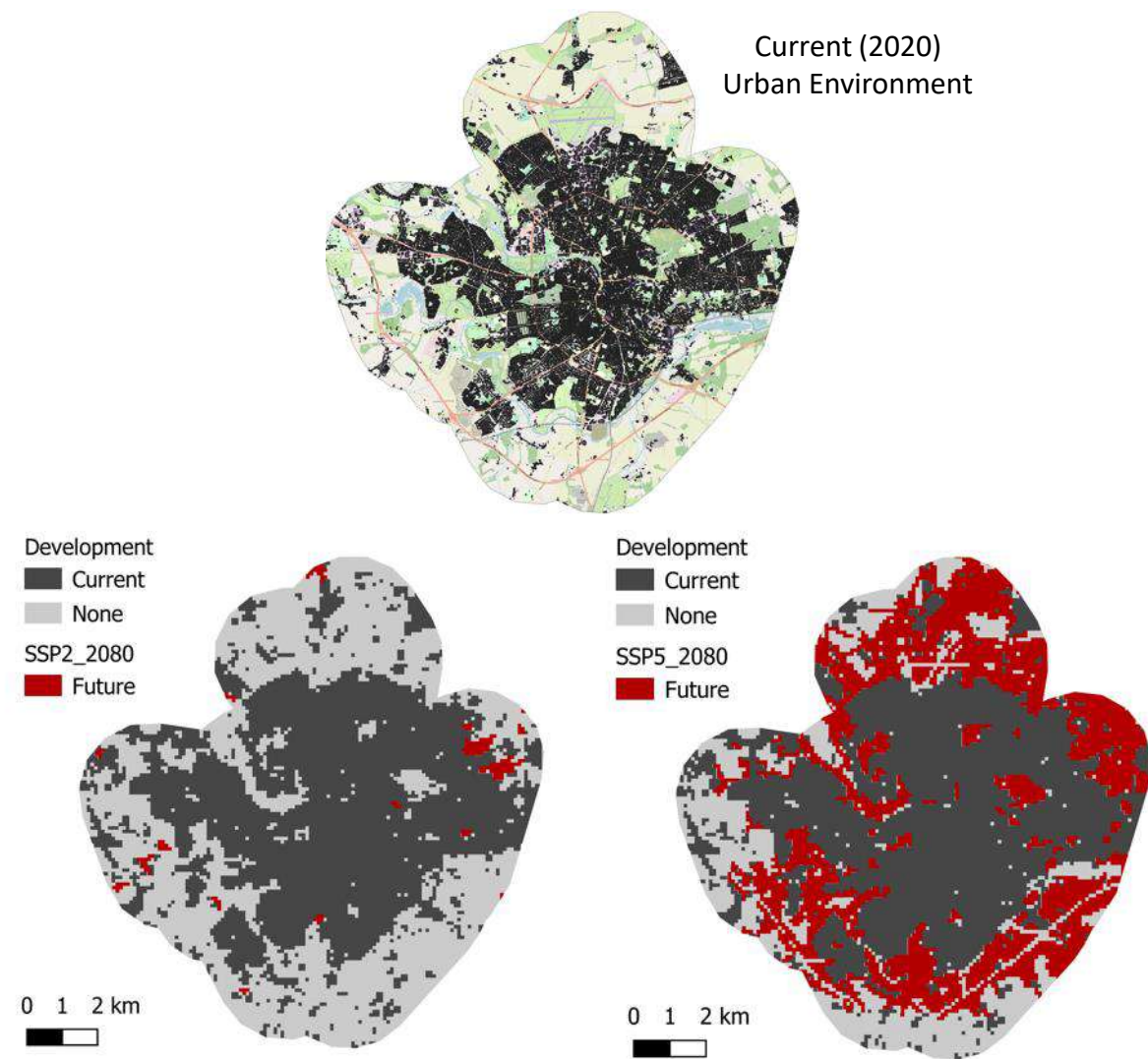
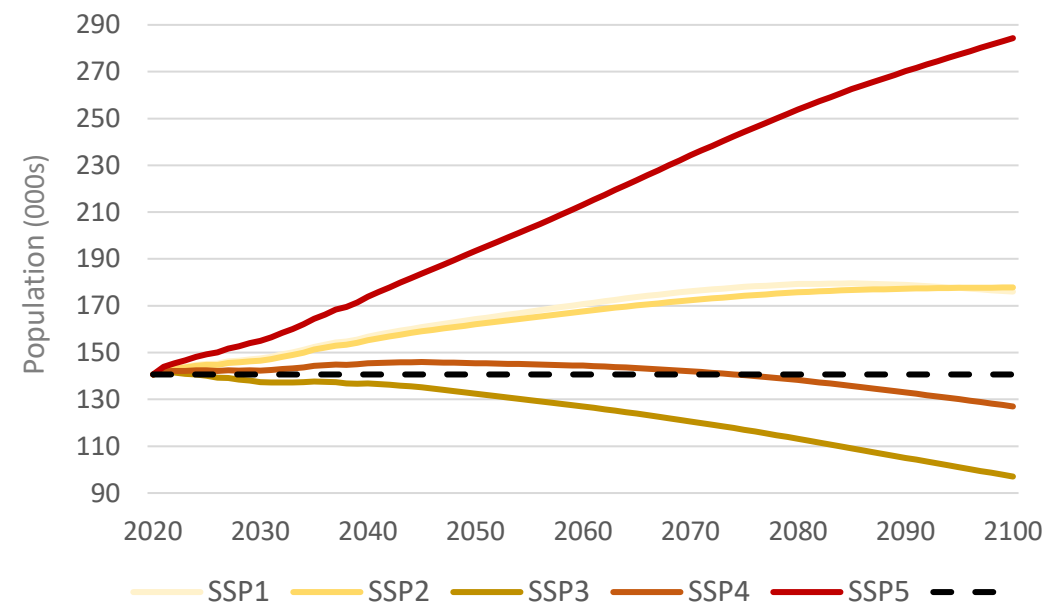
Increase in heat related mortality



Flood risk increases from SLR but not from Wensum Valley rainfall



Future population forecasts used to model future urban development in Norwich



UK Climate Projections User Interface



Before you start...



Products



Conditions of use



UKCP18 web pages

Climate Data Portal

Summer Average Temperature Change - Projections (12km)

✓ Authoritative



Met Office
Met Office

Summary

Projections of changes in summer average air temperature ($^{\circ}\text{C}$ change relative to a 1981-2000 baseline) for a range of future warming levels from the UK Climate Projections (UKCP18). Provided on a 12km grid. This dataset forms part of the Met Office Climate Data Portal service where other datasets, help and

Records: 2,074



Risk or opportunity	2050s, 2/4°C	2080s, 2°C	2080s, 4°C
N1 Risks to terrestrial species and habitats from changing climatic conditions and extreme events, including temperature change, water scarcity, wildfire, flooding, wind, and altered hydrology	Not known	Not known	Not known
N2 Risks to terrestrial species and habitats from pests, pathogens and invasive species	Not known	Not known	Not known
N4 Risk to soils from changing climatic conditions, including seasonal aridity and wetness	- H	- H	- H
N5 Risks and opportunities for natural carbon stores, carbon sequestration and GHG emissions from changing climatic conditions, including temperature change and water scarcity	- VH	- VH	- VH
N6a Risks to and opportunities for forestry productivity from extreme events and changing climatic conditions (including temperature change, water scarcity, wildfire, flooding, coastal erosion, wind and saline intrusion).	- L to - H	- L to - H	- L to - H
N6b Risks to and opportunities for agricultural productivity from extreme events and changing climatic conditions (including temperature change, water scarcity, wildfire, flooding, coastal erosion, wind and saline intrusion).	- H + H	- VH + VH	- VH + VH
N7 Risks to agriculture from pests, pathogens and invasive species	- M	- H	- H
N8 Risks to forestry from pests, pathogens and invasive species	- M	- M	- H



Key Risks and Implications

Some Key Regional Climate Implications



Business

- Sea level rise poses a risk to businesses in the East of England particularly in the tourism sector, with threats of infrastructure damage, loss of natural assets e.g. beaches and damage to built assets e.g. historical monuments.
- Central or high UKCP09 Emissions scenarios identify the East of England as being one of the regions likely to face a high loss of staff days due to heat.
- A reduction in water availability for abstraction poses a significant risk to businesses in the East of England, particularly agricultural/horticultural abstractions, affecting the long term viability of current business models.



Health and Wellbeing

- Being one of the warmer parts of the UK, increases in temperature may lead to increased levels of mortality and morbidity due to heat.
- Increased flooding may lead to increased number of deaths, injuries and people suffering from mental health effects as a result of flooding. A 0.01% (1:1000) tidal flood in the East of England could occur about 2.4 to 14 times more frequently by the 2080s compared with the present day frequency.
- Increased ozone levels by the end of the century may lead to increased levels of mortality and respiratory hospital admissions.

West Midlands Climate Change Adaptation Plan 2021-2026

Date of the report

November 2021

Author of the report

SWM, in collaboration with the Environment Agency

PETERBOROUGH CLIMATE ADAPTATION PLAN

RECOMMENDATIONS	
FROM: Adrian Chapman, Executive Director of Place and Economy	Deadline date: N/A
It is recommended that the Climate Change and Environment Scrutiny Committee: 1. Review and comment on the proposed approach to the development of the Peterborough Climate Adaptation Plan.	

Adaptation Scotland

supporting climate change resilience

What is adaptation Why adapt **How to adapt** Climate-Ready Places Get involved About us News & events 

Your sector Partnerships and collaborations Our adaptation process Tools and resources Case studies

How to adapt

Adaptation is a process of on-going adjustments in response to climate and non-climate drivers. Many adaptation toolkits and guides have been developed both within the UK and at an international level to help society make progress with

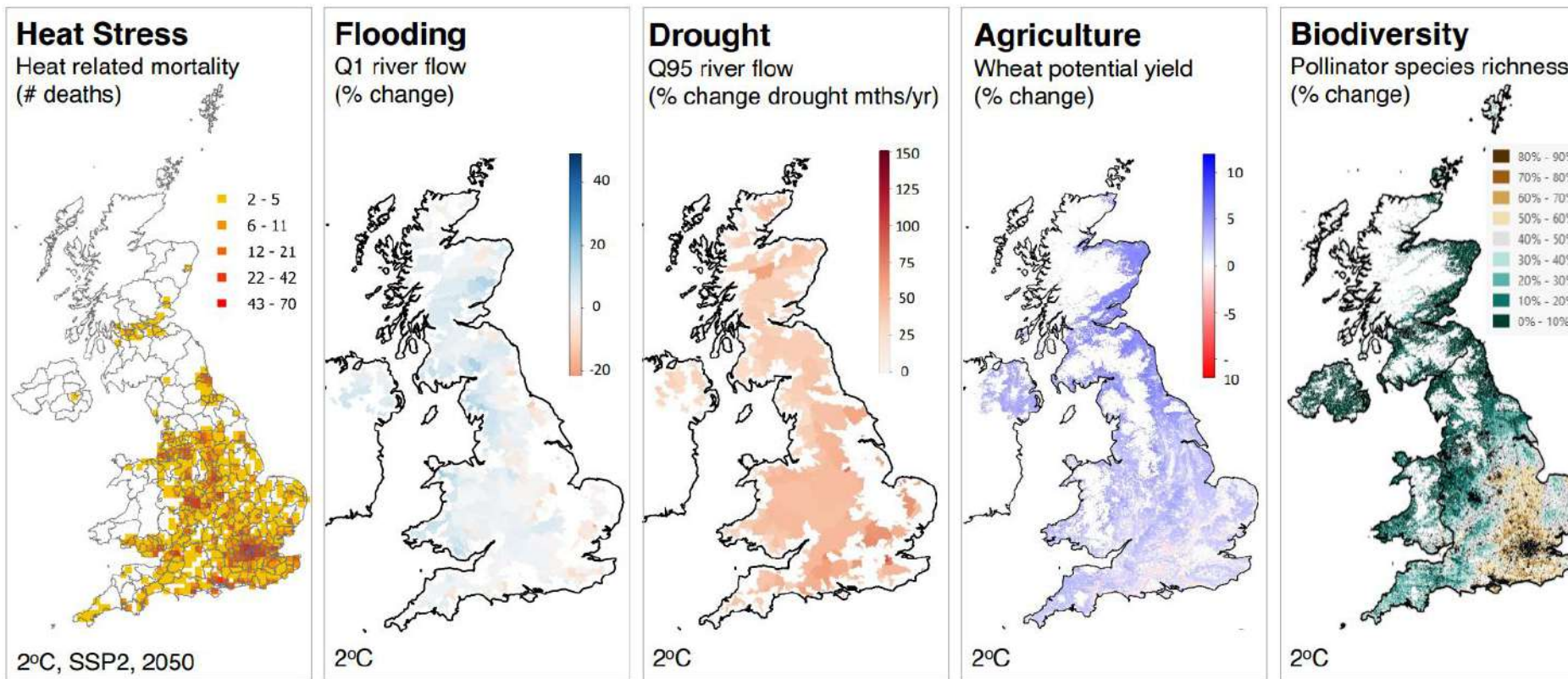
Your sector

To get started it can be useful to see how climate change is affecting your sector and what the main drivers are for adaptation.

20 May 2024

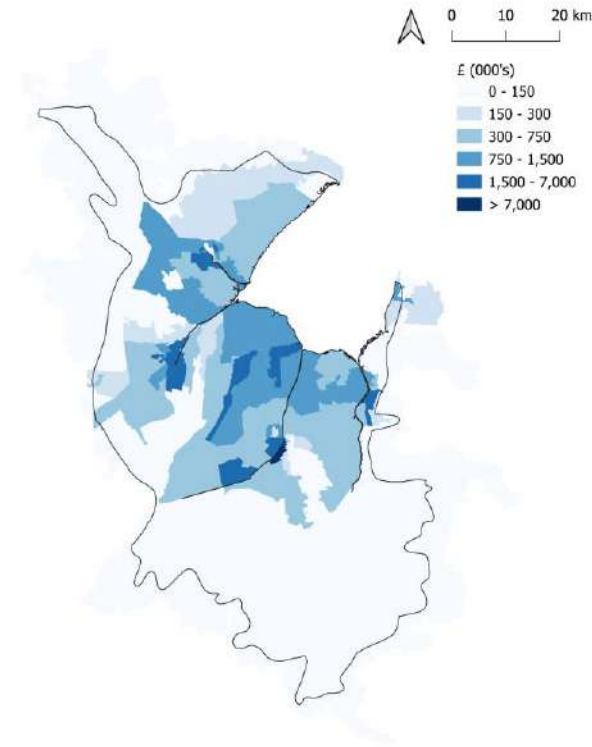
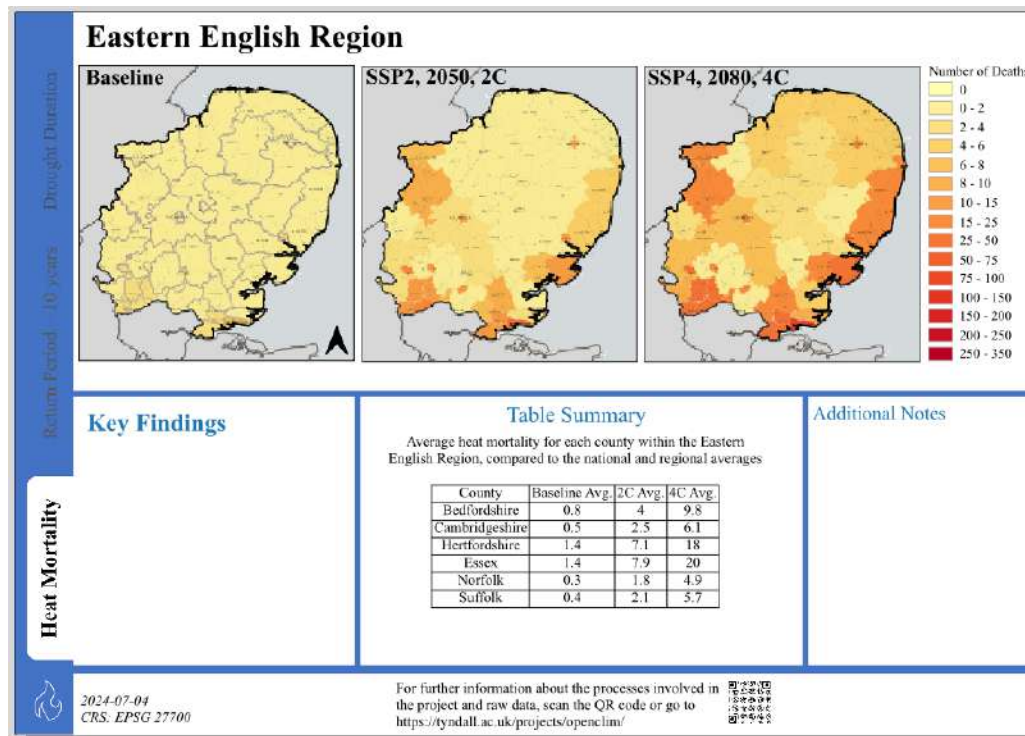
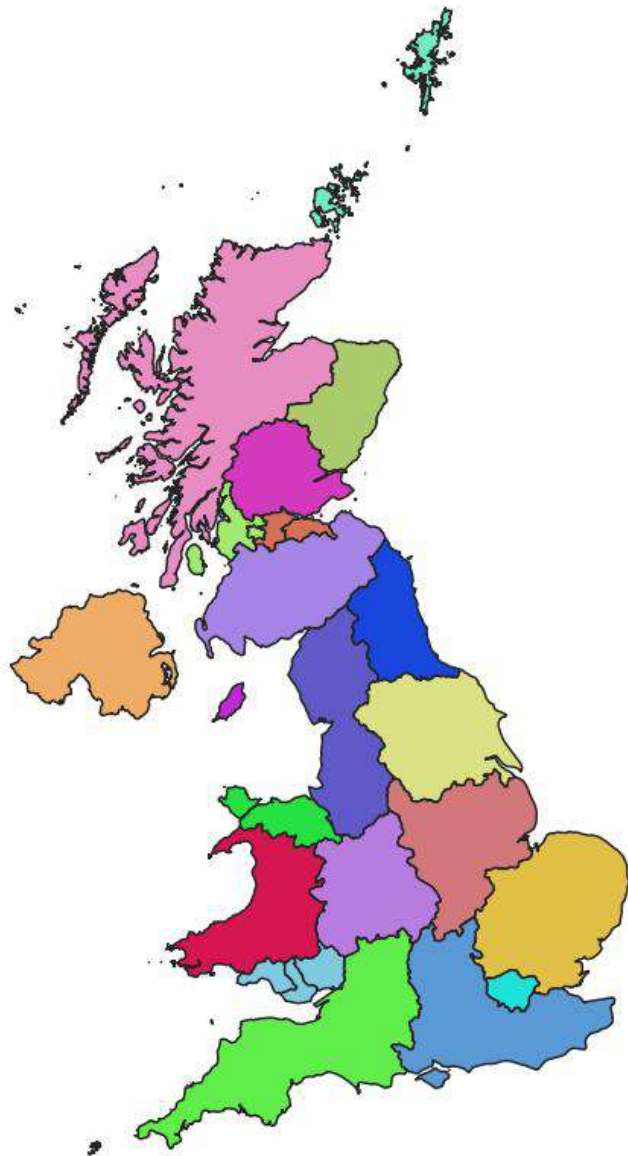
New £5m collaboration to help UK prepare for climate change

Academics and policymakers, led by King’s College London, will work together to assess how the country can best adapt to extreme weather and other effects of climate change.



Identifying adaptation ‘on the ground’: Development of a UK adaptation Inventory

Katie Jenkins^a  , Alistair Ford^b, Craig Robson^b,
Robert J. Nicholls^a



Summary report: Greenspaces for Climate Change Project

A pilot toolkit for Local Authority land managers that prioritises and enhances carbon storage combined with increasing biodiversity in line with environmental policies.

Funded by the Local Government Association (LGA) and University College London (UCL)

Authors: Martin Carpenter and Sam Rogers



Broadland
Coastal and Estuarine
Conservation at Risk

South Norfolk
Council

Tyndall Centre
for Climate Change Research

Local
Government
Association

UCL

UEA University of
East Anglia

Tyndall Centre
for Climate Change Research

The East of England's vital 'offer' to the UK as it progresses towards net zero and some priority 'asks' regarding mitigation and adapting to climate change risks

Briefing for the East of England All Party Parliamentary Group Meeting
Wednesday 6th December 2023

KEY POINTS:

- The East of England is at the sharp end of climate change. It has the lowest average rainfall and highest average temperatures in England. 20% of the region is below sea level, in some areas up to 15% of properties are at risk of flooding and the coastline is eroding rapidly.
- The East of England's offshore renewables are central to the UK's clean energy economy and the continued decoupling of growth from emissions is key to energy security, economic prosperity and progress towards net zero.
- The East of England is the UK's most vulnerable region to the impacts of climate change and adaptation is needed because of high risks. The specific risks to the region of climate change require a specific quantitative assessment.
- Net zero electricity installers and local authorities are all grappling with long energy connection queues. The lack of grid connection is a bottleneck to installing and connecting-up renewable energy solutions whether large or domestic in the region.
- There has been no progress reducing transport emissions. The cheapest and fastest route is potentially a 20mph urban speed limit. Freight contributes to the Region's emissions because of import and agriculture distribution and greener freight is a priority also. Investment in Ely Junction will open up low-carbon rail to freight.

- Support for Sustainable Aviation Fuel from domestic waste streams and feedstocks will help UK airports deliver jet zero. Sugar Beet pulp reclassification will help support biogas production.
- There is no national framework or secure funding for local authority climate action. Stop-start competitive funding is holding back local progress and does not help markets to develop or secure investment. Devolving funding to local authorities will deliver better outcomes.
- To this end, ongoing collaboration between the APPG and local Climate Commissioners and Partnerships will illuminate and support place-based climate action both regarding renewable energy and adaptation such as flood defences.

This briefing has been prepared by Asher Minns of the Tyndall Centre for Climate Change Research at the University of East Anglia. Although commented upon by colleagues and APPG members it has not had a full peer review and is not the view of the Tyndall Centre.



Scatter Banks offshore wind farm, Great Yarmouth
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Tyndall Centre
for Climate Change Research

CLIMATE CHANGE IN THE EAST OF ENGLAND: ENABLING INSTITUTIONS

Report of a workshop of Climate
Commissions, Partnerships and Local
Authorities in the East of England

MARTIN MAHONY
ANDREW KYTHREOTIS
CANDICE HOWARTH
ASHER MINNS

NORWICH
City Council

Tyndall Centre
for Climate Change Research

UEA
University of East Anglia

UNIVERSITY OF
LINCOLN

PEAR
PLACE-BASED
CLIMATE ACTION
NETWORK

NORWICH
CLIMATE
COMMISSION

UEA
University of East Anglia

Tyndall Centre 22 years
for Climate Change Research

Realising the East of England's Contribution to Achieving UK Net Zero

This briefing has been prepared for a meeting of the members of the All-Party Parliamentary Group for the East of England.

- The headline outcomes of COP26 (Glasgow, 2021) were the Glasgow Climate Pact of increased emission reduction pledges and the Paris Agreement Rulebook. The finance headlines of Glasgow are not forthcoming, an ongoing issue since 2009.
- More locally, UK energy supplies will not achieve decarbonisation without the East of England's renewable energy resources.
- The region requires a grid and digital transformation for the necessary electric vehicle and heat pump infrastructure.
- As the UK's most vulnerable region to climate change it needs an up-to-date place-based scientific assessment of its adaptation needs.
- Decarbonisation and adaptation are place-based more than centrally controlled, requiring additional place-based policy focus.

Norfolk Net-Zero Communities





From awareness to action

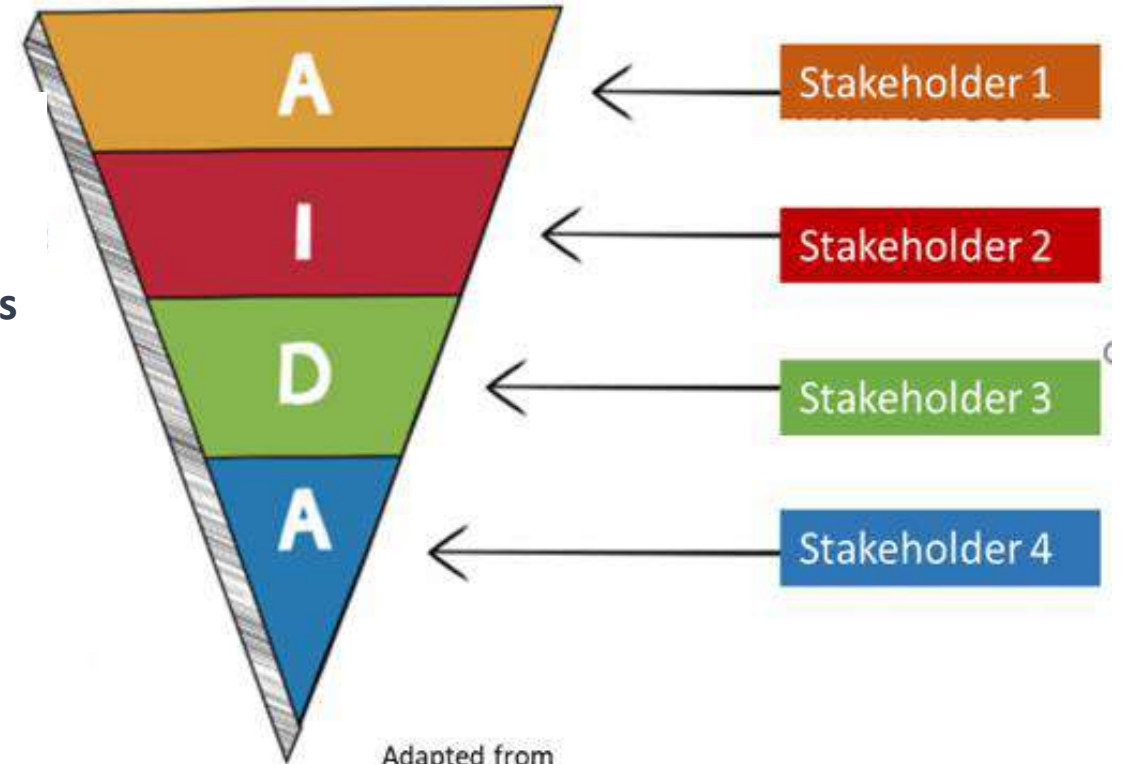
Awareness – Developing Consciousness

Interest - Acknowledging perspectives and affirming beliefs

Desire – Realizing Benefits to Self and Others

Action – Taking Action and Embracing Influence

THE AIDA MODEL



Adapted from
ESSENTIAL MARKETING MODELS [HTTP://BIT.LY/SMARTMODELS](http://bit.ly/smartmodels)

CLIMATE AMBASSADORS



Supporting schools with their climate action plans