Green Infrastructure and Climate Change Conference.
Guildhall, Derry – March 12th 2019.


# CLIMATE IRELAND: SUPPORTING NATIONAL ADAPTATION POLICY AND PRACTICE

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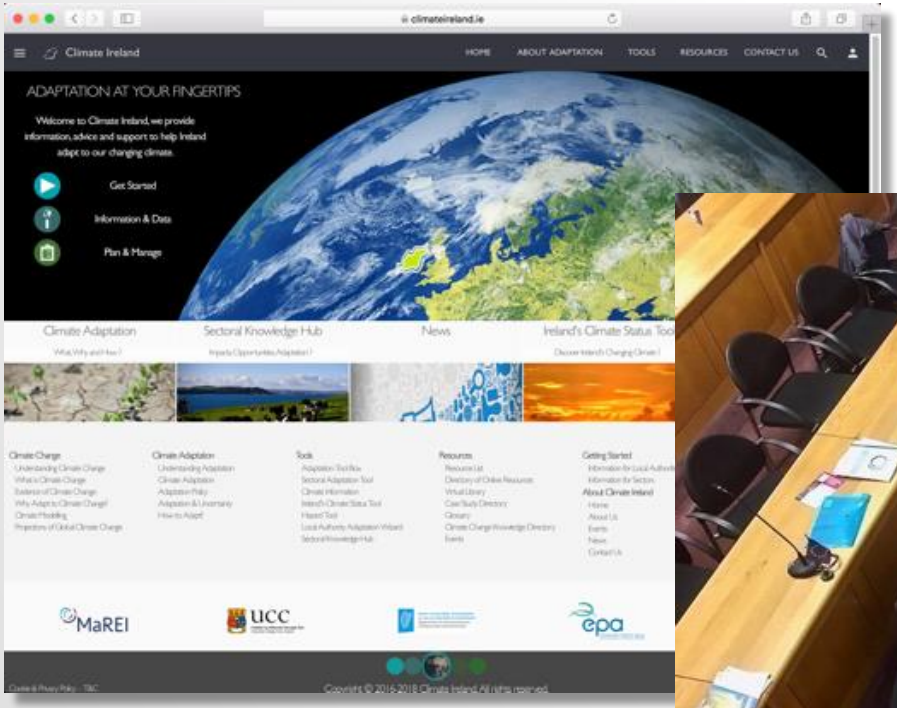
# CLIMATE IRELAND

## IRELAND'S ONLINE SOURCE OF CLIMATE & ADAPTATION INFORMATION (HTTP://WWW.CLIMATEIRELAND.IE)




## DEVELOPING CAPACITY & SUPPORTING PLANNING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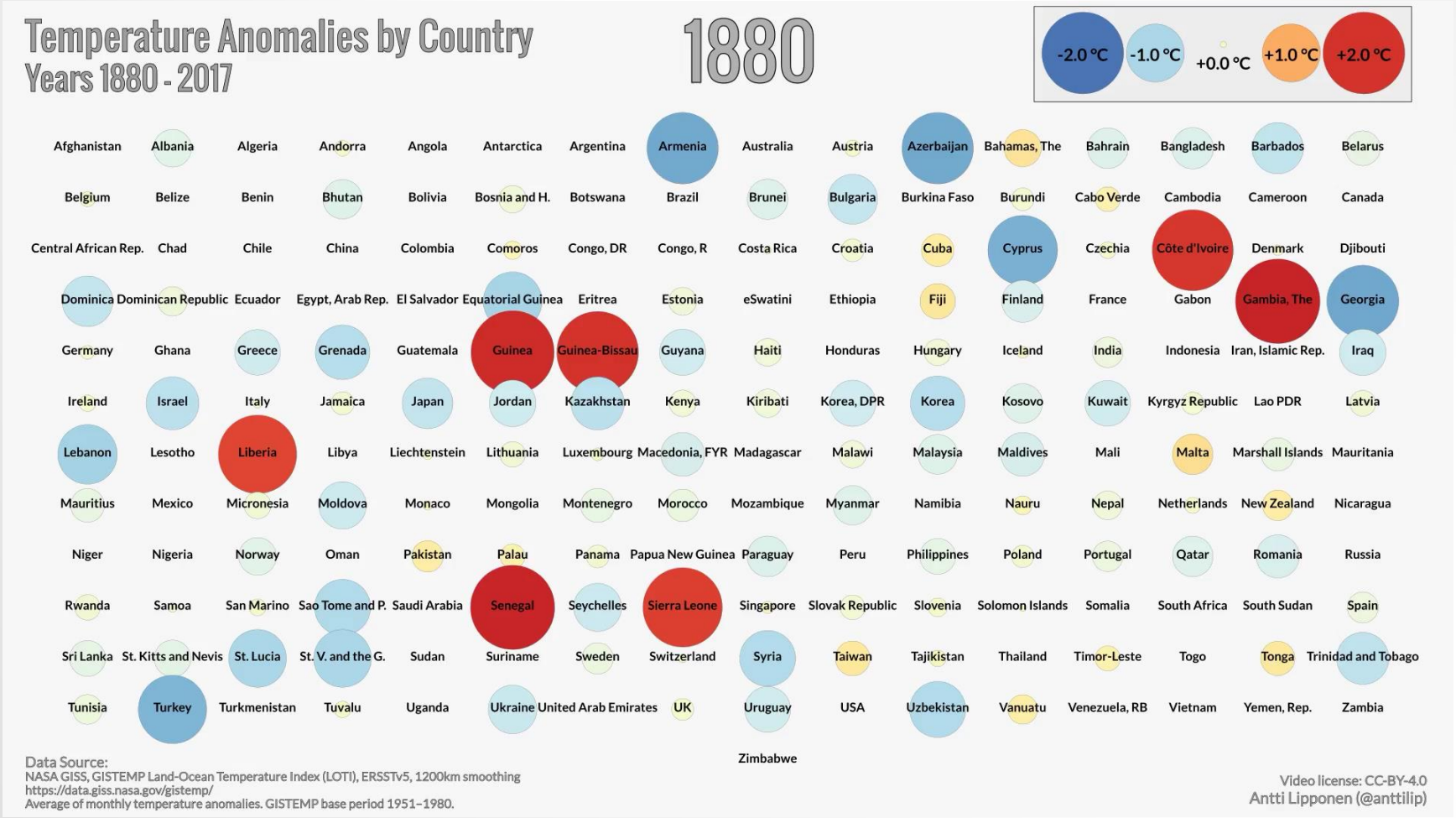
# GLOBAL CLIMATE CHANGE

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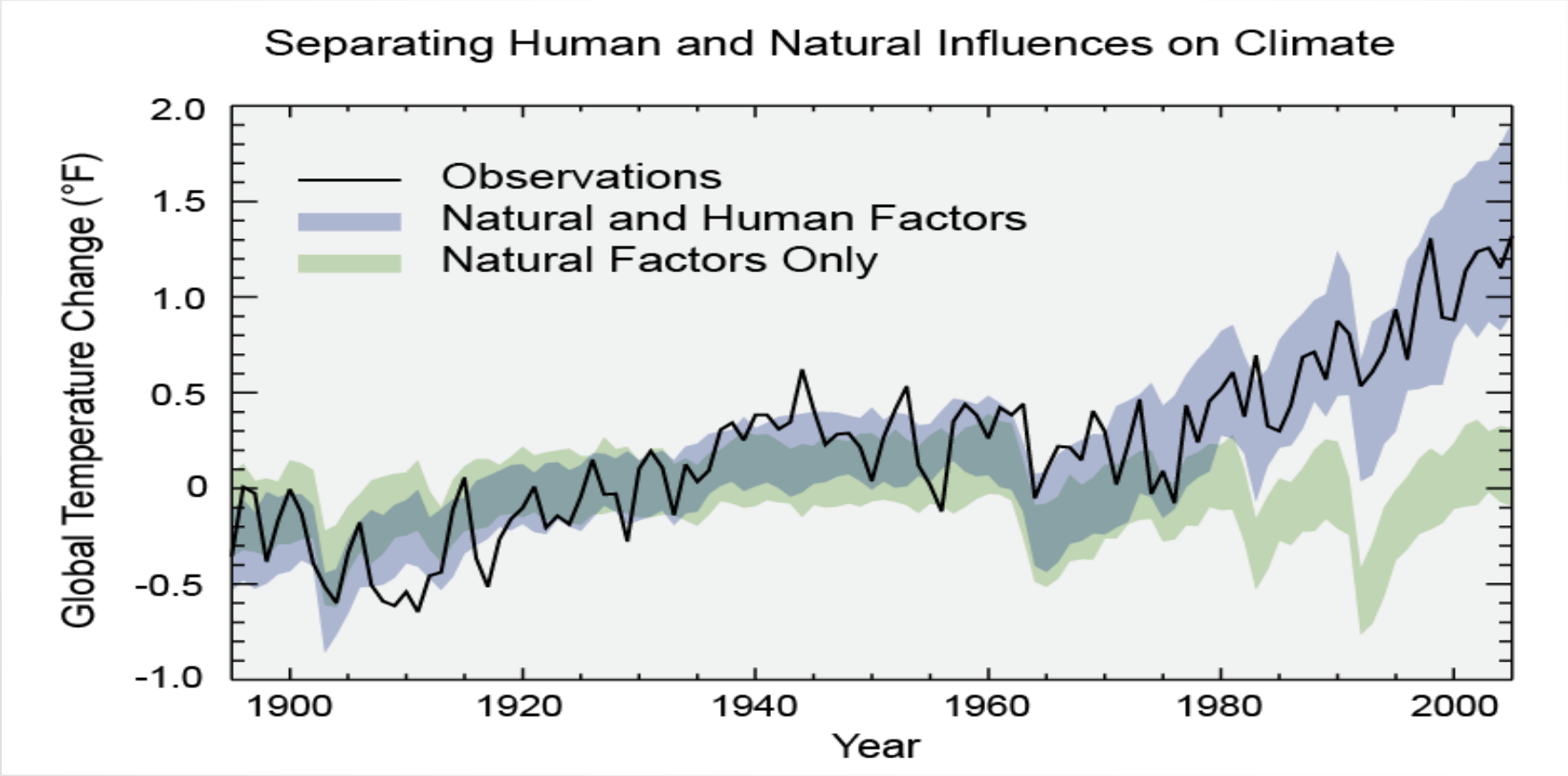
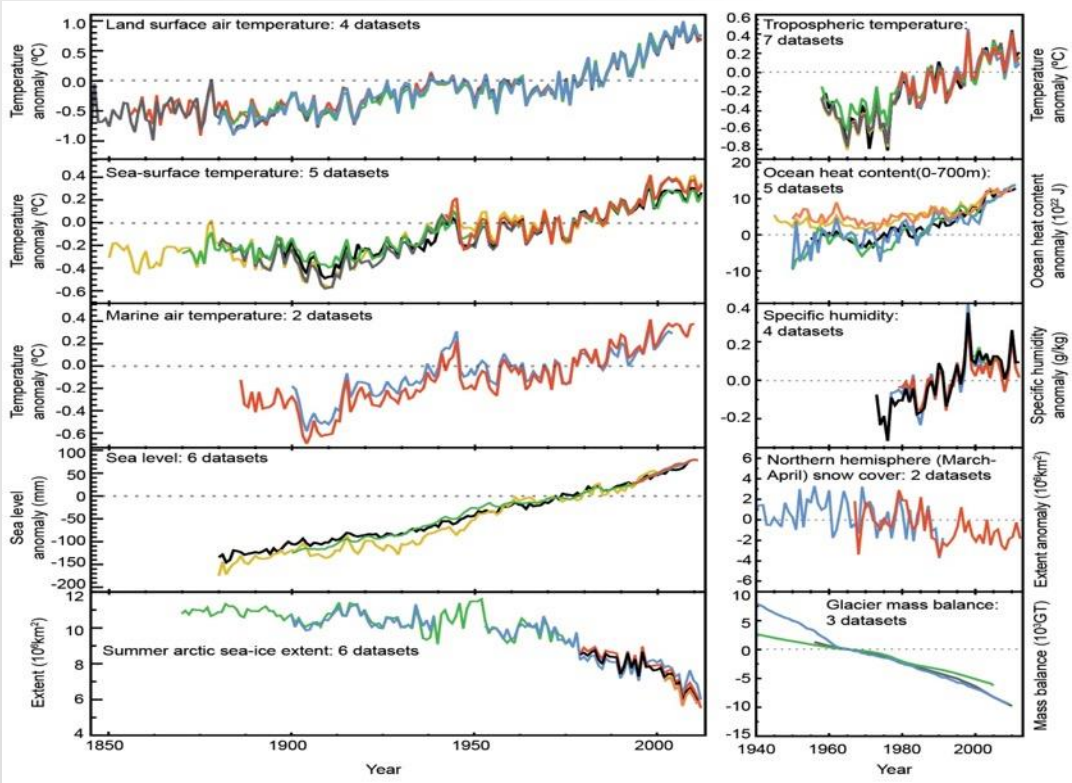
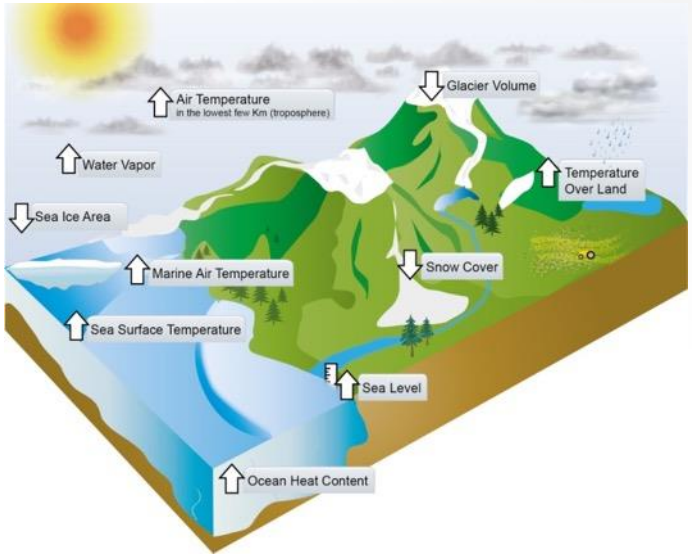



Fig. 2.3 US National Climate Assessment 2014

# CHANGES ARE BEING DETECTED ACROSS THE EARTH SYSTEM

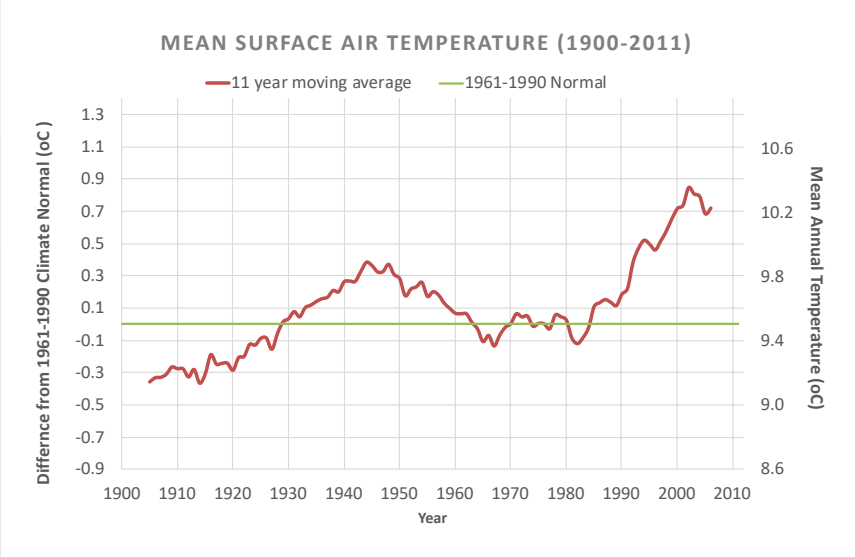



(IPCC AR5, 2013)

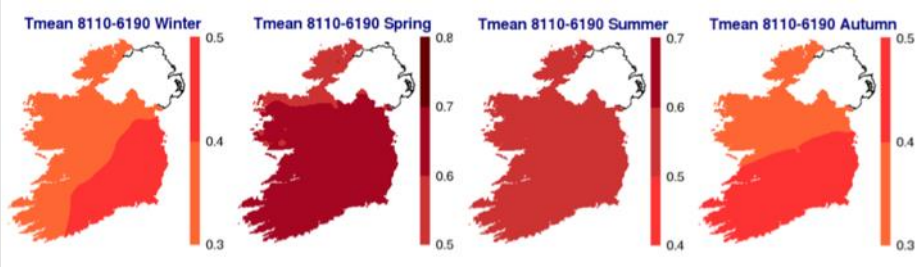



FAQ 2.1, Figure 1 | Independent analyses of many components of the climate system that would be expected to change in a warming world exhibit trends consistent with warming (arrow direction denotes the sign of the change) (IPCC AR5, 2013)

# IRELAND'S CLIMATE IS ALSO CHANGING, REFLECTING GLOBAL TRENDS




Dwyer (2013)




Seasonal Mean Temperature Differences 1981-2010 less 1961-1990 °C (Walsh, 2017)

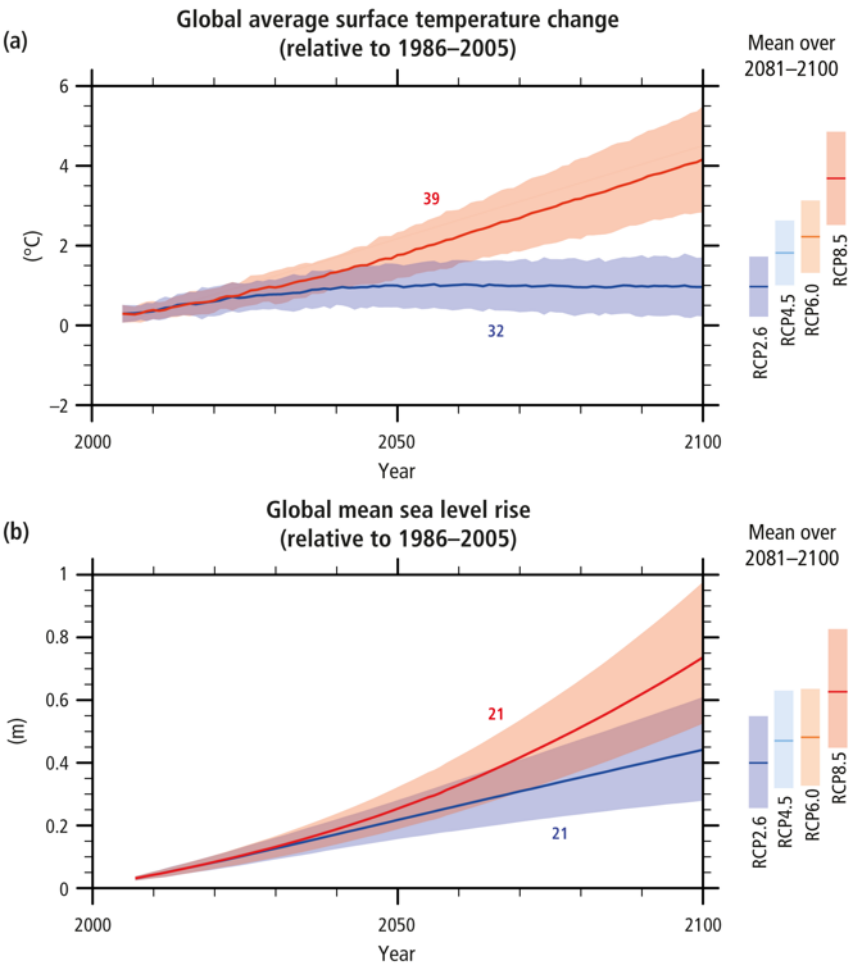
| Difference between 1981-2010 and 1961-1990 LTAs | | | |
|---|---|---|---|
| **Month** | **Mean T** | **Min T** | **Max T** |
| **JAN** | 0.55 | 0.48 | 0.62 |
| **FEB** | 0.60 | 0.42 | 0.78 |
| **MAR** | 0.71 | 0.68 | 0.74 |
| **APR** | 0.56 | 0.51 | 0.61 |
| **MAY** | 0.65 | 0.57 | 0.72 |
| **JUN** | 0.44 | 0.50 | 0.38 |
| **JUL** | 0.56 | 0.60 | 0.51 |
| **AUG** | 0.58 | 0.63 | 0.54 |
| **SEP** | 0.51 | 0.43 | 0.59 |
| **OCT** | 0.04 | -0.04 | 0.13 |
| **NOV** | 0.67 | 0.71 | 0.63 |
| **DEC** | 0.05 | -0.02 | 0.11 |
| **ANNUAL** | 0.49 | 0.46 | 0.52 |

Average difference between Long Term Averages (LTA) temperatures, 1981-2010 less 1961-1990 °C (Walsh, 2017)

# THESE CHANGES ARE ALREADY HAVING IMPACTS…



# … AND ARE EXPECTED TO CONTINUE & INTENSIFY INTO THE FUTURE




(IPCC AR5, 2013)

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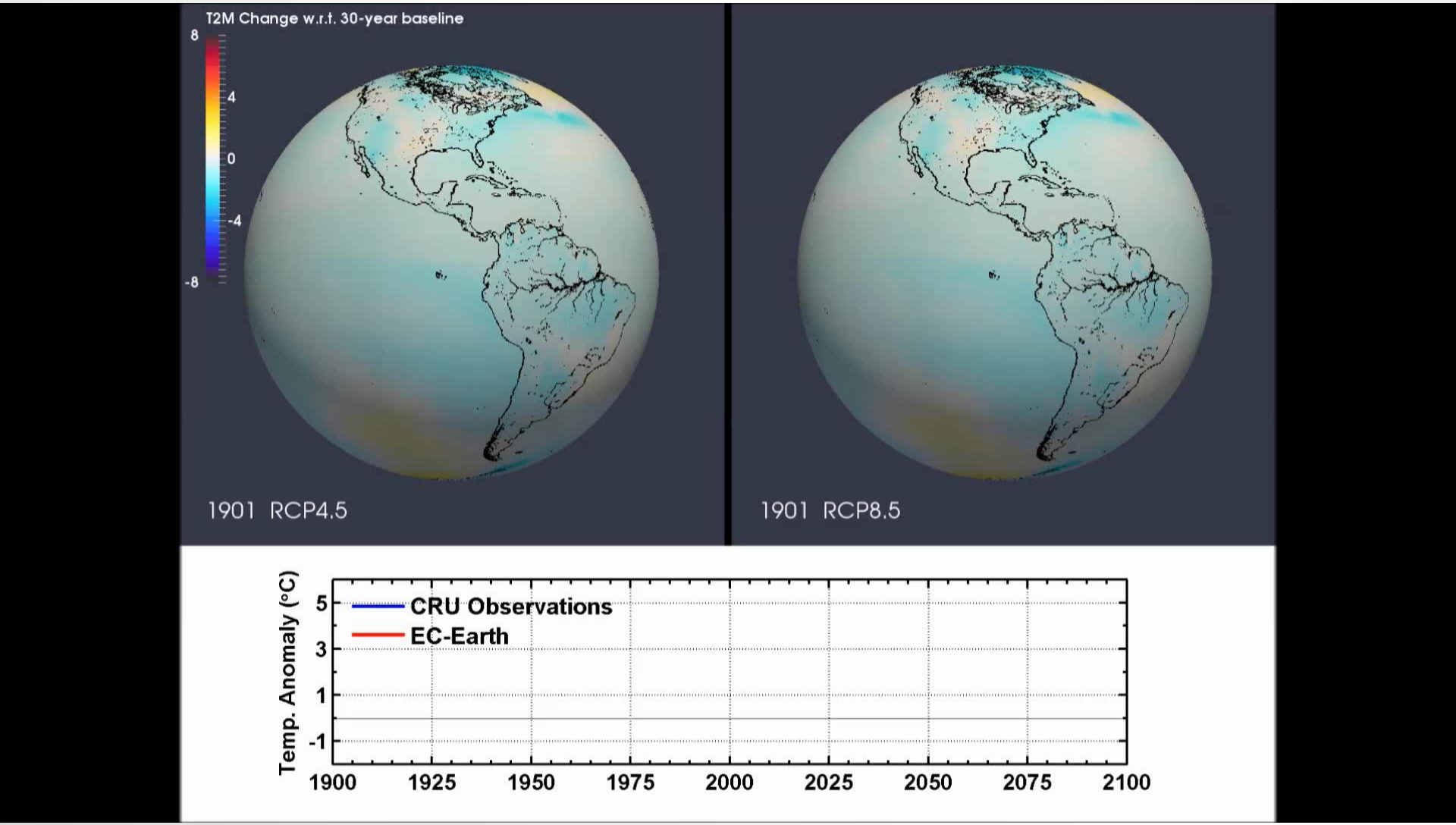
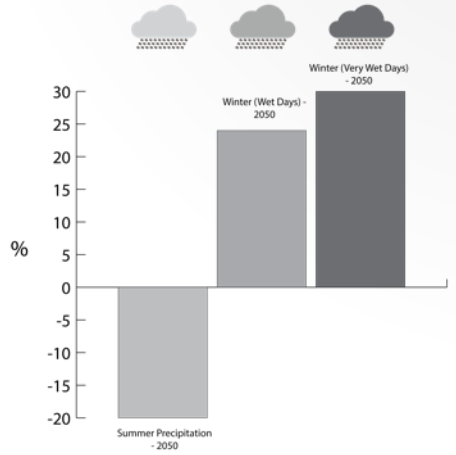
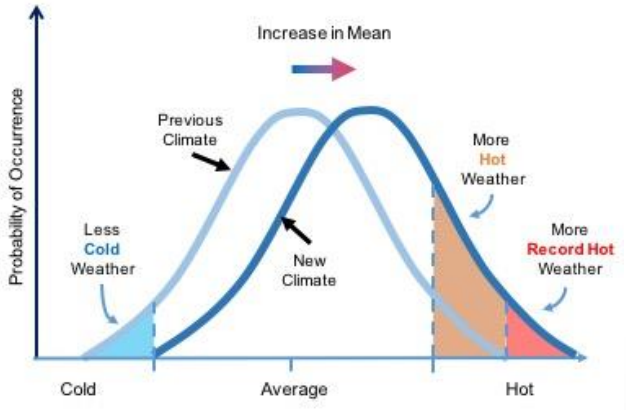



(Courtesy of ICHEC)

# AN OVERVIEW OF PROJECTED CHANGES FOR IRELAND

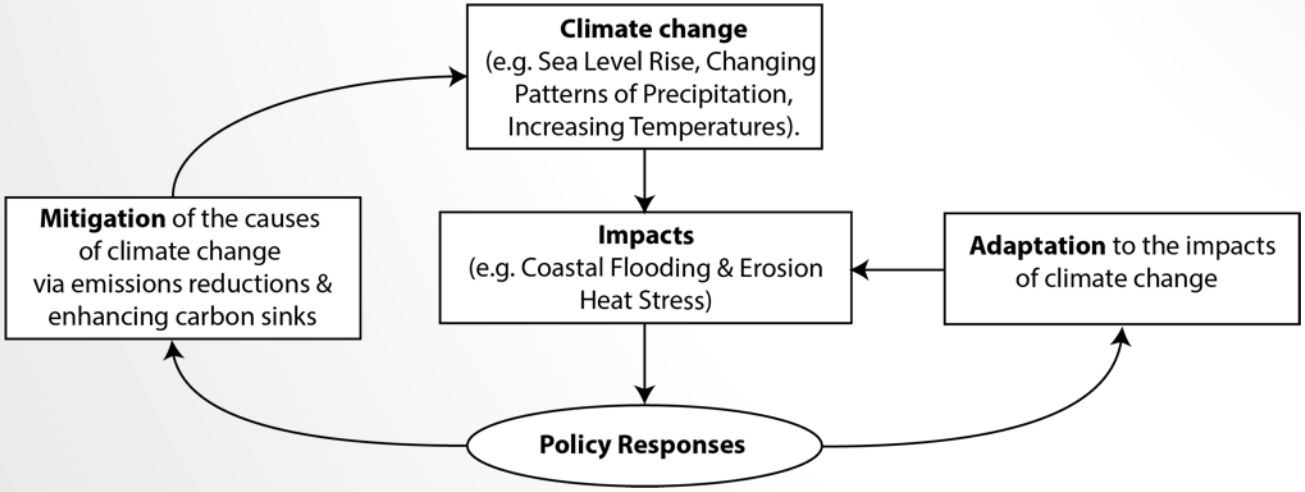
- Average **temperature are expected to rise** across all seasons with increases in the frequency and intensity of **heatwaves**;
- **Sea levels are projected to increase** by in the coastal areas around Ireland and by up to 0.81m by 2100 (conservative);
- Significant **reductions in levels of precipitation** are expected in summer and Autumn;
- Increases in the frequency of **intense precipitation events** are expected;
- The frequency and intensity of **extreme weather events** is expected to increase.




(Source: Nolan, 2015; IPCC, ARR5, 2013)

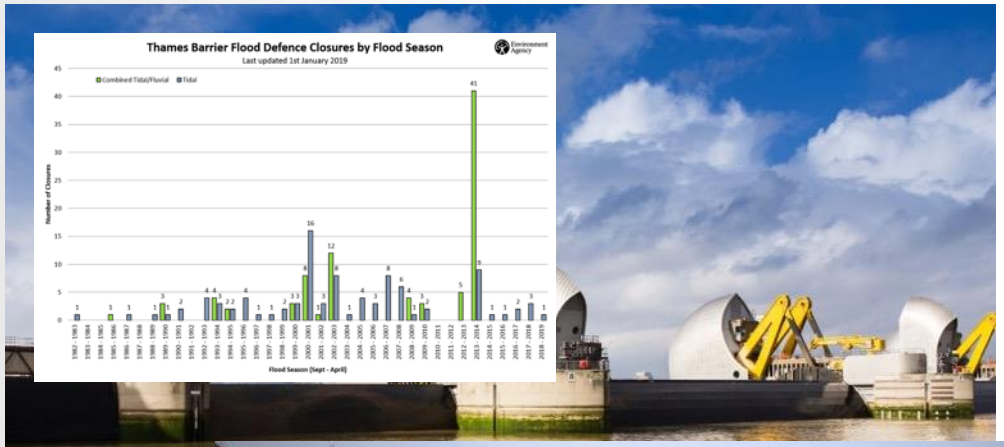
# CLIMATE ACTION – DECREASING THE CAUSES AND MANAGING THE IMPACTS

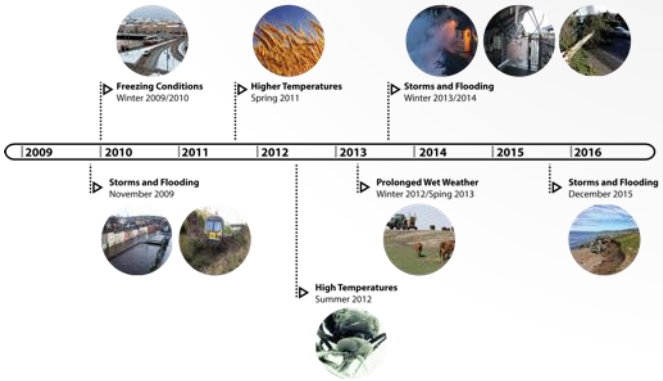



**Adaptation:** The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.

**Mitigation:** A human intervention to reduce the sources or enhance the sinks of greenhouse gases.

# EXAMPLES OF ADAPTATION IN ACTION





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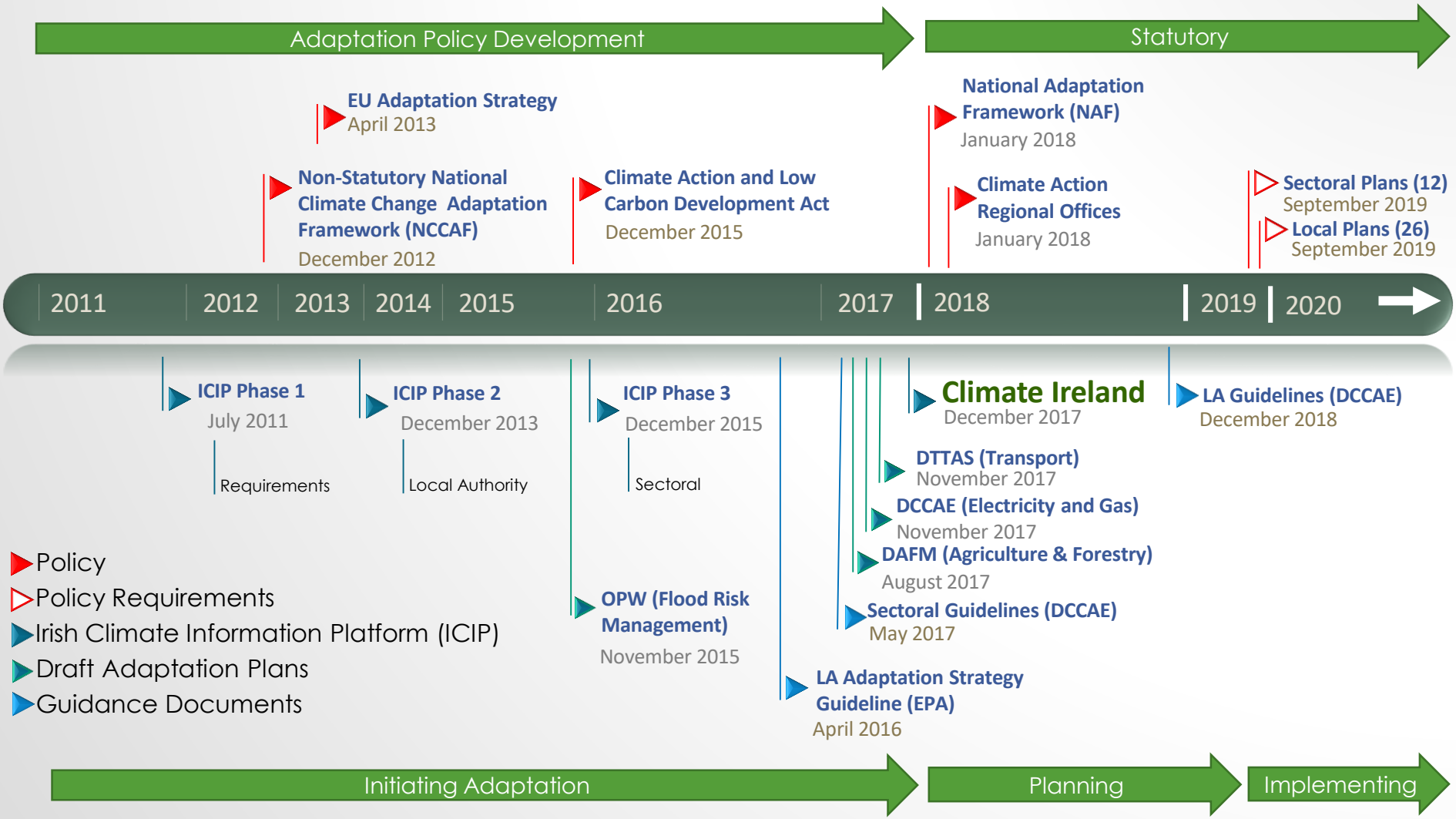
# EVOLUTION OF ADAPTATION POLICY AND PLANNING IN THE REPUBLIC OF IRELAND

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# CLIMATE ADAPTATION POLICY: NATIONAL ADAPTATION FRAMEWORK (2018)

- Low Carbon and Climate Action Act (2015):
  - National Mitigation Plan;
  - **National Adaptation Framework (NAF)**;
  - National Climate Change Advisory Council.
- NAF provides for a coordinated and whole of government response.
- Requires the development of local and sectoral adaptation strategies **by September 30th 2019**
- Established **Climate Action Regional Offices** (Linking sectors and LAs)
- **Iterative – Learning by Doing.**


*Adaptation under this Framework should seek to minimise costs and maximise the opportunities arising from climate change*

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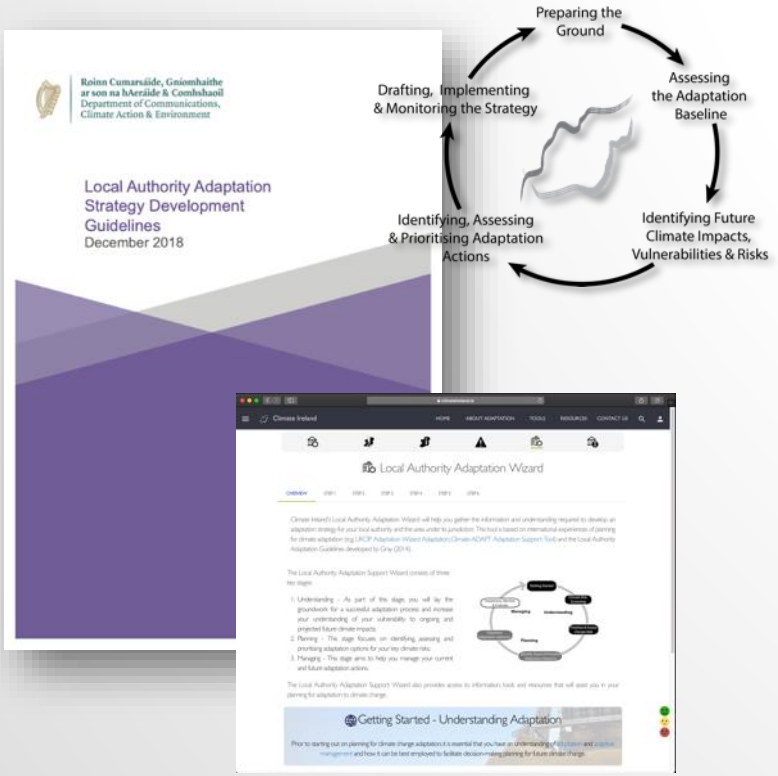
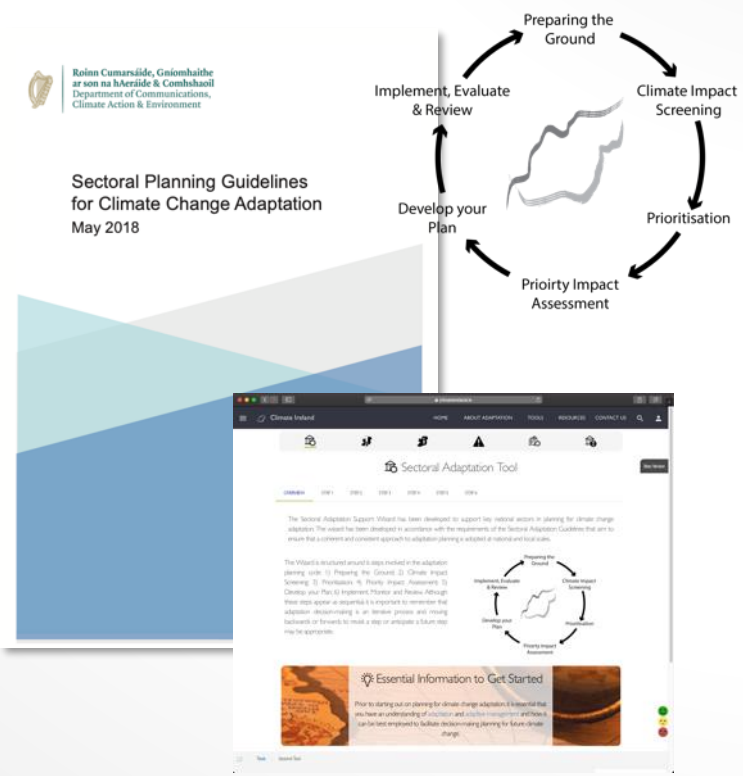
# SUPPORTING ADAPTATION AT SECTORAL AND LOCAL LEVEL

Ireland's National Adaptation Framework requires the development of local and sectoral adaptation plans. This is being supported by Climate Ireland through the development of adaptation guidelines and online tools.

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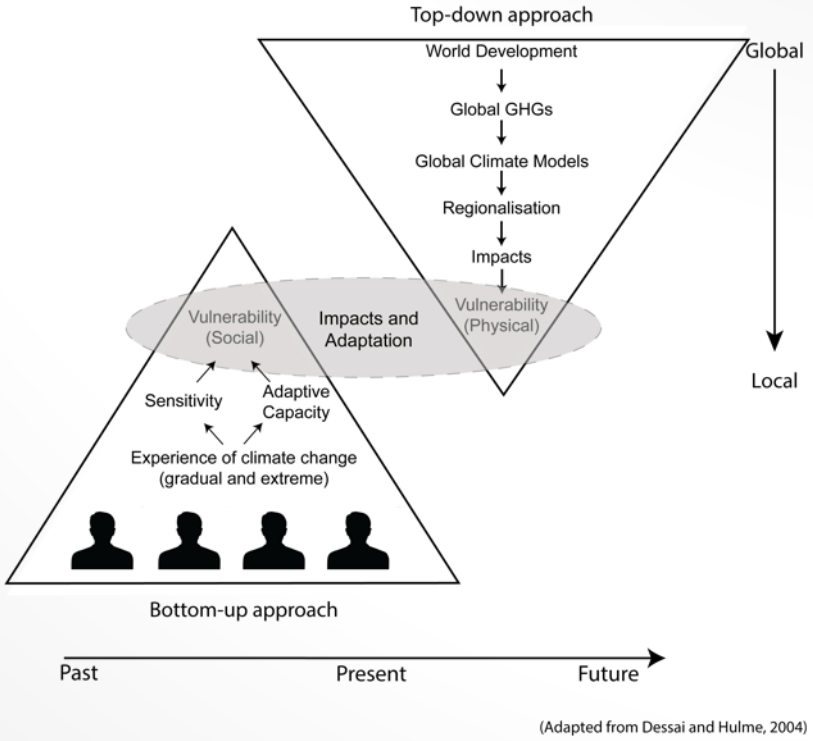
# SOME KEY CONSIDERATIONS: ADAPTATION NEEDS TO BE TAILORED

- Climate impacts will be felt and differentiated at the **local scale**;
- Planning for future climate change is not just about impacts (i.e. impacts driven) but about **local, regional and national aims and objectives** (i.e. policy orientated);
- This requires a **combination of top-down and bottom up approaches** to adaptation planning;
- Important to consider ongoing and future **projected climate changes, development and interactions**.

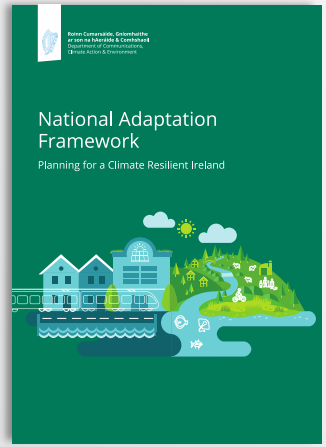


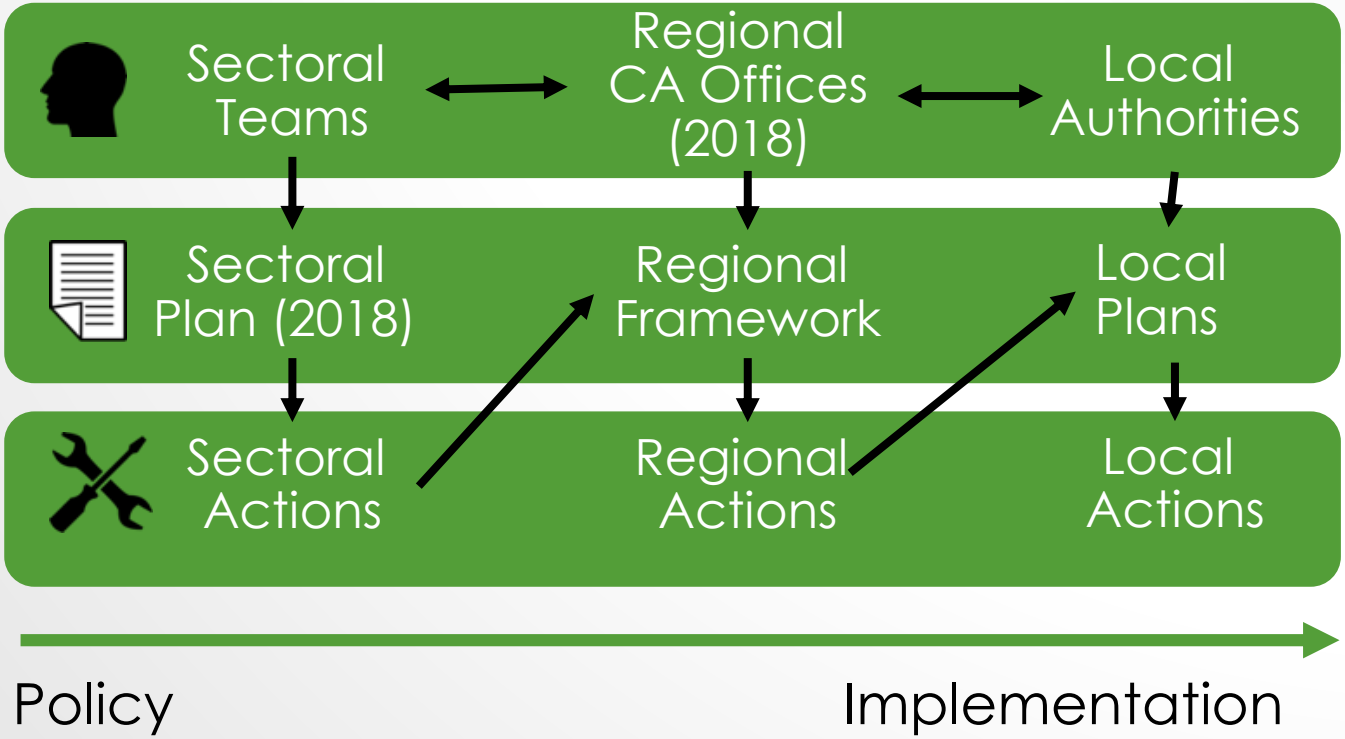

(Adapted from Dessai and Hulme, 2004)

# SOME KEY CONSIDERATIONS: ADAPTATION IS ITERATIVE

- Based on an **Adaptive Management Framework** (stepped and iterative approach);
- Combines **top-down (science-first) and bottom up (policy-first)** approaches to planning for climate change adaptation
- **Align** to local and sectoral decision making processes
- Aim to **address the challenges** of planning for climate change adaptation.

# SOME KEY CONSIDERATIONS: SUCCESS WILL DETERMINED BY A HIGH LEVEL OF ENGAGEMENT & COORDINATION

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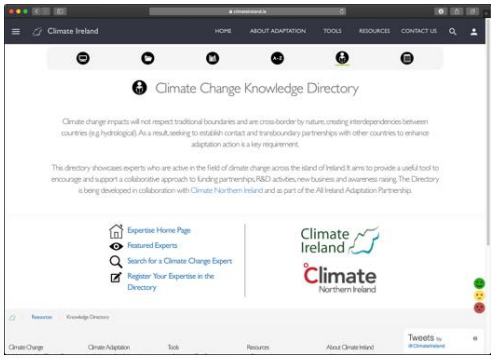
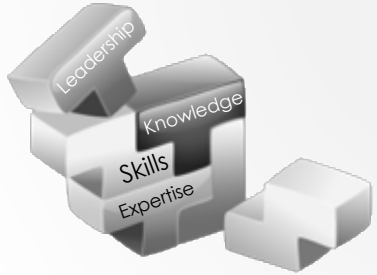
# SOME KEY CONSIDERATIONS: GETTING STARTED IS THE HARDEST PART

- Adaptation is **already happening**;
- **Expertise** is available to support adaptation – All Ireland Climate Change Knowledge Directory;
- Adaptation is not just about climate but about **strategic** and **sustainable planning**;
- **Current climate conditions** are already accounted for in planning, there is now a need to consider potential future changes in these;
- **No need for a hammer to crack a nut!**

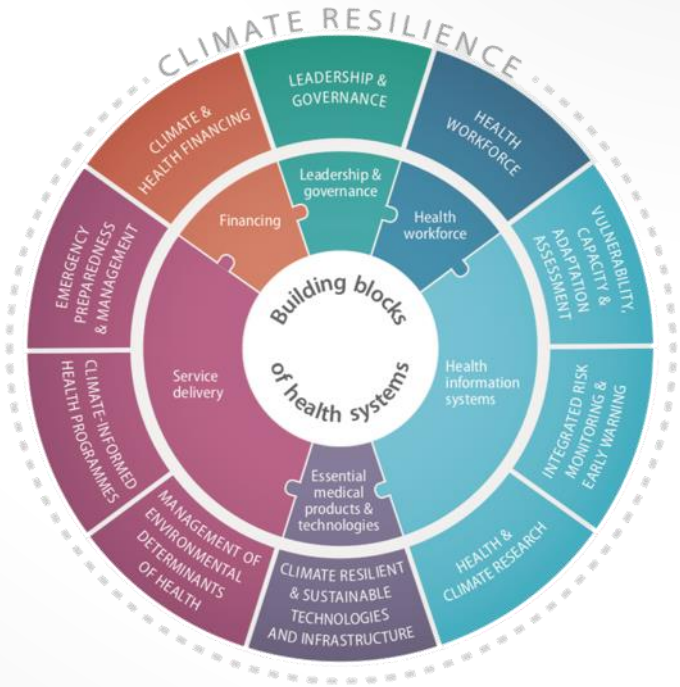
# FROM PLANNING TO IMPLEMENTATION: SUCCESSES




- **Understanding** of climate change and adaptation amongst local and sectoral planners has increased;
- Levels of **buy-in** to the adaptation planning has increased with governance structures being put in place;
- **Capacity** for adaptation planning (vulnerability analysis and risk assessment) amongst local and sectoral planners has increased;
- Understanding **of climate impacts and vulnerabilities** has been developed;
- **Priority climate impacts** are being identified
- Data **deficits and gaps** are being identified in terms of both exposure and sensitivity (e.g. vulnerability mapping)
- **Actions** to address deficits are being included as part of adaptation strategies.

# PROGRESSING ADAPTATION – CLOSING THE IMPLEMENTATION GAP

- **Ongoing funding to** support adaptation planning and implementation - Leveraging finance (e.g. private sector)
- Continued **development of decision relevant information** that accounts for increased capacities;
- Continued actions to increase **understanding and awareness** of climate impacts and actions;
- Continued **training** to increase capacities of decision-making communities to plan for and implement climate actions;
- **Measurement and evaluation** of adaptation actions.
- **Mainstreaming** of adaptation considerations across all areas of decision making




(WHO, 2015)

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