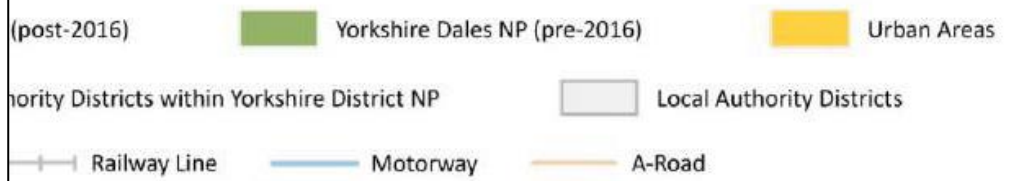
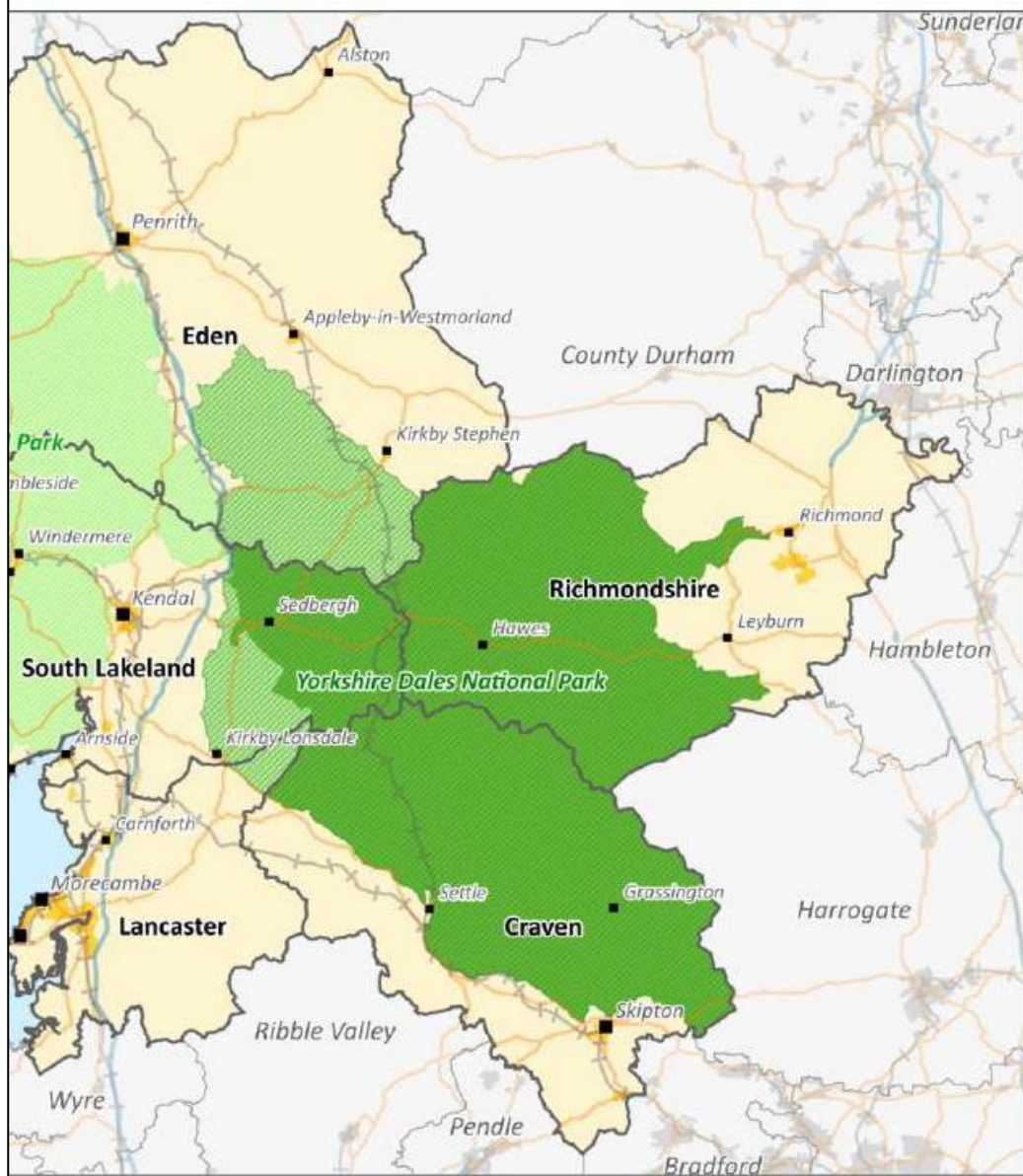


Yorkshire Dales National Park 'Climate & Nature'



National Parks England





'The Big Issues'

- Climate
- Nature
- Land Management



Attenborough Wild Isles – The UK

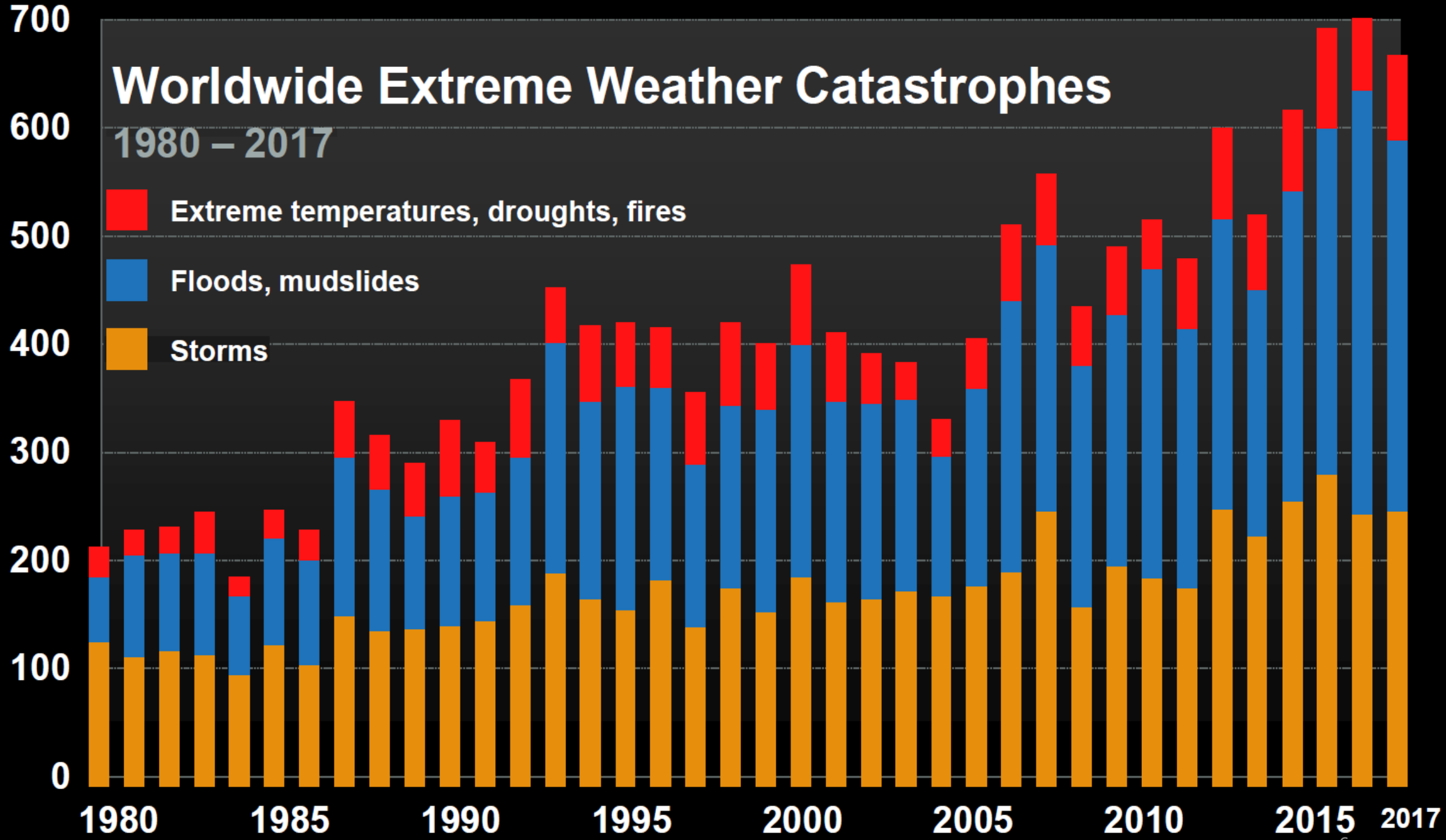
- $\frac{1}{4}$ of mammals at risk of extinction
- $\frac{1}{3}$ of our birds
- Insects declined by 60% in 20 years
- The UK is one of the most nature depleted countries in the world.
- Nature is 'nice to have'. No – it underpins the existence of the human race.

Worldwide Extreme Weather Catastrophes

1980 – 2017

Number of Events

- Extreme temperatures, droughts, fires
- Floods, mudslides
- Storms




Data: 2017 Munich Re, Geo Risks Research, NatCatSERVICE. As of January 2018.

UK's Extreme Weather Events

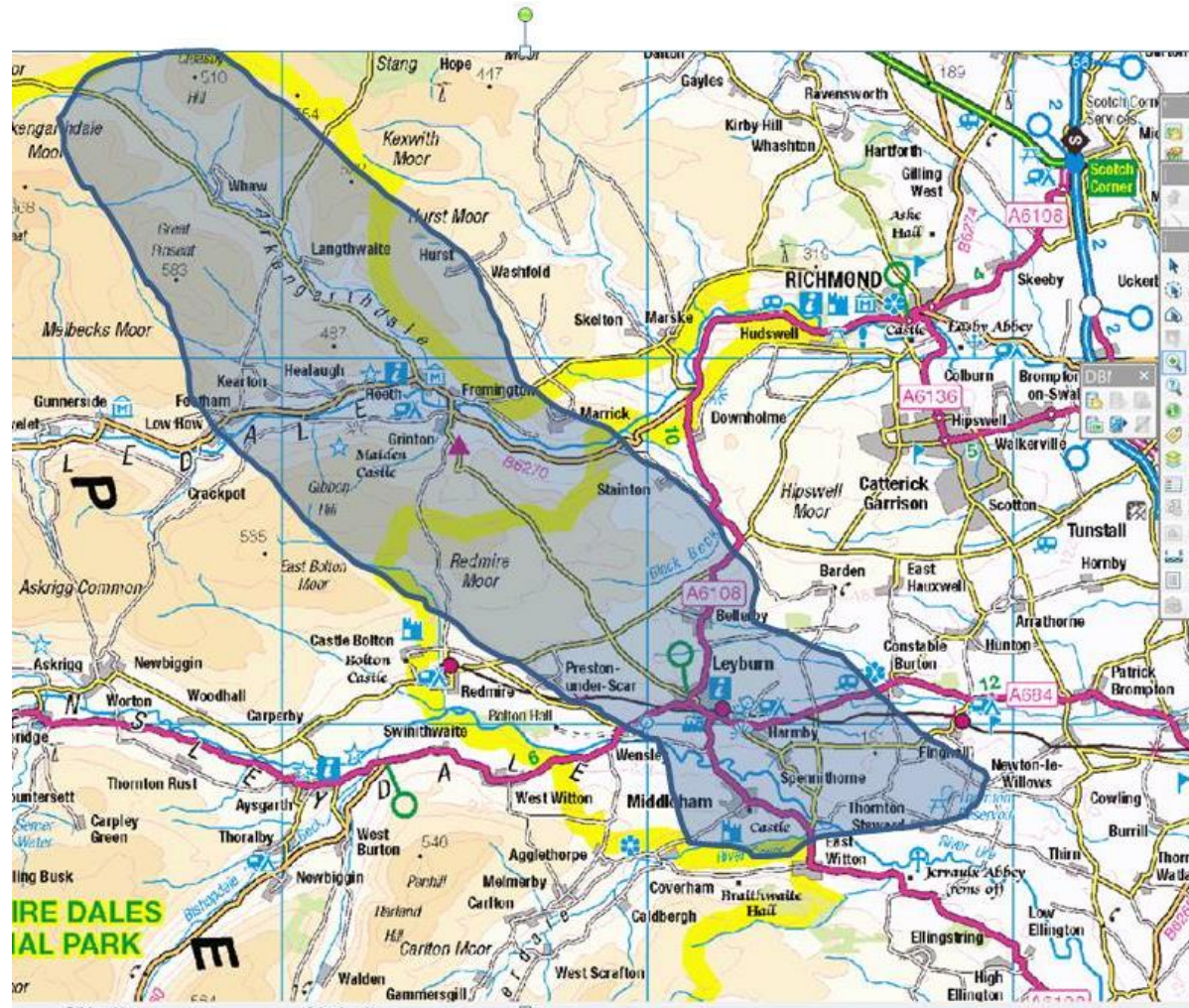
- “27 Extreme weather events in the last 3 years” Met Office
- July 2022 Extreme Heatwave
- New Year 2021-22 Rather Mild!
- November 2022 Storm Arwen
- August 2020 Storms Ellen & Francis
- February 2020 Storm Ciara
- December 2019 Pretty mild
- November 2019 Pretty wet
- February 2019 Warmer than Barbados.

Dales' Extreme Weather Events



- December 2015 Storm Desmond
- July 2019 The Cloudburst

The cloudburst – July 2019



Whaw Village



Damage to farmland and property







landslides



mining spoil heaps eroded



Sediment



Damage to tracks



Road bridges



Scheduled monuments



Rights of way obstructed



How do we tackle it?

NPA action falls into two main categories:

Adaptation

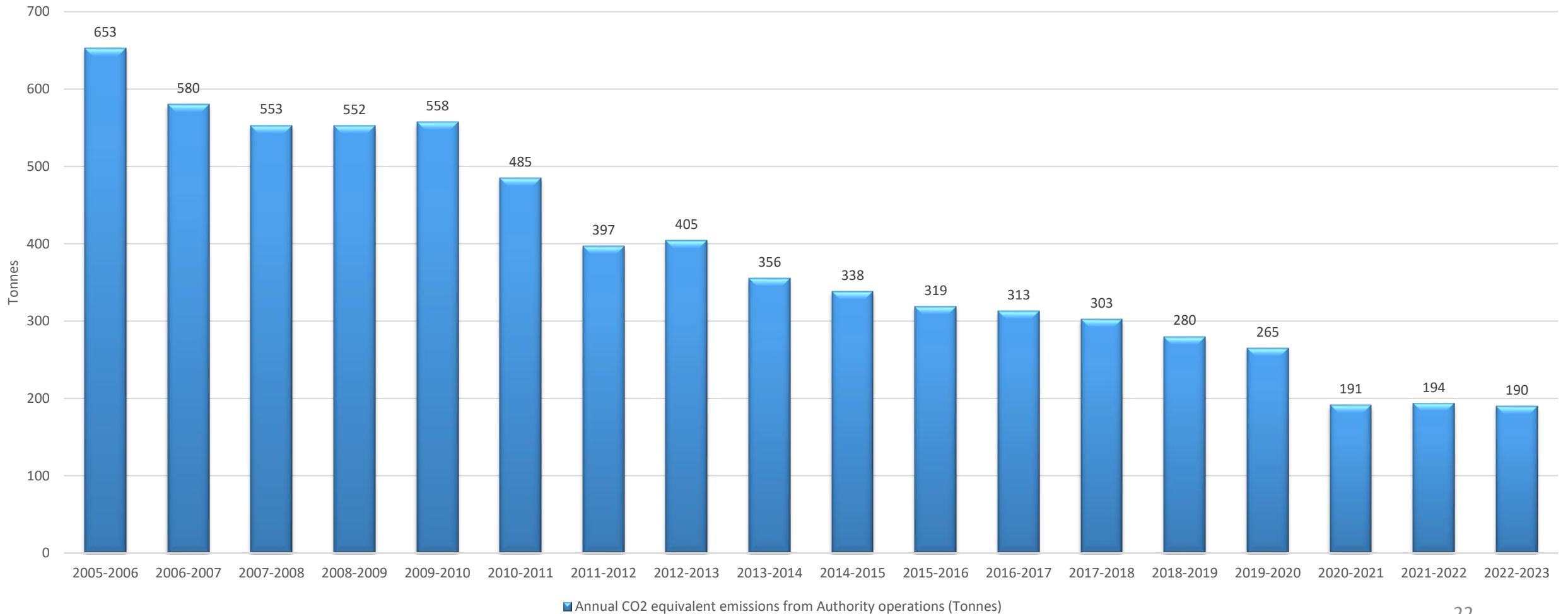
- Action to cope with changes that are already happening.

Mitigation

- reducing the amount of greenhouse gas produced;
- increasing the amount of carbon stored naturally

Progress - YDNPA

Annual CO₂ equivalent emissions from Authority operations (Tonnes)



Emissions in the Park

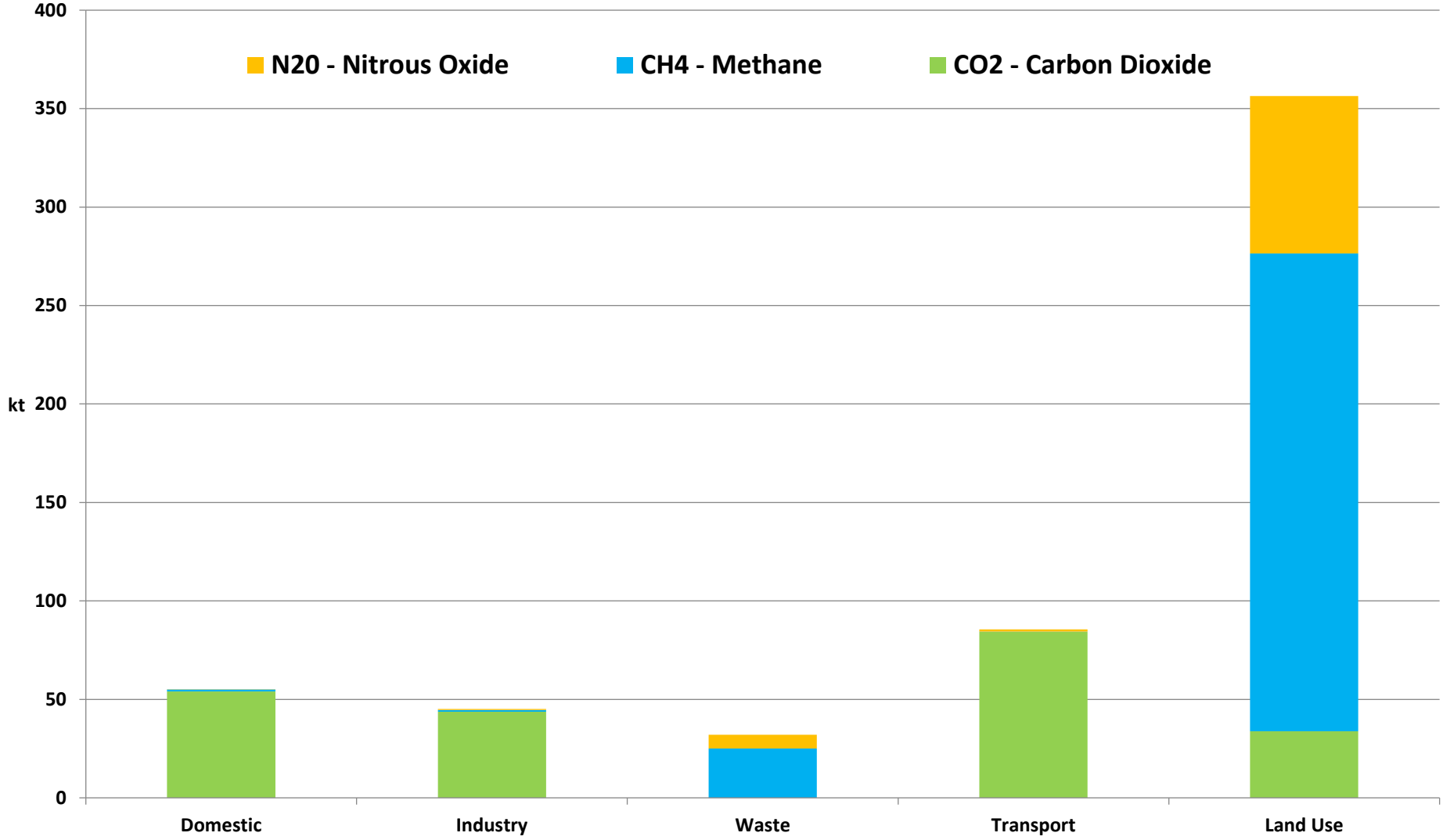
Total emissions relatively low...

...but emissions per person are high:

- Car ownership
- Distance to services
- Inefficient buildings
- Reliance on fuels e.g. oil-fired heating

Challenges

Total GHG Emissions - Yorkshire Dales (2017)



Big Developments

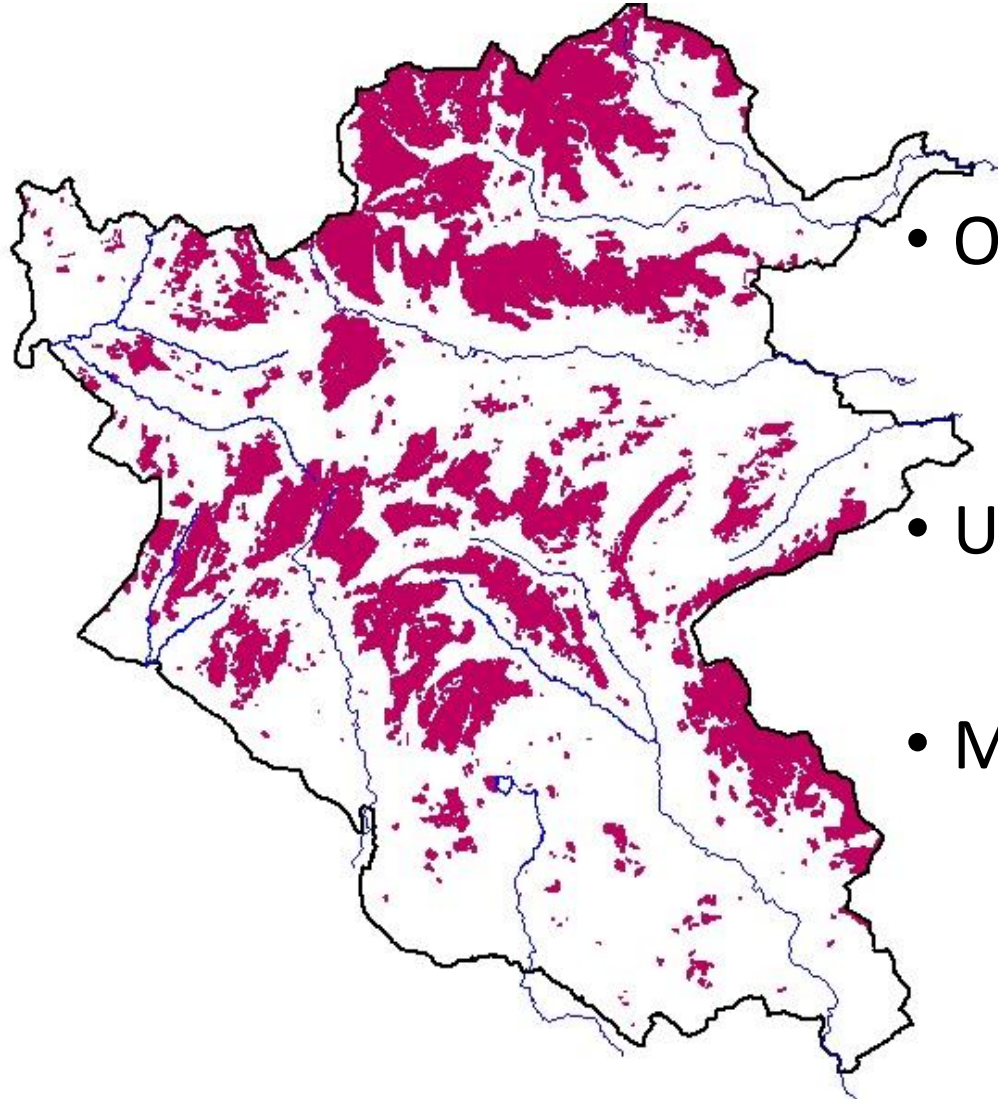
Nationally:

Government's 25 year Environment Plan
Environmental Improvement Plan

Regionally:

North Yorks Route map to Zero

Peatland



- Over 60,000 ha of peat
- Up to 7 metres deep
- Much of it damaged



Impacts

- Rapid water run-off and....

...significant loss of carbon



Restoring natural drainage



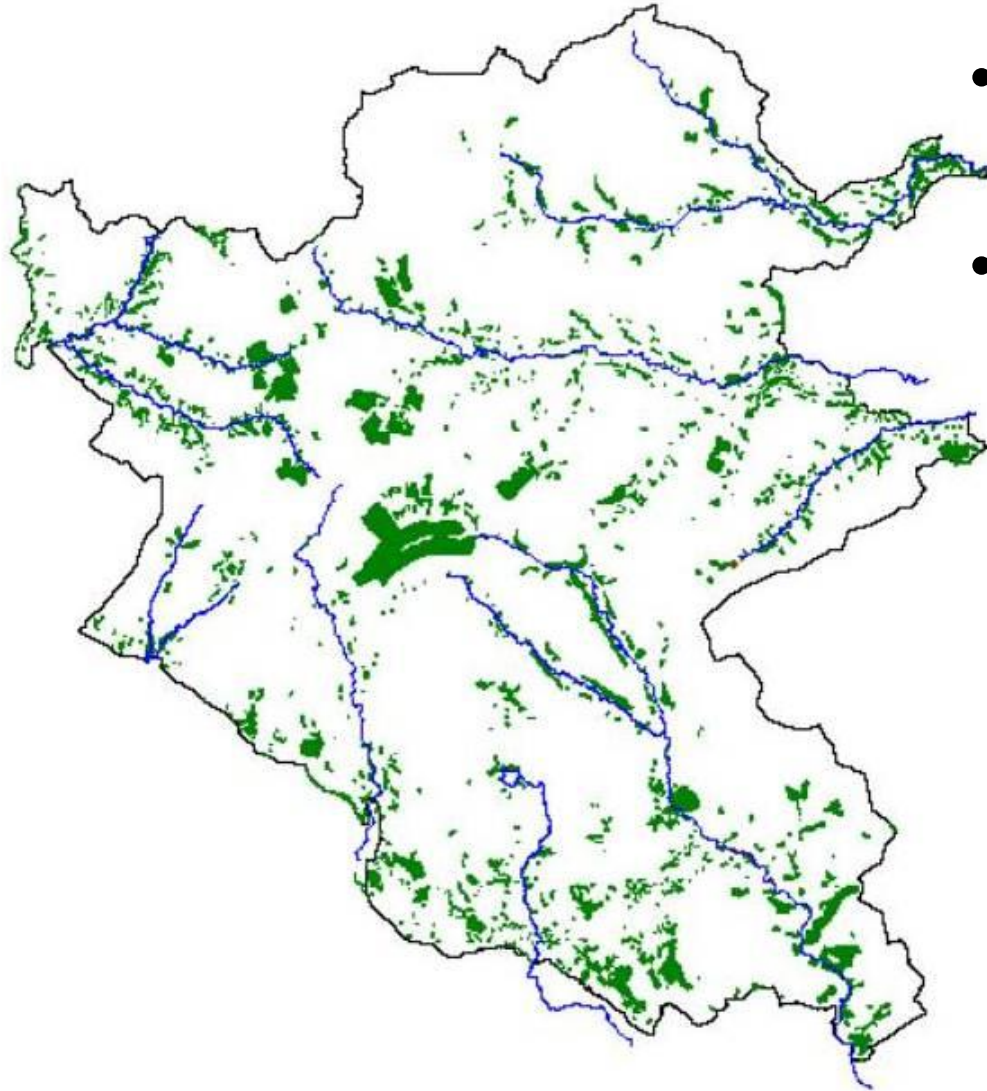
..and more resilient biodiversity, better water quality,
better flood management etc

Progress

- Yorkshire Peat Partnership – YWT, Environment Agency, Natural England, YDNPA and many more
- Restored natural drainage across more than 19,000 ha since 2009
- Roughly, another 25,000 ha to restore



TREES



- Only 4.3 % of the Park is woodland
- A further 6,000 ha over 10 7 years = 7%

Progress

- Dales Woodland Restoration Programme – Forestry Commission, YDMT, YDNPA
- Over 2,100 ha planted since 1995
- Now have ambition to plant 6,000 over 10 years
- Still only 7% tree cover



Changes in Farming & Land Management

Government's Vision

Rewarding Public Goods with Public Money

A thriving, self-reliant and resilient farming sector

A trusting and productive relationship between farmers
and government

World Class Animal Welfare Standards

Potential public goods from livestock systems

1. Beauty, Heritage and Engagement

- Contribution to **landscape** and sense of place, health and wellbeing.
- Recreational services from **access** provision.

2. Mitigation and Adaptation to Climate Change

- **Carbon** stored in soils beneath pastures

3. Protection from and Mitigation of Hazards

- **slow water flow** from 'rougher' swards and more permeable soils
- floodplain meadows **flood alleviation** services

4. Thriving Plants and Wildlife

- ancient meadows can have as much **biodiversity** in 1m² as a rainforest.



Nature Improvement – habitat works



Peatland restoration



Hay meadow restoration



Woodland creation



Wetland creation



Rush management



Reduced contamination



River enhancement

- 
- Basic Payment Scheme – reducing
 - New England Land Management Schemes – 2024!!
 - Tough choices
 - Farming in the National Park

Farming Decisions?



The Future



Who decides?