



Committee on
Climate Change

Independent advice to government
on building a low-carbon economy
and preparing for climate change

29th November 2019

Adaptation Committee Indicator framework

Brendan Freeman
Committee on Climate Change

Climate change adaptation: Sector priorities

- Assessment separated into four overarching themes: **natural environment**, people & built environment, infrastructure, business.

Table 2.1. Natural environment chapter adaptation priorities

Natural capital assets including biodiversity	Regulating services	Provisioning services
Terrestrial habitats and species Freshwater habitats and species Marine and coastal habitats and species Farmland habitats and species	Water management	Agricultural productivity Commercial forestry Commercial fisheries and aquaculture

Assessing outcomes: Linking CC adaptation, (mitigation), risk and impact

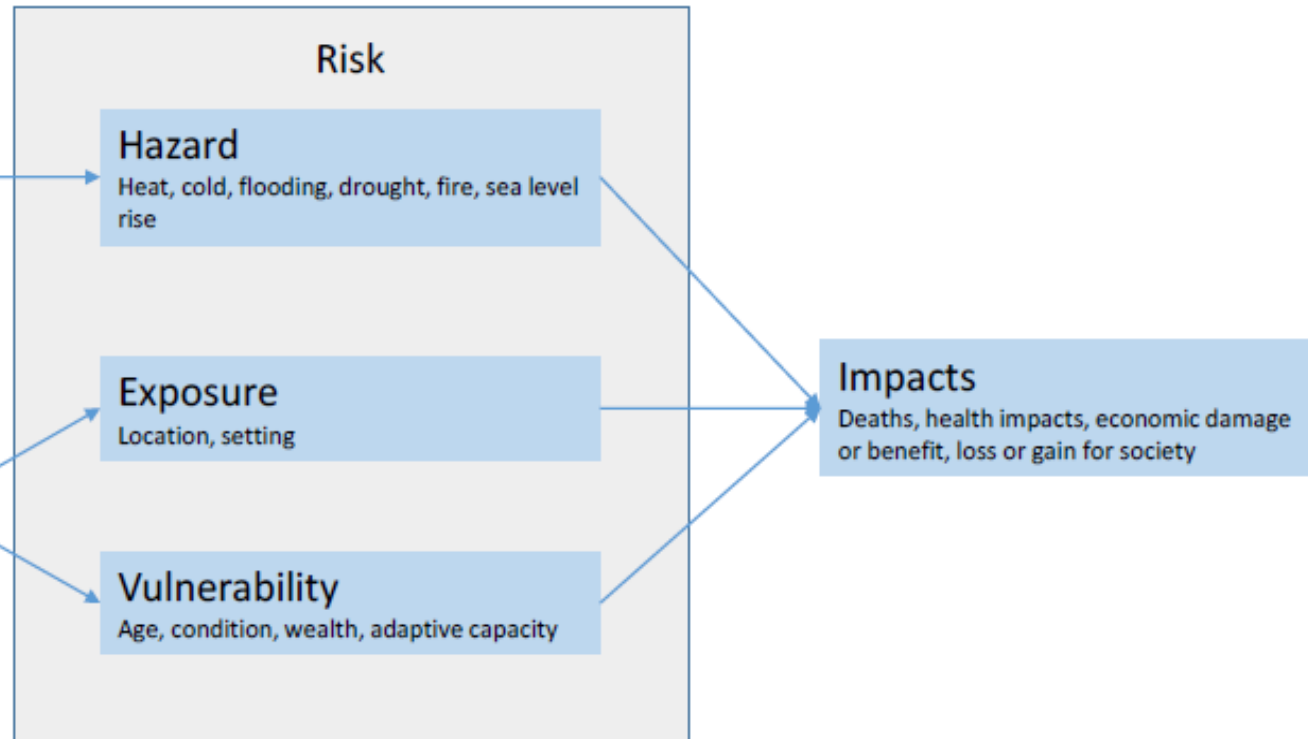
Mitigation

Reduce greenhouse gases, ultimately affecting scale of climate change (but actions have a time lag of decades/centuries)

Adaptation

Actions to reduce vulnerability or exposure to hazards, or take advantage of opportunities:

- Low and no regret adaptation, including capacity building
- Decisions with long lead times
- Decisions to avoid lock-in



Source: CCC, Progress in preparing for climate change, 2019

Indicator framework: enables the Committee to assess trends in risk factors: hazard, vulnerability and exposure - we also collect indicators to assess trends in adaptation action, and impacts

Natural environment sector: Indicator wish-list

Terrestrial	Vulnerability	Soil organic carbon (SOC) and biota levels	Defra, Natural England, CEH
Terrestrial	Impact	Soil erosion levels	Defra, CEH
Terrestrial	Impact	Changes in abundance and distribution of climate sensitive terrestrial species	Defra, Natural England, RSPB
Freshwater	Impact	Changes in abundance and distribution of climate sensitive freshwater species	Defra, Natural England, RSPB
Freshwater	Vulnerability	Water temperature	EA
Marine & coastal	Impact	Impacts of acidification, temperature and salinity on marine species	Defra, MMO, MCCIP, CEFAS
Farmland	Action	Change in hedgerow length	Defra, Natural England
Farmland	Action	Average field size	Defra, ONS
Farmland	Vulnerability	Proportion of degraded land area	Defra, Natural England
Water management	Vulnerability	Soil condition for flood risk management	Defra, CEH
Water management	Action	Uptake of nature based solutions for flood risk management	Environment Agency, Defra
Agricultural productivity	Action	Research on improving the resilience of crop (including crop sub-strains) and livestock	Defra
Forestry	Impact	Tree sapling and mature tree losses as a result of extreme weather	Forestry Commission
Forestry	Exposure	Geographical spread of different climate-sensitive pests and pathogens	Forestry Commission
Fisheries & Aquaculture	Vulnerability	Vulnerability metrics for the aquaculture sector	Defra, MMO, MCCIP, CEFAS