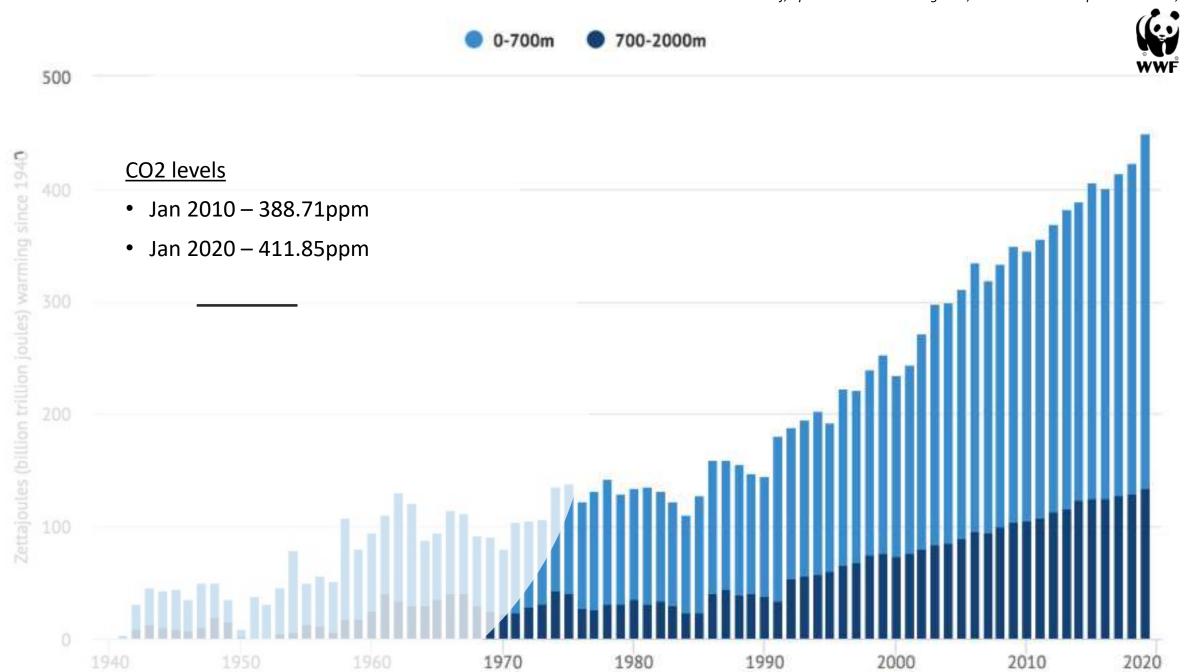


Ocean Recovery – Time For A Reset?





The ocean is a quiet hero, at its own expense and despite our direct impacts

- Southern Ocean world's largest carbon sink (Witman, 2018)
- Ocean has absorbed 20-30% CO2 and up to 93% % heat (IPCC, Cheng et al., 2017)
- Ocean heating rate since 1990
 equivalent to 3-6 Hiroshima
 bombs/second (Zanna et al. 2019)
- Seagrass 10% of global ocean carbon burial despite 0.2% area

(Fourqurean et al, 2012)

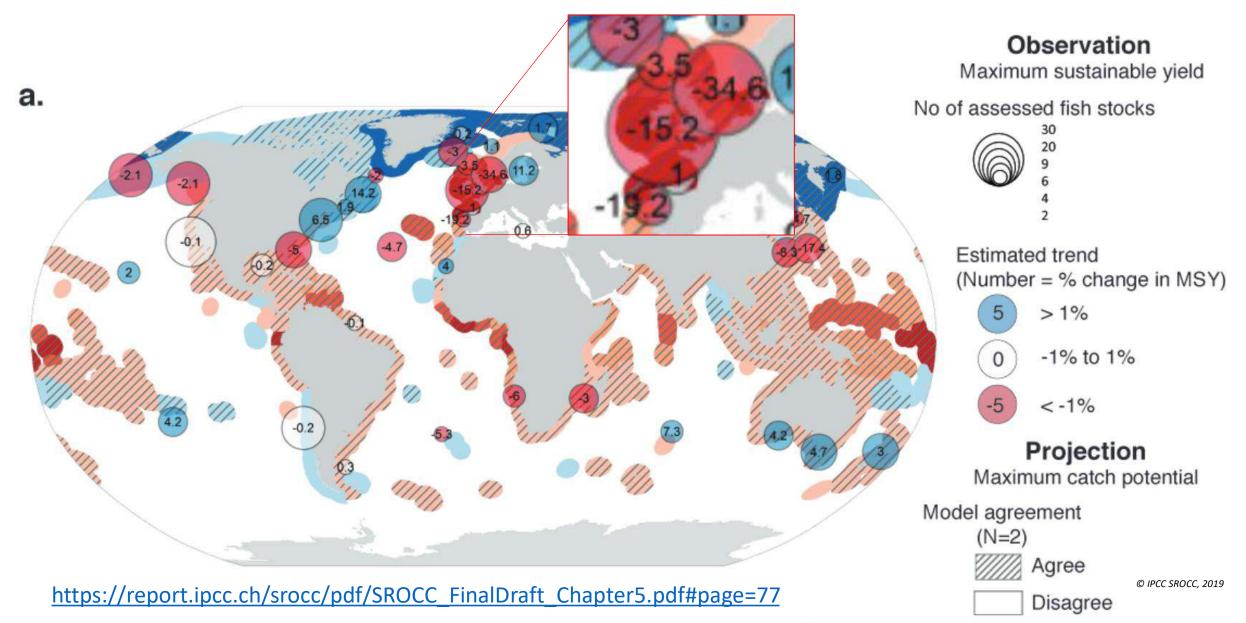
- Without ocean, world would be 36°C hotter than pre-industrial levels, not 1°C (Grantham Institute, 2015)
- Over 1/3 heat absorbed below 700m 1993-2017 (SROCC, 2019)
 - 1756m tonnes carbon stored in Scottish seabed sediments (SNH, 2018)
- 90% seagrass in UK lost, 92% in Denmark, 60% Sweden... (Gubbay, 2015)
- 50% coastal wetlands lost in last 50 years worldwide (IPCC SROCC, 2019)
- Only 7% global fish stocks fished within safe limits (FAO, 2018; IPBES, 2019)
- 50% Great Barrier Reef corals bleached in 2016/17, leading to 89% decline in new corals (Hughes et al., 2019)

- 4 of 11 indicators of UK seas in 'good' status (Cefas et al, 2019)
- 300-400mill tonnes pollution per year (IPBES, 2019), incl 8 million tonnes plastic
- >400 dead zones, greater than UK size (IPBES, 2019)
- Southern ocean up to 62% total world heat gain 2005-17 (IPCC SROCC, 2019)



Change to MSY/Max fish potential by 2050 under RCP2.6





Policy Context – the time is



UK seas in crisis

UK as Independent Coastal State UK as financial centre

Nature and climate emergencies

UK as global oceans leader

2020 Superyear



FROM MANAGING DECLINE TO DRIVING RECOVERY

- The ocean can be the hero but must be allowed to be so!
- Everything will change we must change too
- Tweaking business as usual is not an option.
 Transformational change is needed, fast, with recovery at its heart
- Climate is a golden thread that fundamentally affects and integrates everything, including MPAs & fisheries management
- Ocean recovery is a political and societal choice and an opportunity for leadership



OCEAN RECOVERY - KEY THEMES

- 1. URGENCY and AMBITION
- 2. LEADERSHIP and CREDIBILITY
- 3. INTEGRATION
- 4. DYNAMISM
- 5. HOPE



Maxium annual emissions reductions (GtCO2e)* Needed annual GHG emissions 21% reductions by 2050 (56 GtCO_e) 5.4 Ocean-Ocean-Coastal Fisheries, Carbon Total based and aquaculture storage in oceanbased and dietary seabed renewable transport marine based shifts solutions ecosystems energy

Notes: * To stay under a 1.5°C change relative to pre-industrial levels

Source: Authors





ONE WHALE HAS THE CARBON ABSORBING CAPACITY OF THOUSANDS OF TREES





Concluding thoughts

- The time is NOW. A radical rethink of ocean policy is due in the light of the urgency and ambition needed.
- Does our legislation drive recovery, or is it just lack of implementation?
- Silos and quest for detail are missing the bigger picture
- Ocean recovery is a message of hope an opportunity for leadership and to showcase UK seas in positive way
- We have solutions and knowledge we need to act!
- By end of 2020: a world-leading UK ocean recovery programme announced at COP26?





10 years to save the ocean (and save ourselves?)