“I felt a great disturbance in the forest”

Challenges in representing and accounting for natural disturbances and interannual variability

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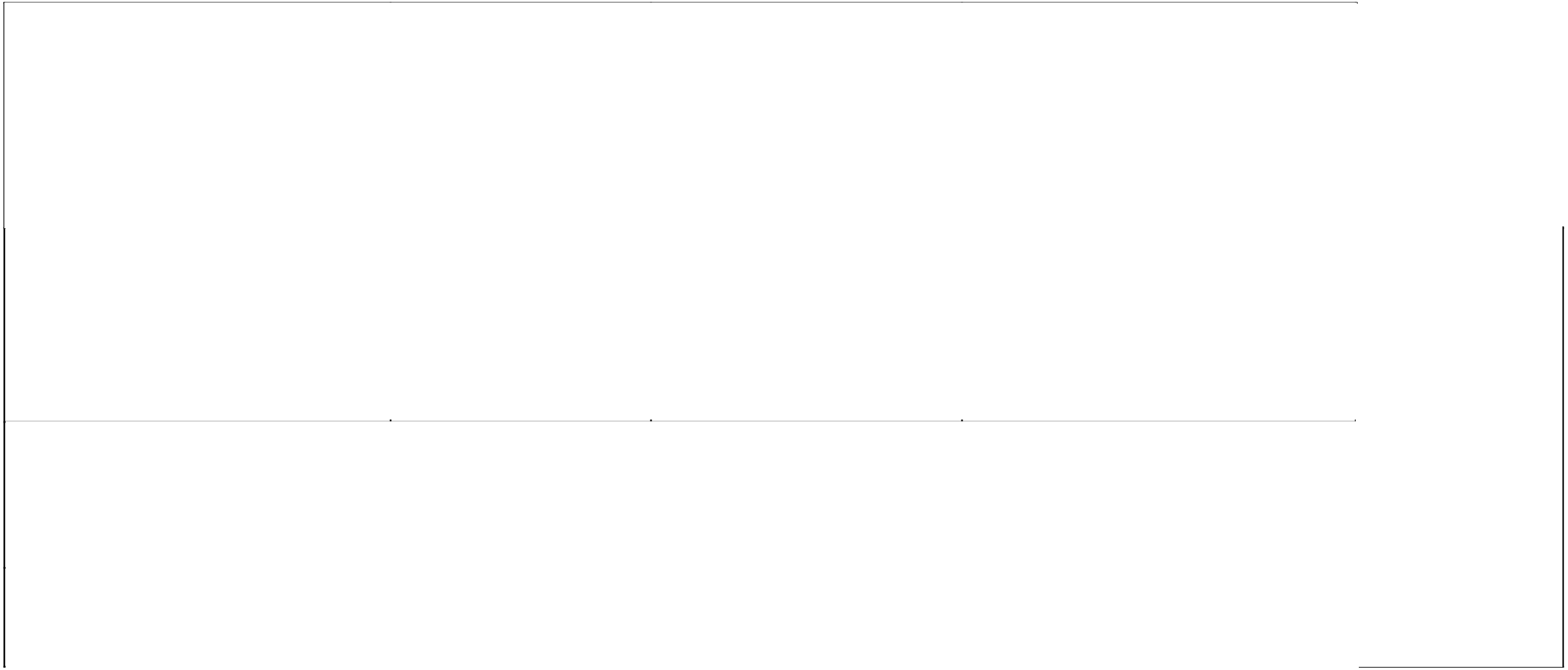
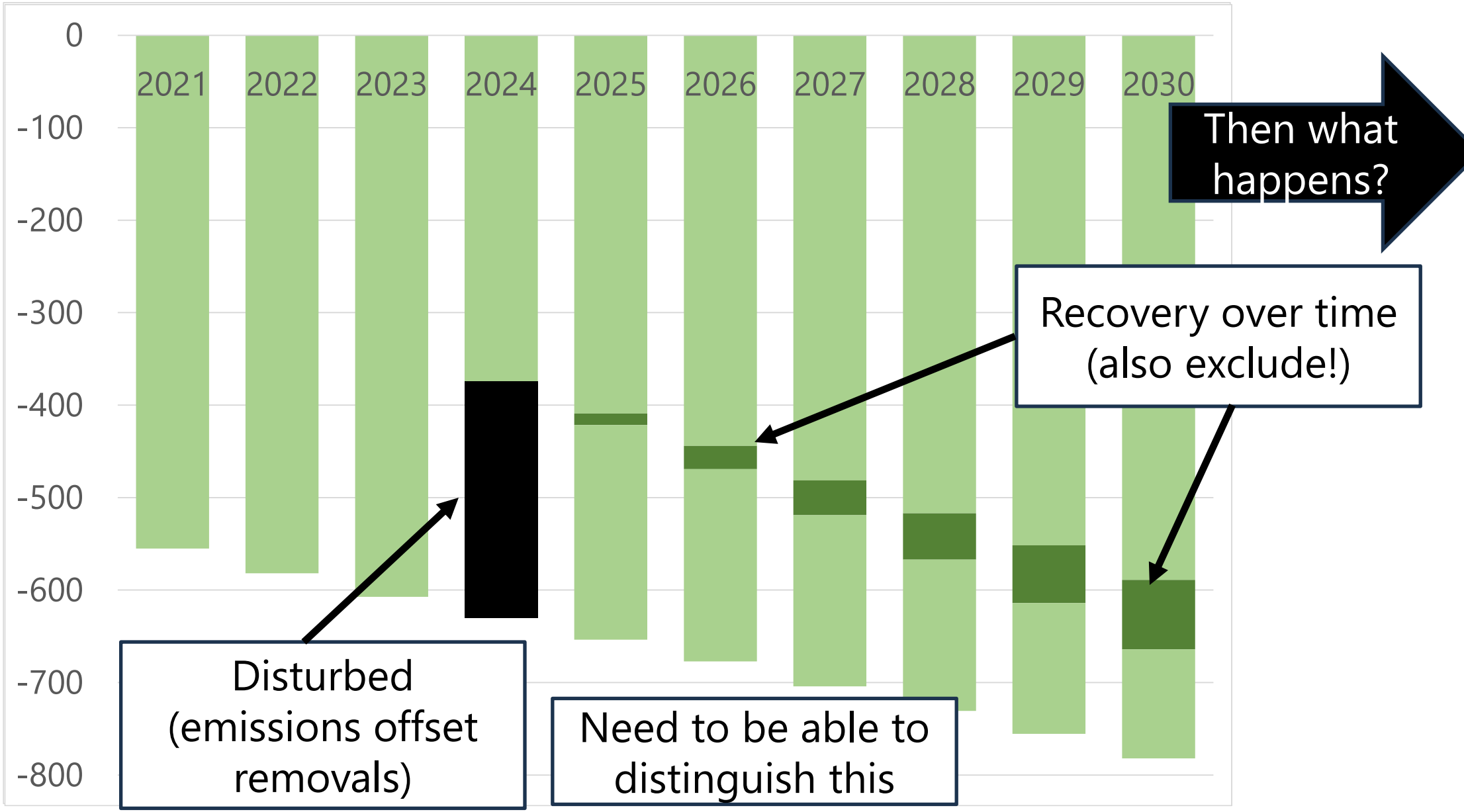
Responding to climate change

- Targets to reduce emissions
- All sectors of the economy needed to contribute – but …
- LULUCF (and especially forests) viewed as a 'rogue' sector:
  - Uncertain
  - Non-anthropogenic/non-additional (credits for no action)
  - 'Autonomic'/variable
  - Impermanent/reversible – risks from natural disturbances.

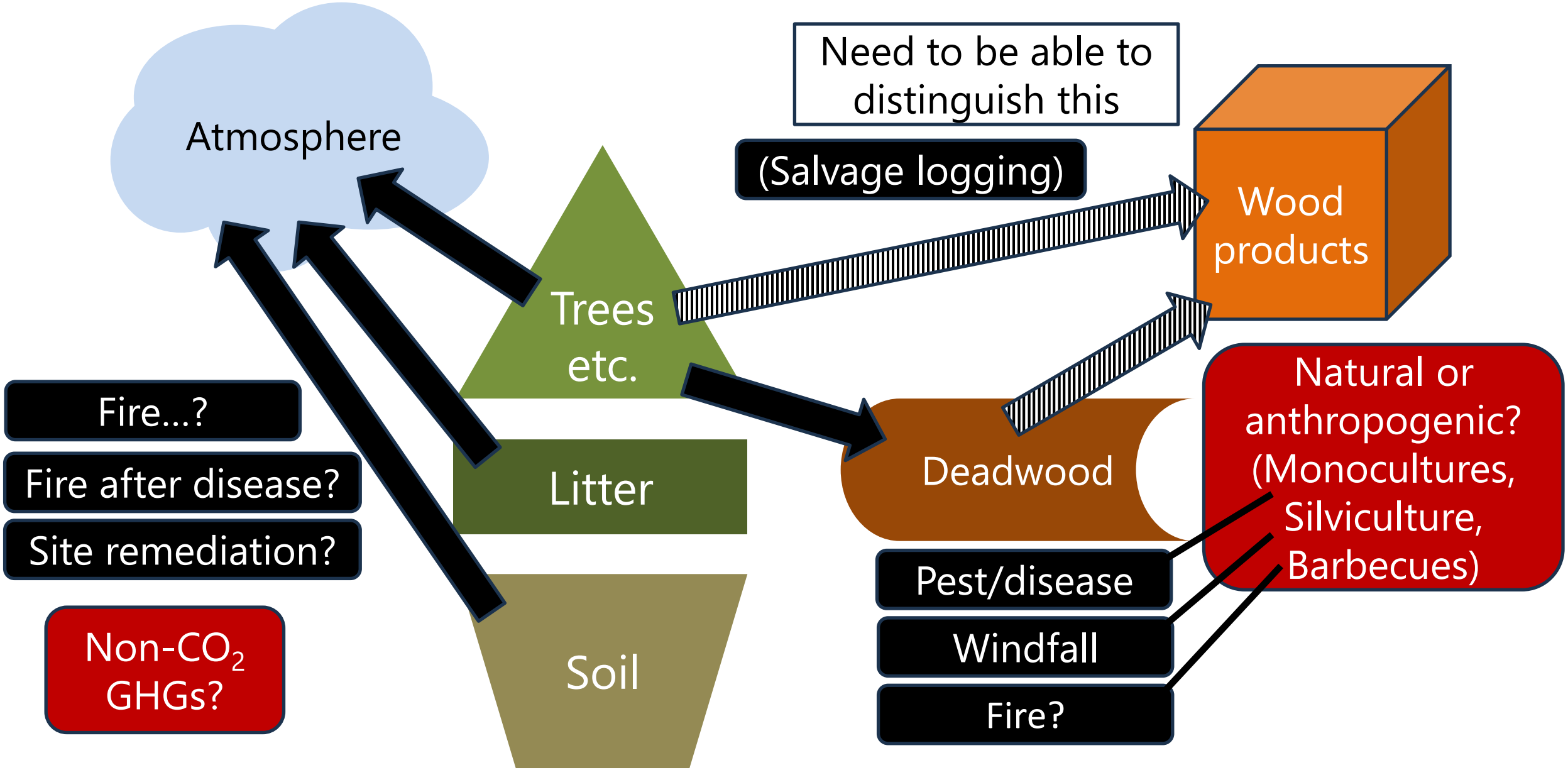
Progress in accounting for LULUCF



How it works



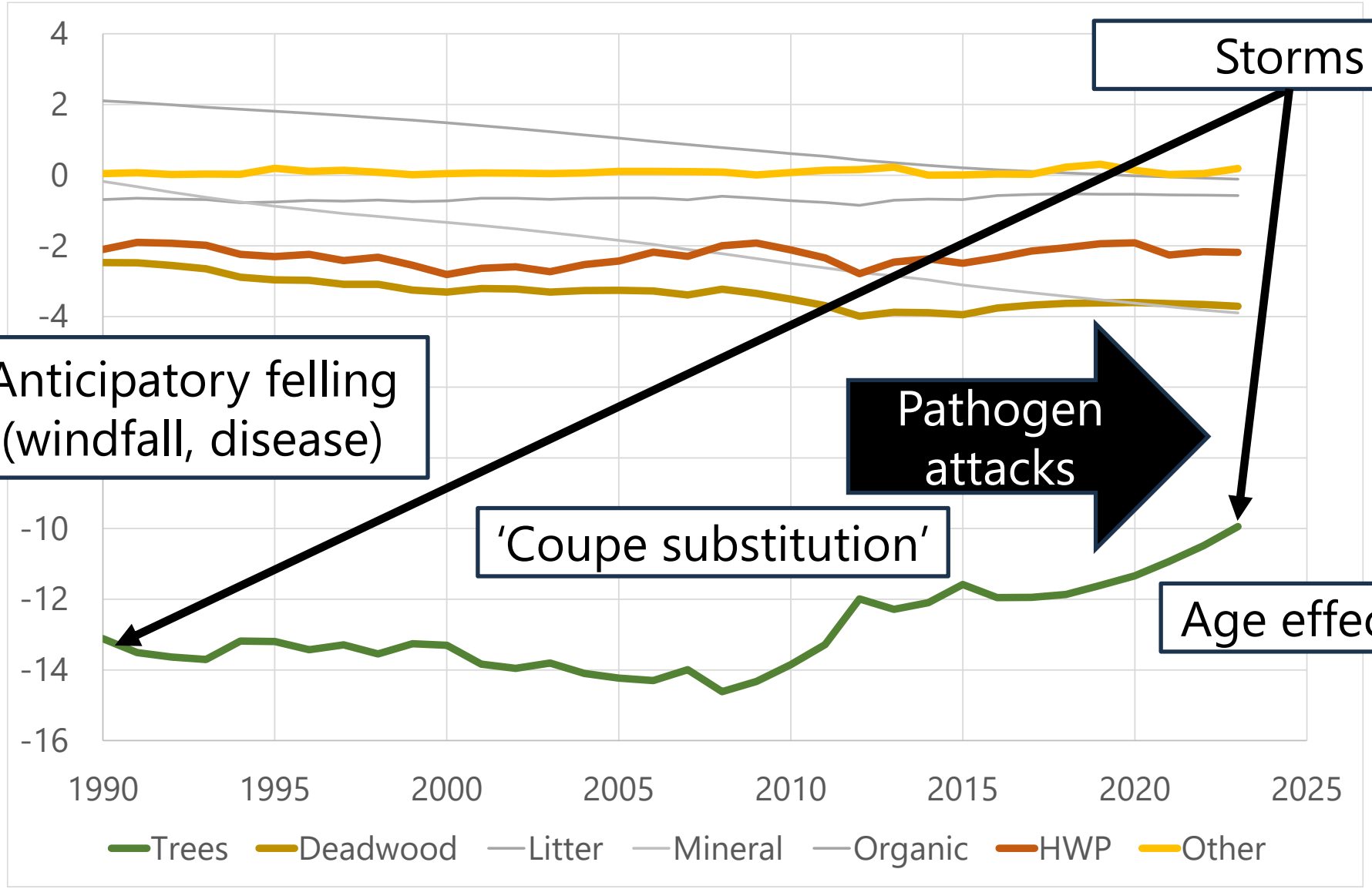
Where does the carbon go? 'Natural' or not?



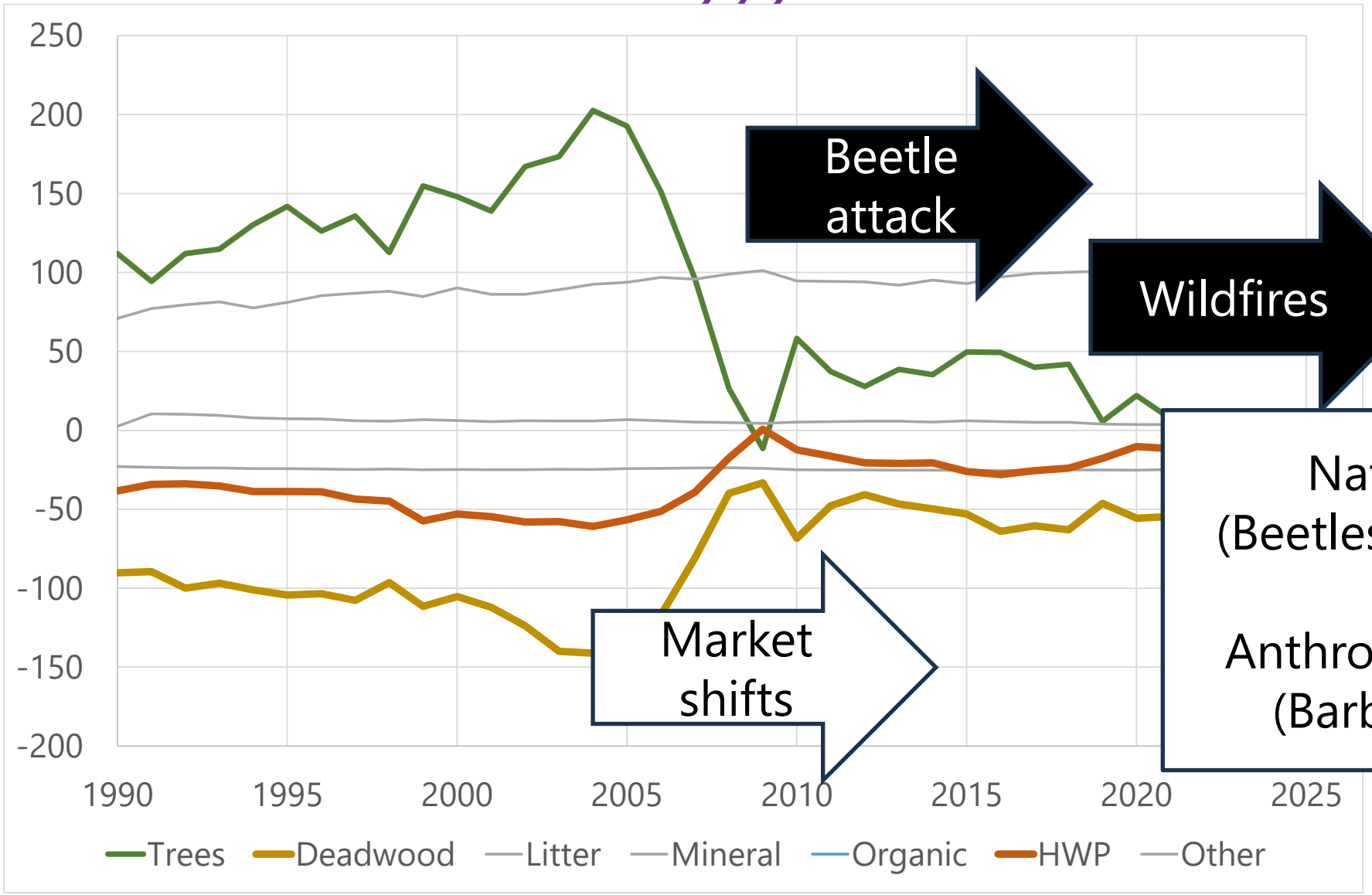
Some examples

- Real countries
- Star Wars planet names (guess the country?)
- Period 1990-2023
- Forest Land CO_2 emissions/removals only
  - (includes FrF and L2F)
- Units are $MtCO_2$
- Focus on living trees, deadwood and HWP
- Home-grown HWP including exports.

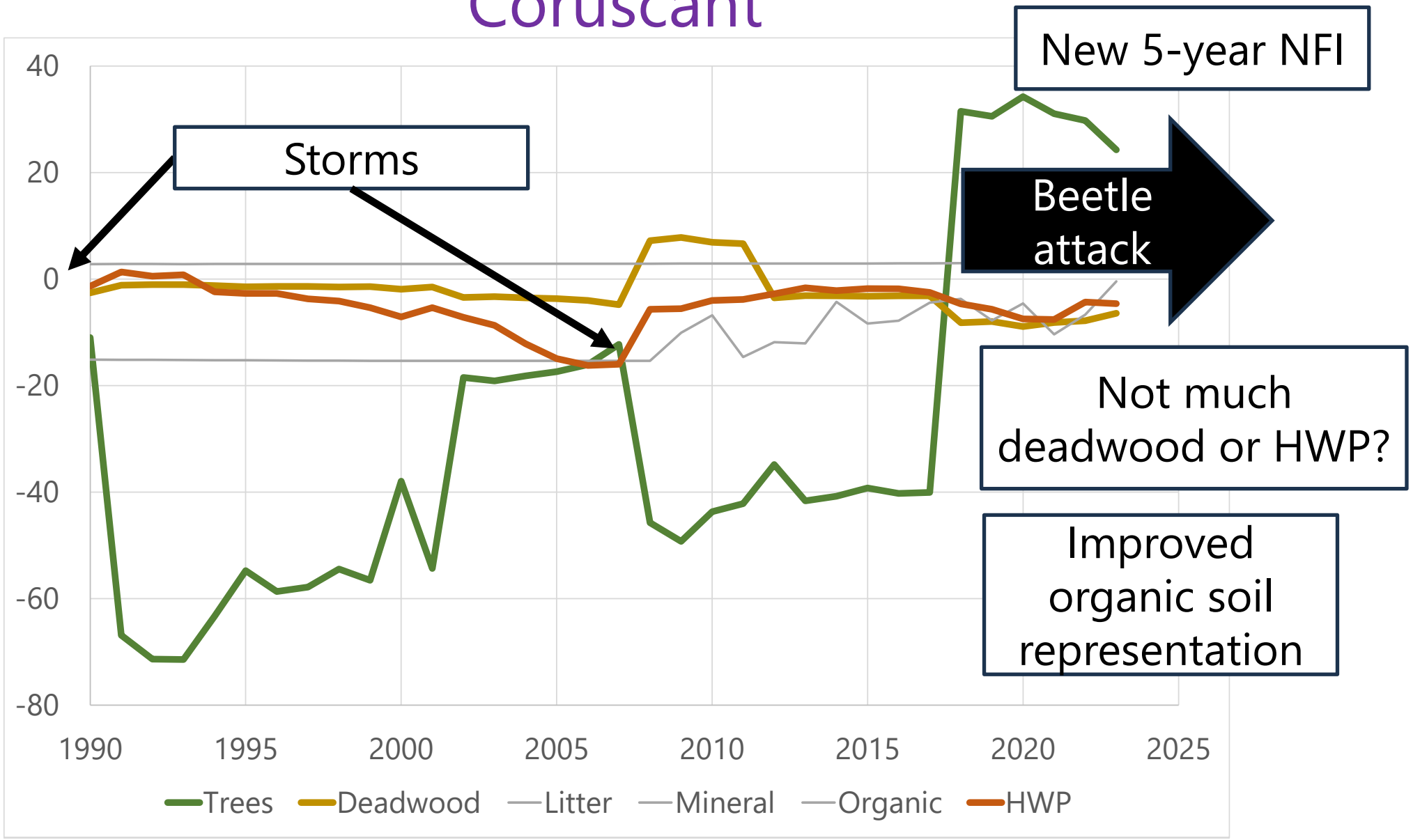
Ahch-To



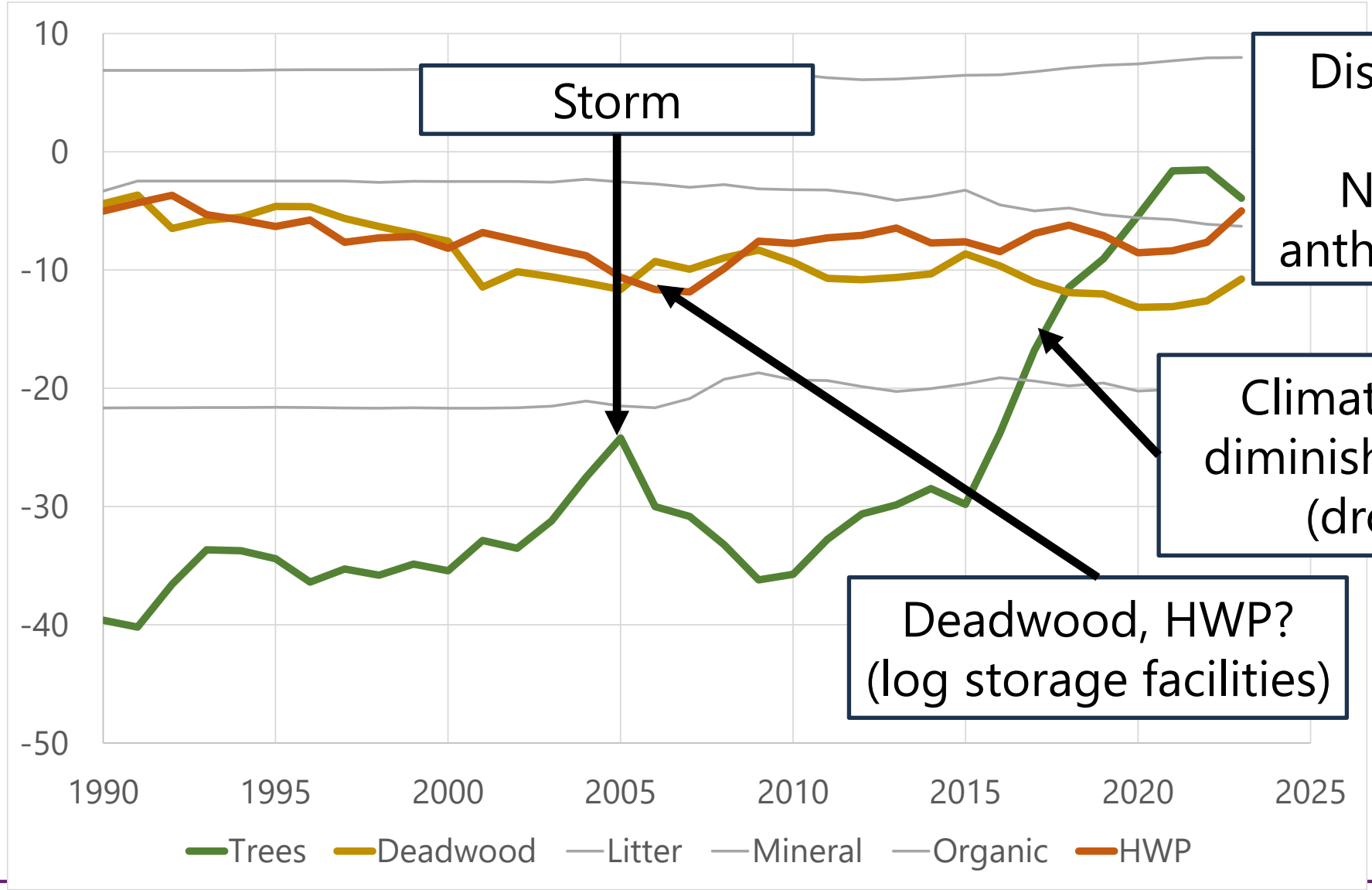
Kashyyyk



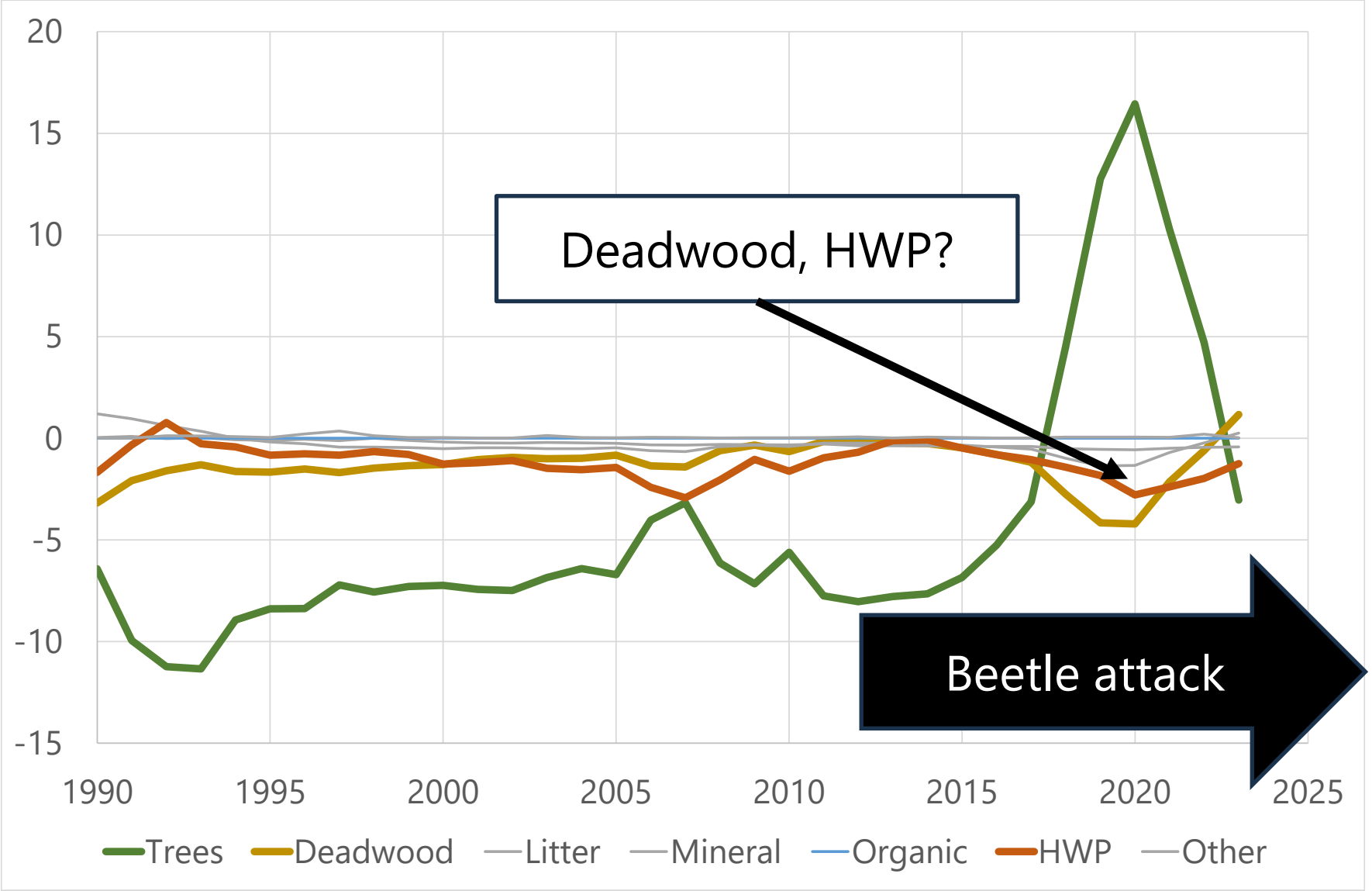
Coruscant



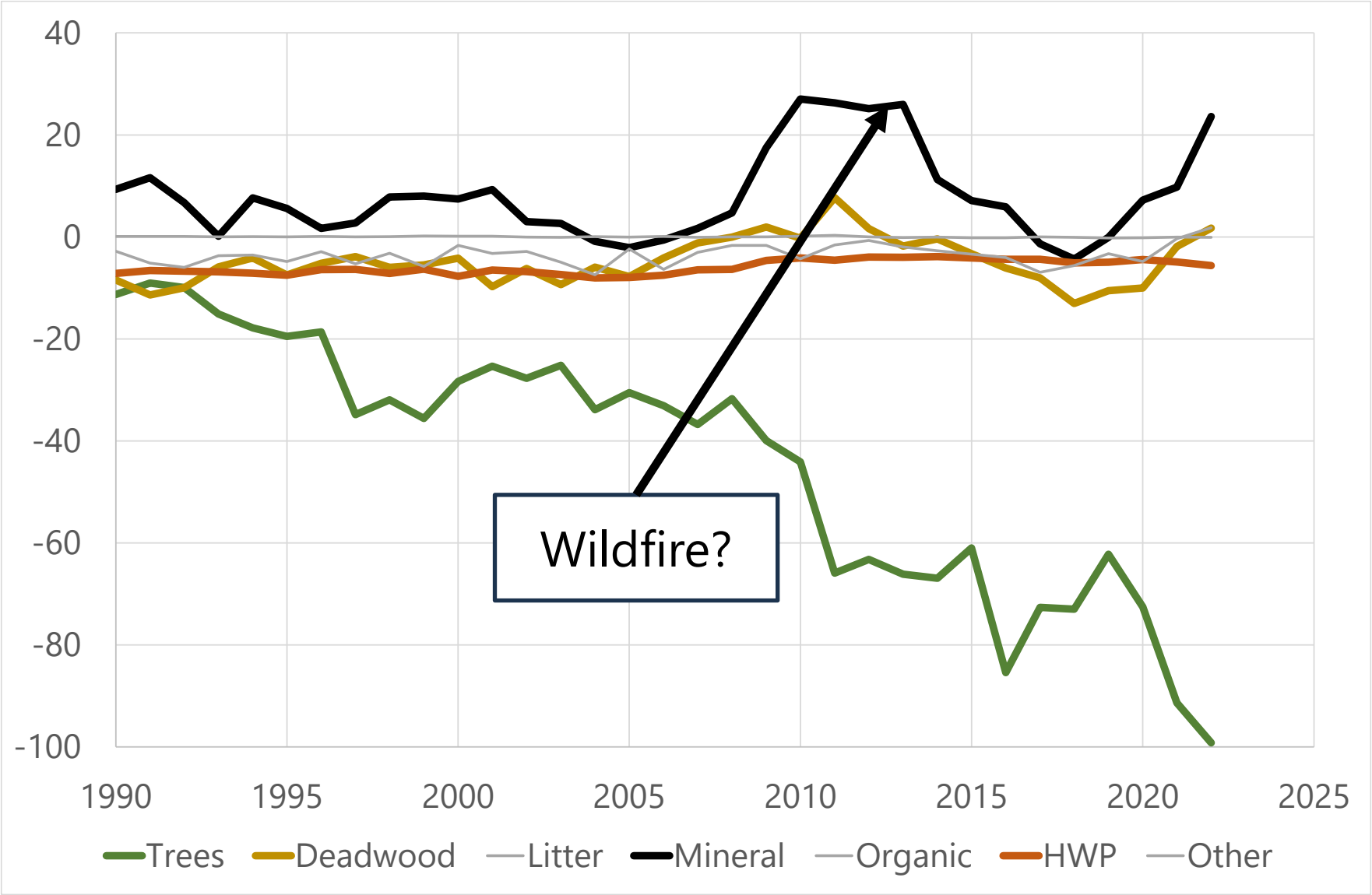
Endor moon



Yavin 4



Tatooine



"Conclusions, I have" (1)

- Understanding inter-annual/periodic variability in development of emissions/removals is challenging!
- Greater transparency would help (known/unknown)
- Information box in NID explicitly commenting on this
- Assessment of attribution to underlying drivers (noting that these can act in concert – reinforcing/cancelling out)
- Better understanding/documentation of 'where disturbed carbon goes' ('conservation of carbon')

"Conclusions, I have" (2)

- Evidence, evidence, evidence
- How easy to distinguish 'natural'/'anthropogenic' effects?
  - (Climate, management/non-human, human causes of damage)
- Can changes been foreseen – early notification?
  - A role for projections?
- Both inventory-based measurements and model estimates are needed, both have strengths and limitations – how to combine/reconcile for the best?

Thank you

(May the forest be with you…)