

Marine Natural Capital in the UK – a global model?

Nature's Benefits: Natural Capital in the South Atlantic

13 March 2019

Vicky Morgan



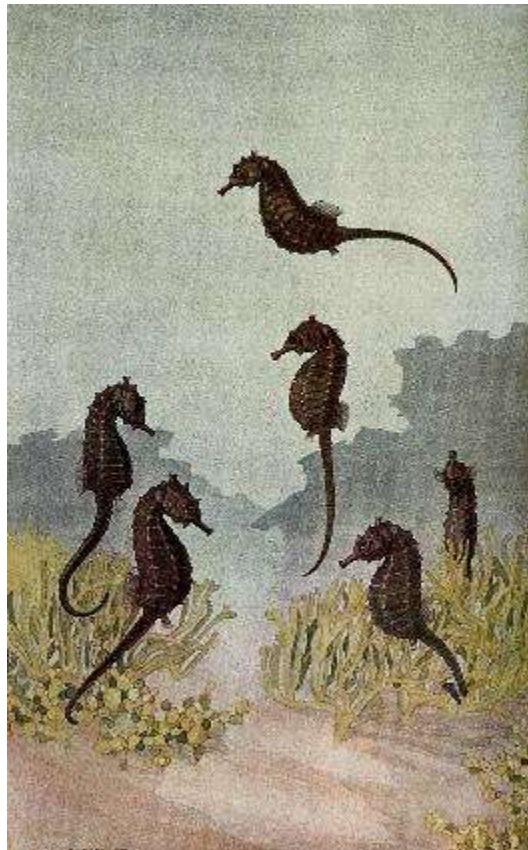








Barbara Hepworth 1903–1975
Pelagos 1946
Elm and string on oak base
Pelagos ('open sea' in Greek) was inspired by a view of the bay at St Ives in Cornwall, where two arms of land extend into the sea.



Nature Conservation and Natural Capital

VALUES

- Guardianship
- Love (nature, beauty, culture, knowledge)
- Inspiration
- Wellness
- Peace
- Personal growth

NATURE CONSERVATION

- Count
- Measure
- Map
- Study
- Analyse
- Understand
- Explain
- Set targets
- Protect
- Manage
- Restore

VALUATION

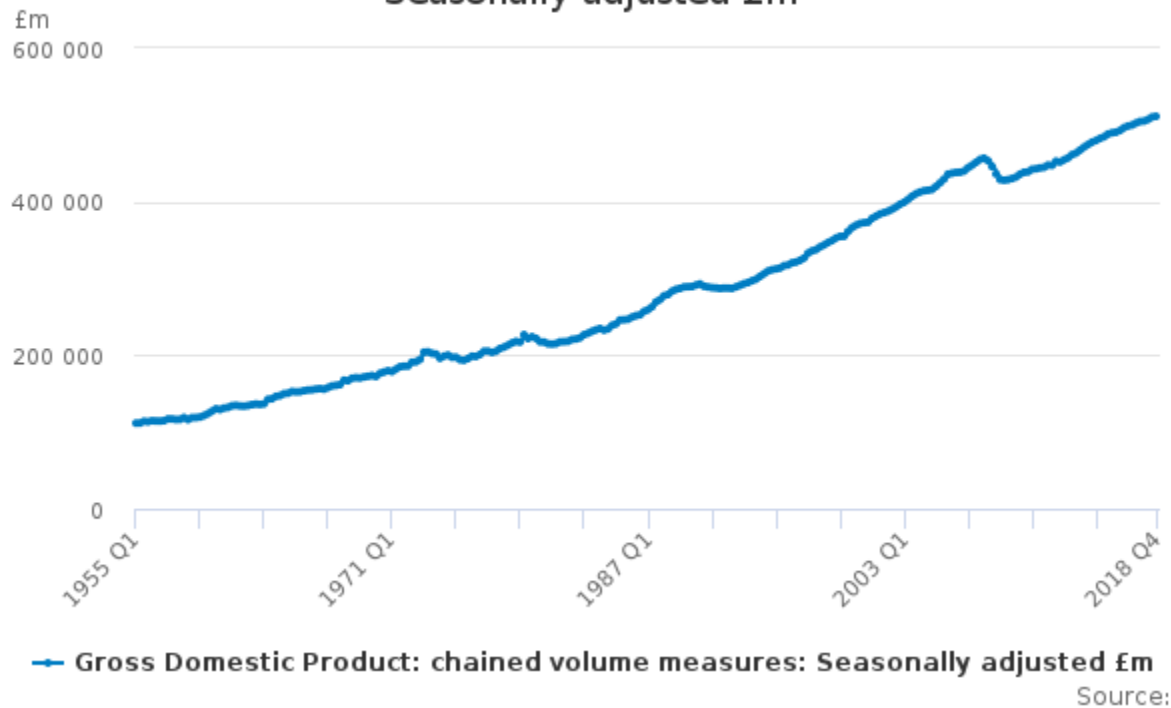
- Natural Capital Accounts
 - National
 - Regional
 - Local
- Cost benefit analysis

NATURAL

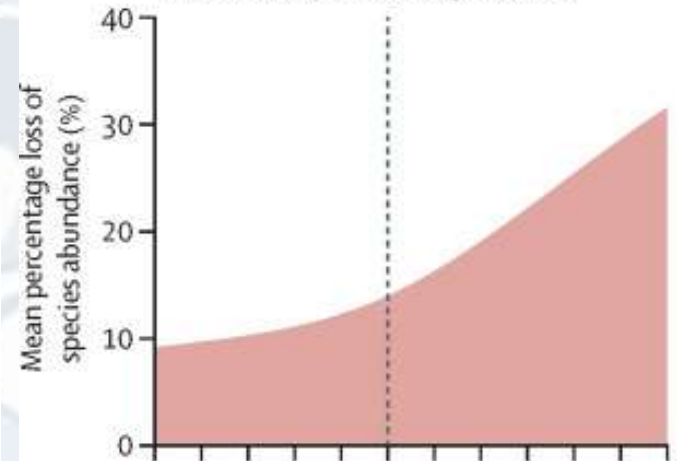
CAPITAL

Measures of performance

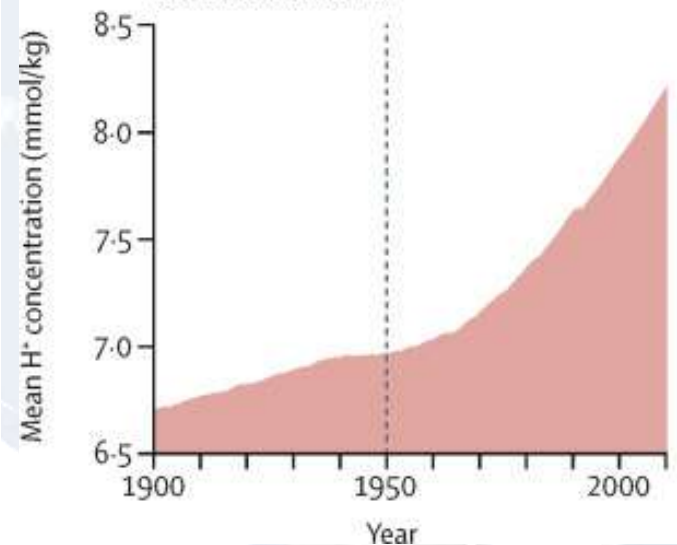
Gross Domestic Product: chained volume measures:
Seasonally adjusted £m



Terrestrial biosphere degradation



Ocean acidification



UK direction of travel

- UK marine Natural Capital Accounts
- Embedding Natural Capital know-how into policy and decision-making
- Global leadership



Pressure Test

Bayesian Network

Select MESO model

Sub_littoral_coarse

Select Transition

Pressures to Bio-Assemblages

Pressure Test

Calc

Sediment.type.change

Off On

Abrasion

Off On

Penetration

Off On

Extraction

Off On

Siltation.light

Off On

Siltation.heavy

Off On

Wave.exposure

Off On

Suspended.solids

Off On

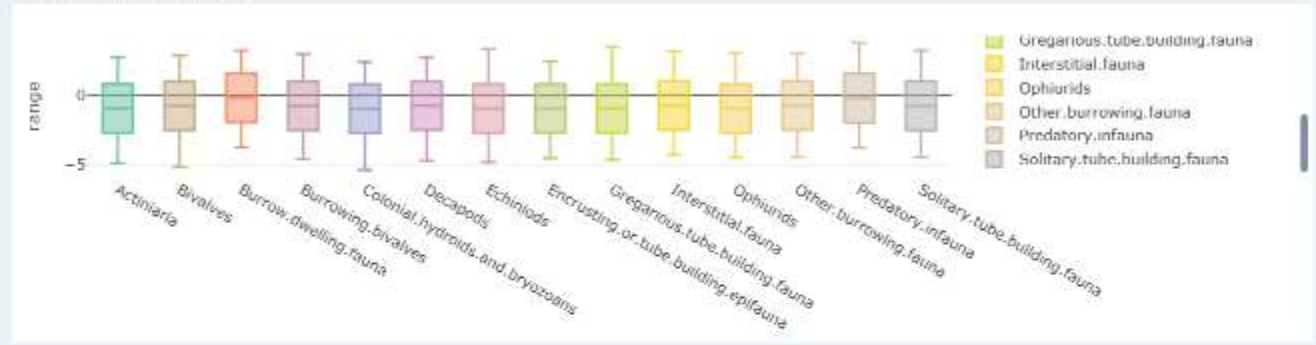
Physical.change.to.Artificial.or.Hard

Off On

Physical.Change.to.Muddy.or.Mixed

Off On

Effect on bio-assemblage



Effect on Output Processes

Effect on Eco-system services



Pressure Test

Bayesian Network

Select MESO model

Sub_littoral_coarse

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Pressures to Output Processes

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Wave.exposure

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Suspended.solids

Off On

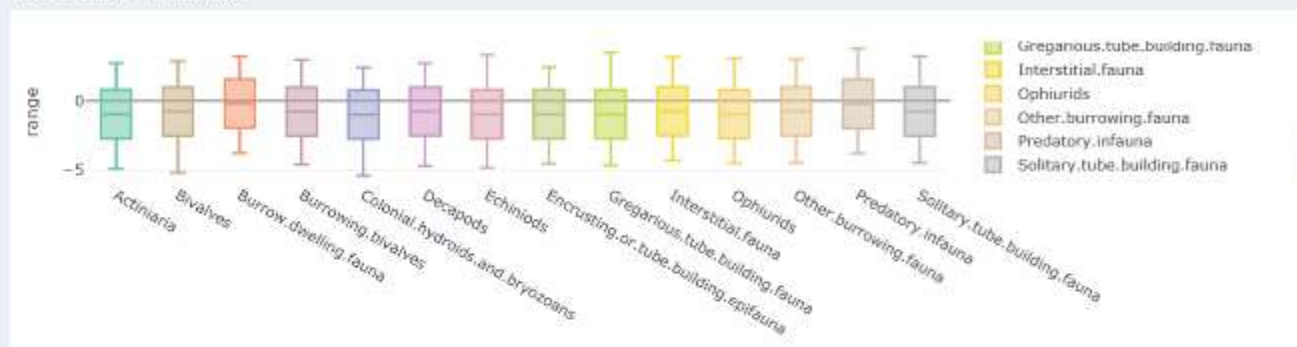
Physical.change.to.Artificial.or.Ha

Off On

Physical.Change.to.Muddy.or.Mixed

Off On

Effect on bio-assemblage



Effect on Output Processes



Effect on Eco-system services

Calc

Select MESO model
Sub_littoral_coarse

Select Transition
Pressures to Eco-system services

Sediment.type.change
 Off On

Abrasion
 Off On

Penetration
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Extraction
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Siltation.light
 Off On

Siltation.heavy
 Off On

Wave.exposure
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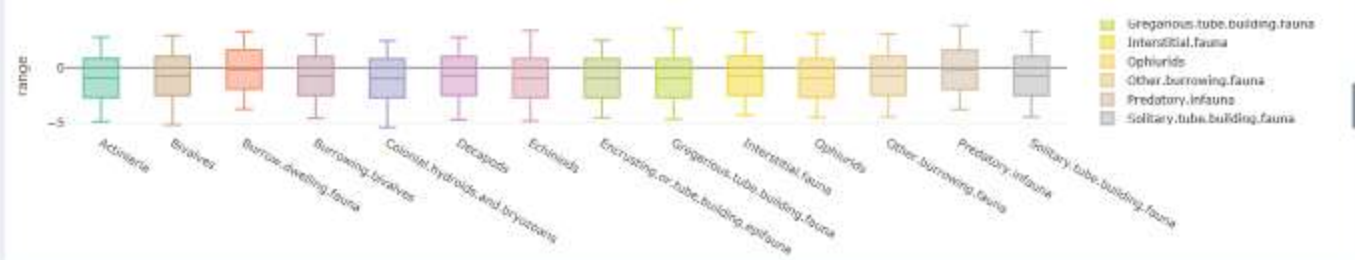
Suspended.solids
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Physical.Change.to.Artificial.or.Hard
 Off On

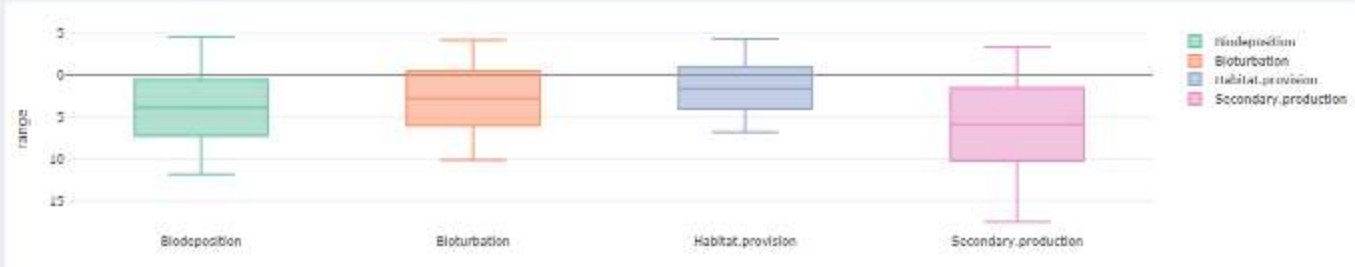
Physical.Change.to.Muddy.or.Mixed
 Off On

Physical.Change.to.Coarse
 Off On

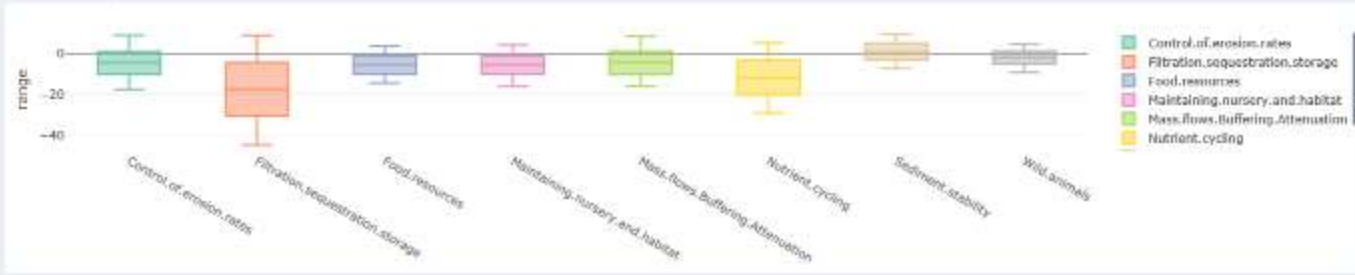
Generic.Contamination
 Off On



Effect on Output Processes



Effect on Eco-system services



Thank you to our funders

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