



VALUING NATURE

Valuing coastal services: Stressor
Stressor induced impacts, tipping
tipping points and societal wellbeing
societal wellbeing

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Placement Objectives

- Objective 1:
 - Assign values for multiple ecosystem sedimentary habitats.
- Objective 2:
 - Apply these values to assess the multiple stressors.
- **Background:**
 - **Sediment ecology**
 - **Impacts of nutrient enrichment and disturbance**

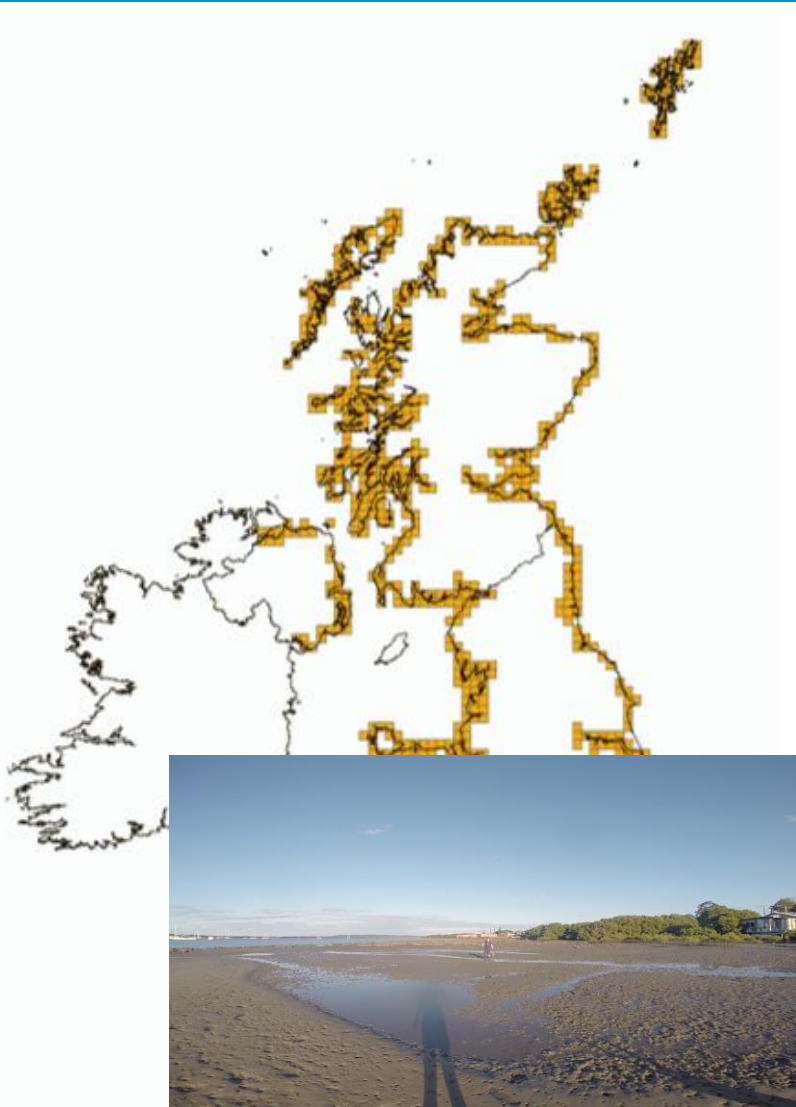
Placement Objectives

- Objective 3:
 - Assess the differences before and after a tipping point resulting from increased stress.
- Objective 4:
 - Identify how human health and wellbeing will be impacted by stressors.
- **Background**
 - **Interest in how systems change**
 - **Complete the bigger picture from previous research**

Key activities

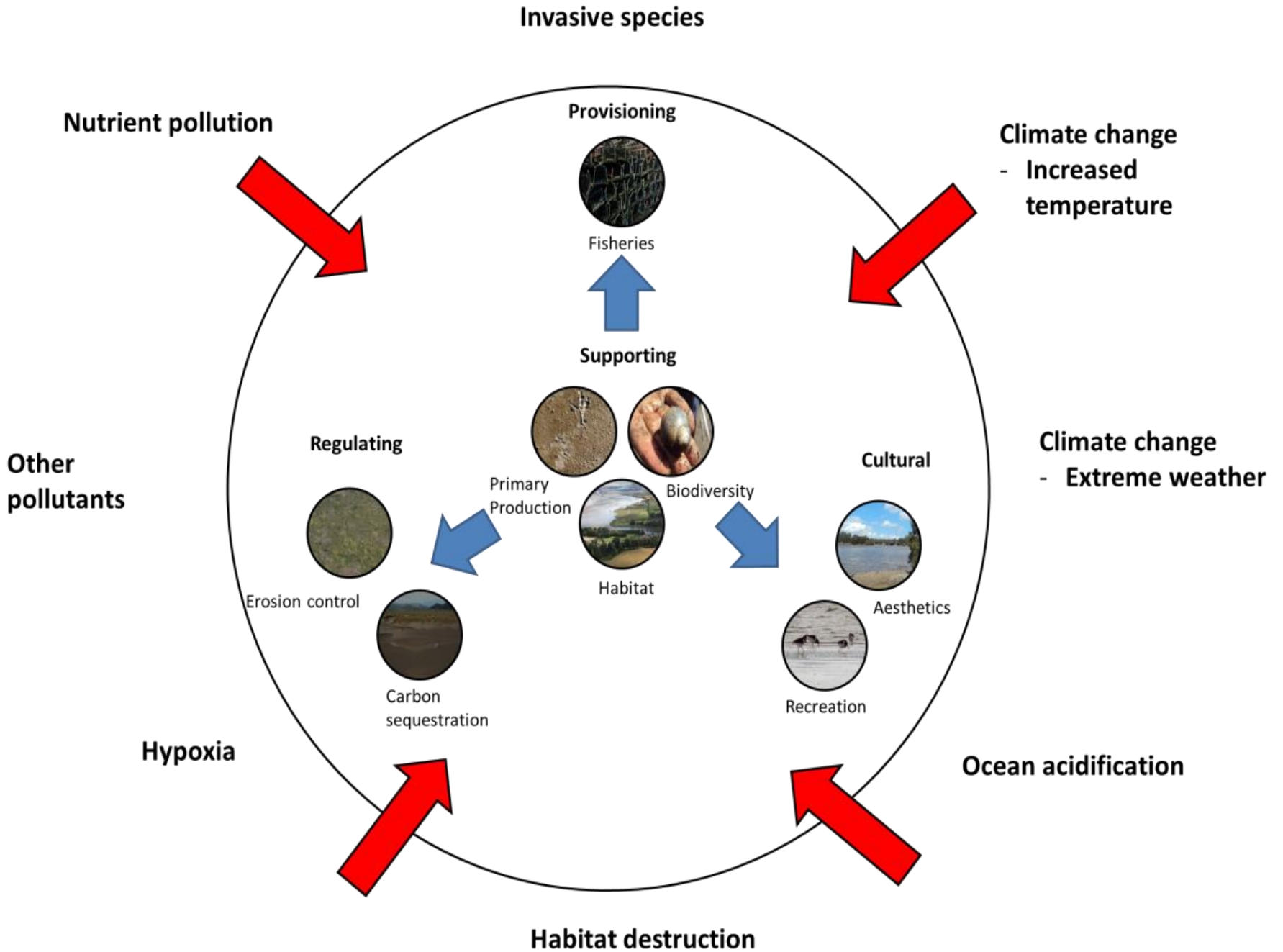
- **Objectives 1 and 2**
 - **ecosystem service values and impacts**
 - Attendance at environmental economics lecture series
 - Participation in group meeting
 - Background learning
 - Introduction to environmental economics
 - Cost benefit analysis

Difficulties and alterations – what are mudflats?



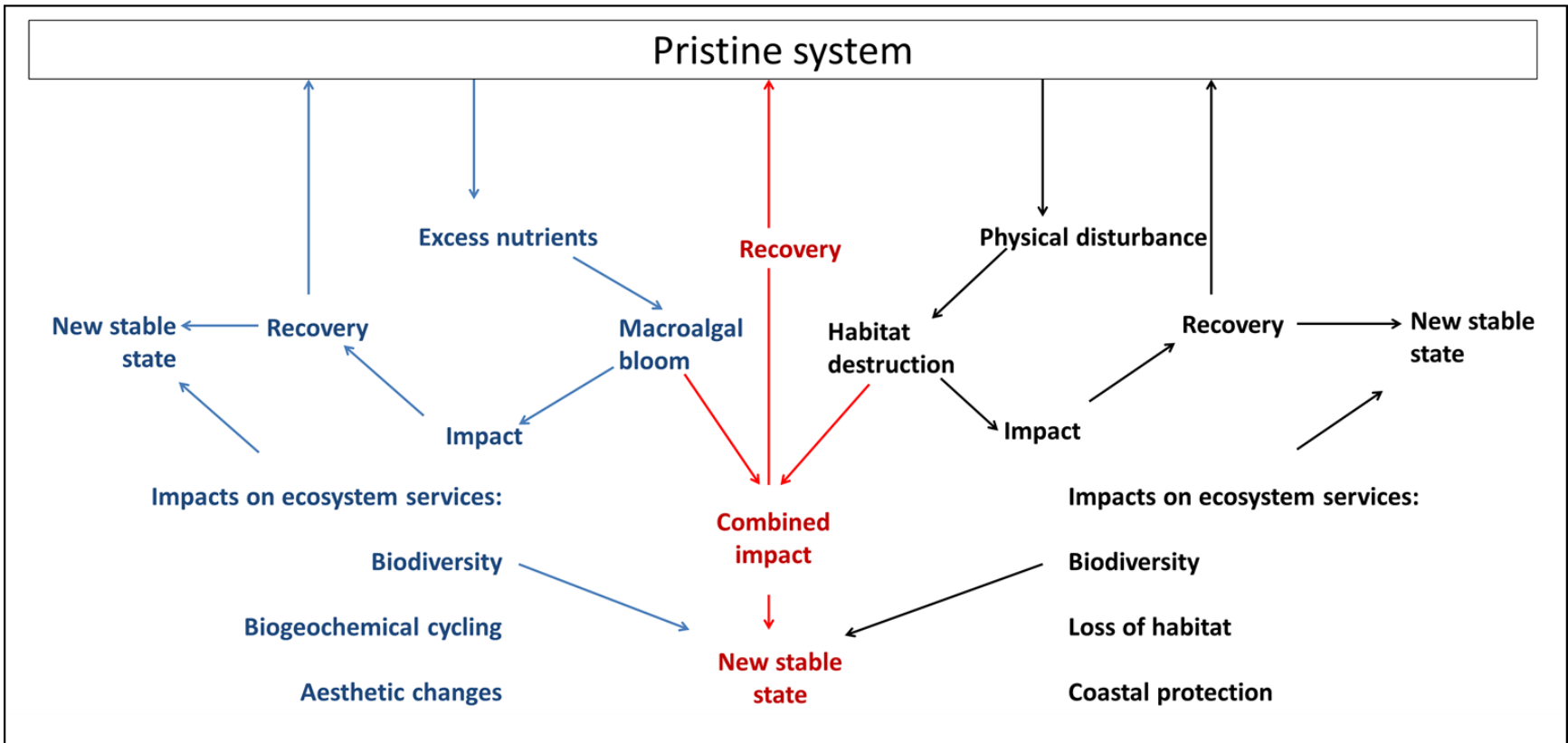
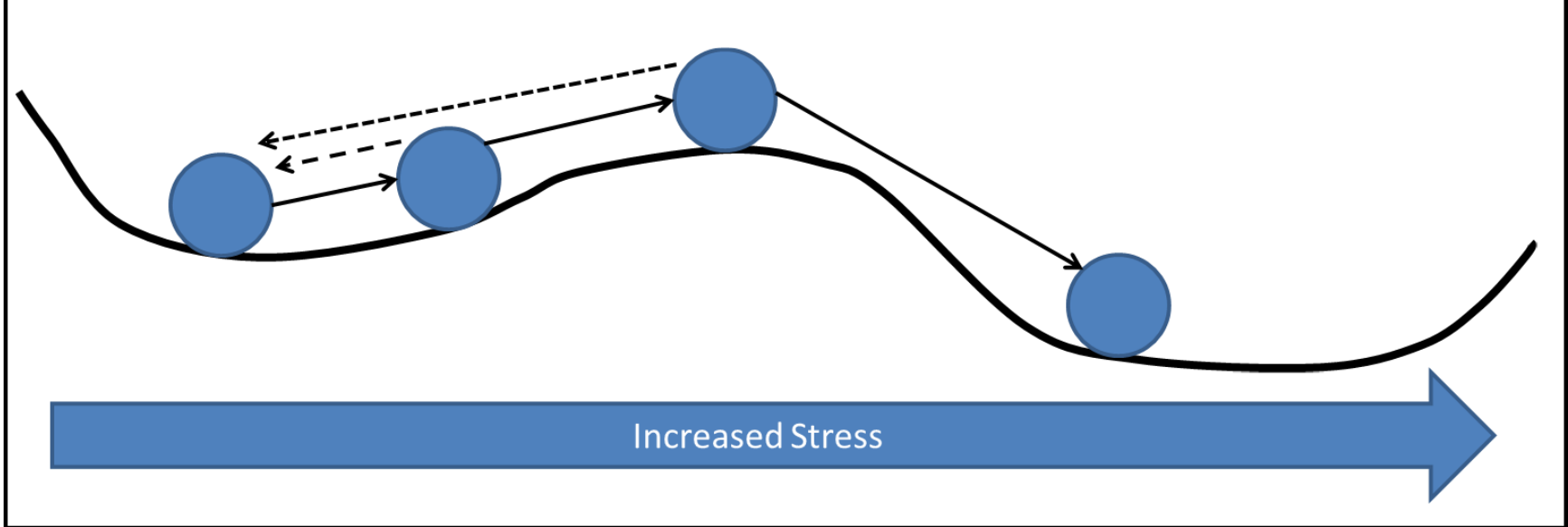
Key activities

- **Objectives 1 and 2**
 - **ecosystem service values and impacts**
 - Attendance at environmental economics lecture series
 - Participation in group meeting
 - Background learning
 - Introduction in environmental economics
 - Cost benefit analysis
 - Basic value transfer
 - How were ecosystem services altered?



Key activities

- **Objective 3**
 - **Tipping points**
 - No effect from my initial study
 - Other examples



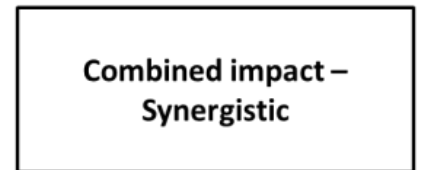
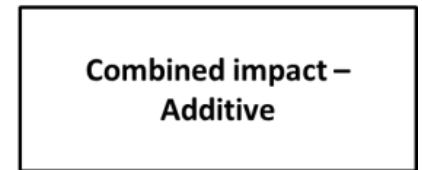
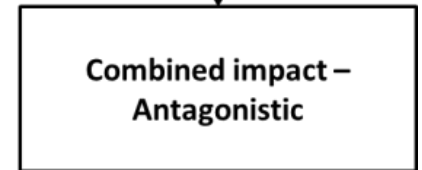
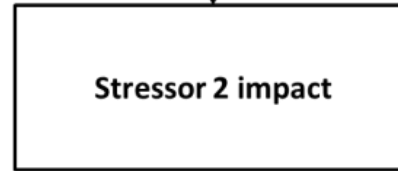
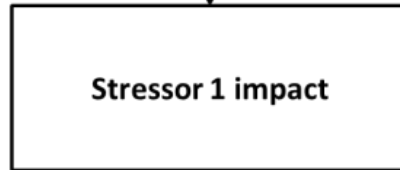
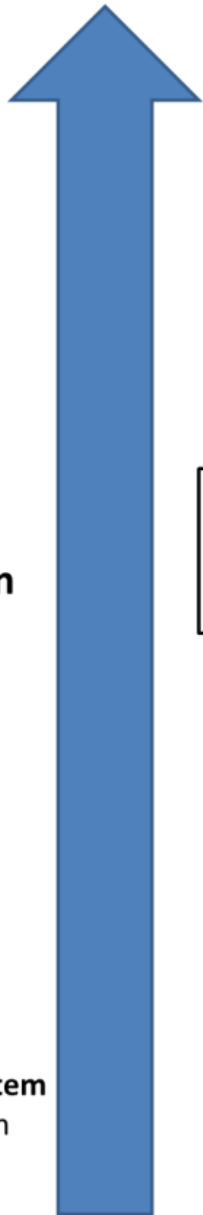
Key activities

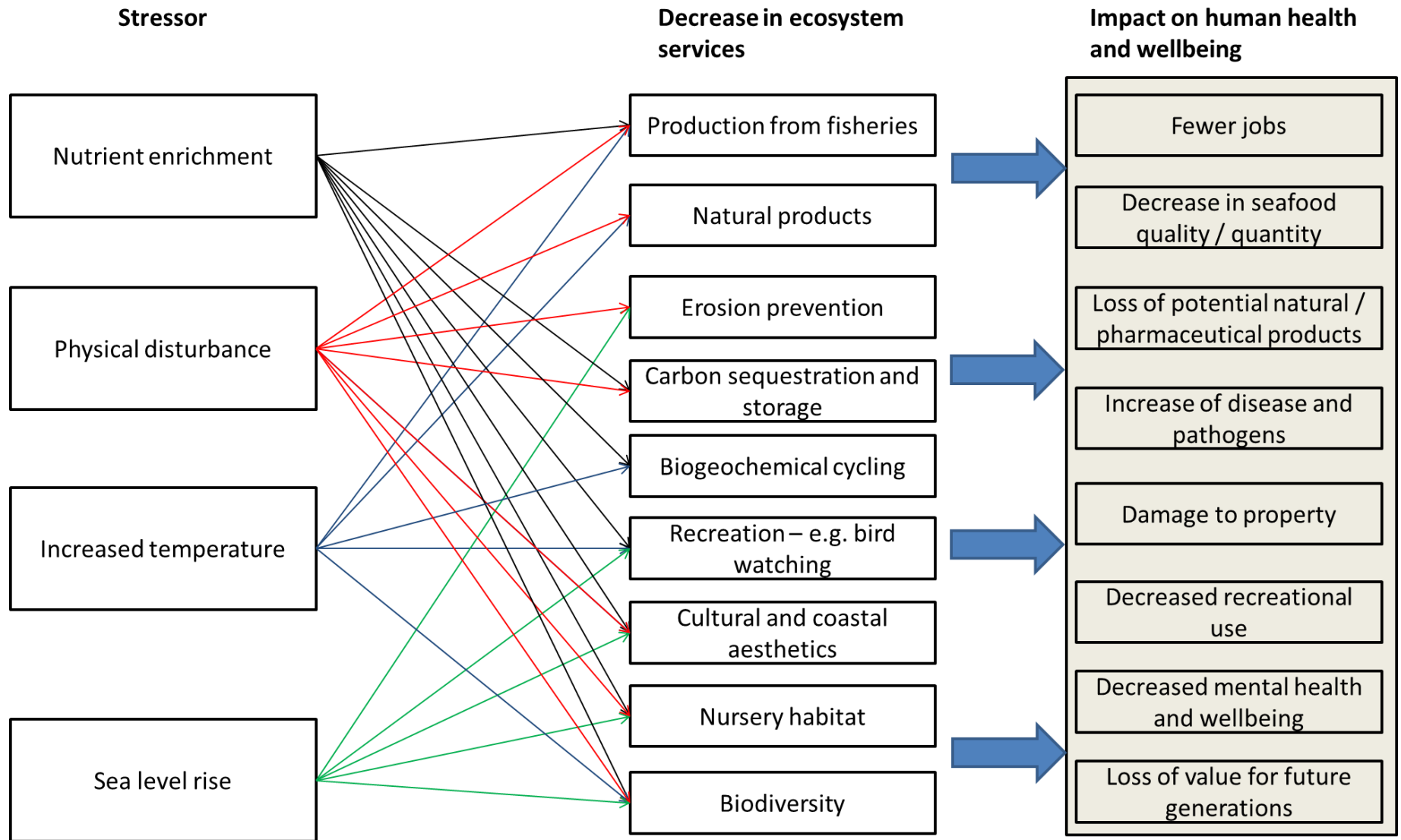
- **Objective 4**
 - **Health and wellbeing**
 - Literature search
 - Multiple stressor impacts on human health and wellbeing are complex
 - More research is needed into the combined effects on ecosystem services

Pristine system
Maximum service provision

Level of ecosystem service provision

Highly impacted system
Low service provision





Adapted from Sandifer and Sutton-Grier (2014) *Natural Resources Forum*: 38, 157-167

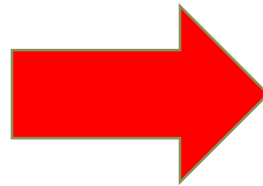
Nature of learning experience

- Better understanding of valuing nature concepts
- How do you value ecosystems and services?
- Is it possible to transfer from one place to another?
- How is human health and wellbeing impacted?

Opportunities and challenges

- New way of thinking
 - Ecological thinking to economic thinking

Something interesting
or unexpected
happens. Why? How?



Is society going to feel
the change?

Will society be
impacted?

Opportunities and challenges

- Clear definitions are needed for appropriate valuations
- Co-operation between ecologists and social scientists are needed to be able to understand the implications of stressors

Progress

Completed:

- Blog 1 - learning environmental economics
- Blog 2 - Outputs and experiences of the placement
- VN - report

Progress

In progress :

- Improved previous papers incorporating ideas and concepts from placement
- New publication on the impacts of an algal mat on sediments

Future :

- Publish findings from placement