Case study of the Marine Pioneer – a UK government pilot

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Introducing the Marine Pioneer– MP

Government 25 year environment plan - **Natural Capital Approach (NCA)** created by the Natural Capital Committee (NCC).

To test the NCA at **local scale**, in July 2016 'Pioneer' pilots were set up by DEFRA. The Pioneer's are: urban - Manchester, catchment - Cumbria, landscape - N. Devon and **marine – N. Devon and Suffolk**.

The **Marine Pioneer's aim** is to use partnership projects to test pioneering management of the environment and share the lessons.

This PhD will be investigating the '**Marine Pioneer**'.

Introducing the PhD

Aim 1:
To document and interpret the process of the Marine Pioneer.

Aim 2:
To understand the role of natural capital within the Marine Pioneer.

The research will use **qualitative data collection methods** within a **case-study** methodological framework. Case study research involves the detailed and intensive analysis of a case to provide a holistic understanding of the phenomenon being studied (Baxter and Jack, 2008).
Case study research can also allow the discovery of issues that are intricately wired to political, social, historical and personal contexts (Stake, 1995). This is of importance within this research due to the **political context** in which the Pioneer's are founded.

Research Questions

1. Are the participants of the Marine Pioneer achieving co-management? If so, how?

Methods: Participant observation
One-to-one interviews

Participants: Members of the MP steering and working groups, associated community groups and DEFRA staff

Data analysis: Thematic analysis

2. How is natural capital valuation being tested within the Marine Pioneer?

Methods: Document analysis

Participants: DEFRA staff, Ministers, Natural Capital Committee

Data analysis: Thematic analysis

3. What are the participants' perceptions of natural capital valuation within the Marine Pioneer?

Methods: One-to-one interviews

Participants: Members of the MP steering and working groups, associated community groups and DEFRA staff

Data analysis: Thematic analysis

OBJECTIVE: Analyse how the participants changed their thinking around the Marine Pioneer.

Methods: System mapping
Participants: Associates of the MP who attended the system mapping workshops ran in June/Oct 2017. **Map analysis** via Complex Control Tool (CCTOOL).

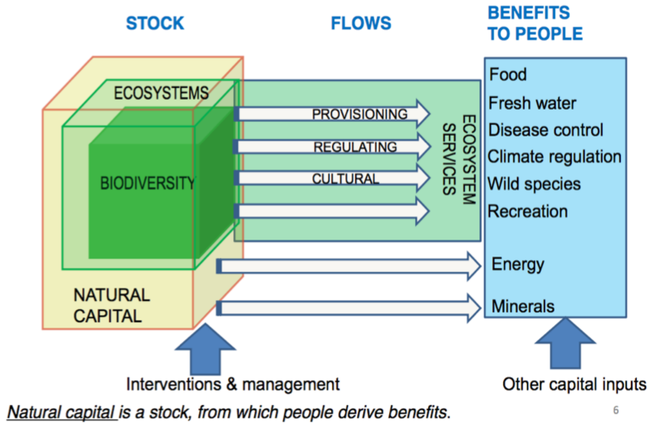
Methods: Participant observation
Participants: Members of the MP steering and working groups, associated community groups and DEFRA staff.
Data analysis: Thematic analysis

Concepts within study

The Natural Capital Committee has defined natural capital as:

"the **elements of nature** that directly or indirectly produce **value to people**, including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as **natural processes and functions**" .

Image 1: Natural Capital Committee

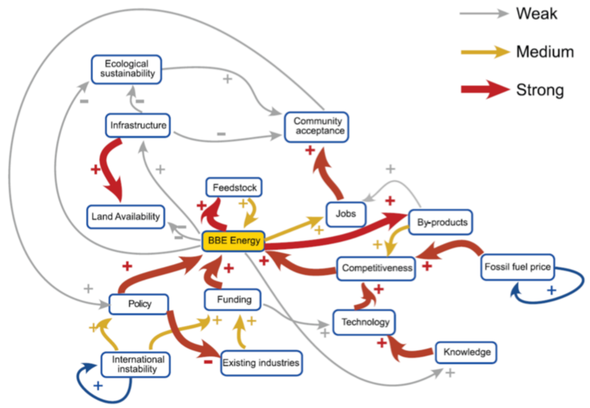


System maps are **qualitative models of a system**, consisting of variables and the **causal relationships** between those variables (Özesmi and Özesmi, 2004).

These maps can incorporate many types of data and are created with **knowledge** and **agreed consensus** from a variety of **stakeholders**.

The use of these maps can be valuable when considering **complex environmental problems** (Özesmi and Özesmi, 2004), such as those being explored within the Marine Pioneer pilot.

Image 2: Example systems map created by Dr Alexandra Penn, University of Surrey.



Next steps: This PhD project commenced in April 2017 and is due for completion in April 2020.
Due to the multiple-methods approach, data will be collected at varying times throughout 2018 and 2019.
An iterative approach to research will be taken in light of new information gleaned during this data collection period.

References: Stake, R.E., 1995. The art of case study research. Sage.
Baxter, P. and Jack, S., 2008. Qualitative case study methodology: Study design and implementation for novice researchers. *The qualitative report*, *13*(4), pp.544-559.
Özesmi, U. and Özesmi, S.L., 2004. Ecological models based on people's knowledge: a multi-step fuzzy cognitive mapping approach. *Ecological modelling*, *176*(1-2), pp.43-64.