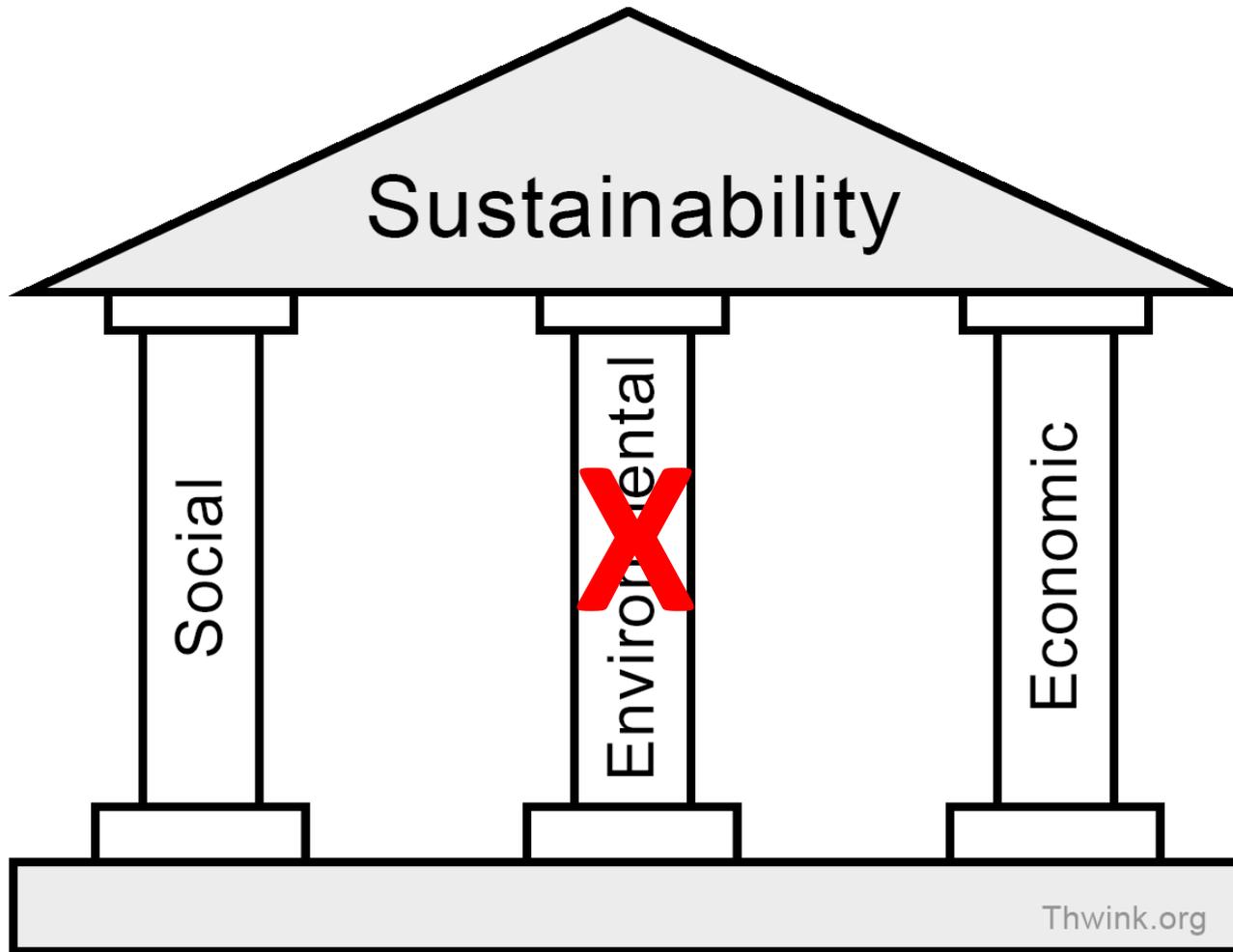


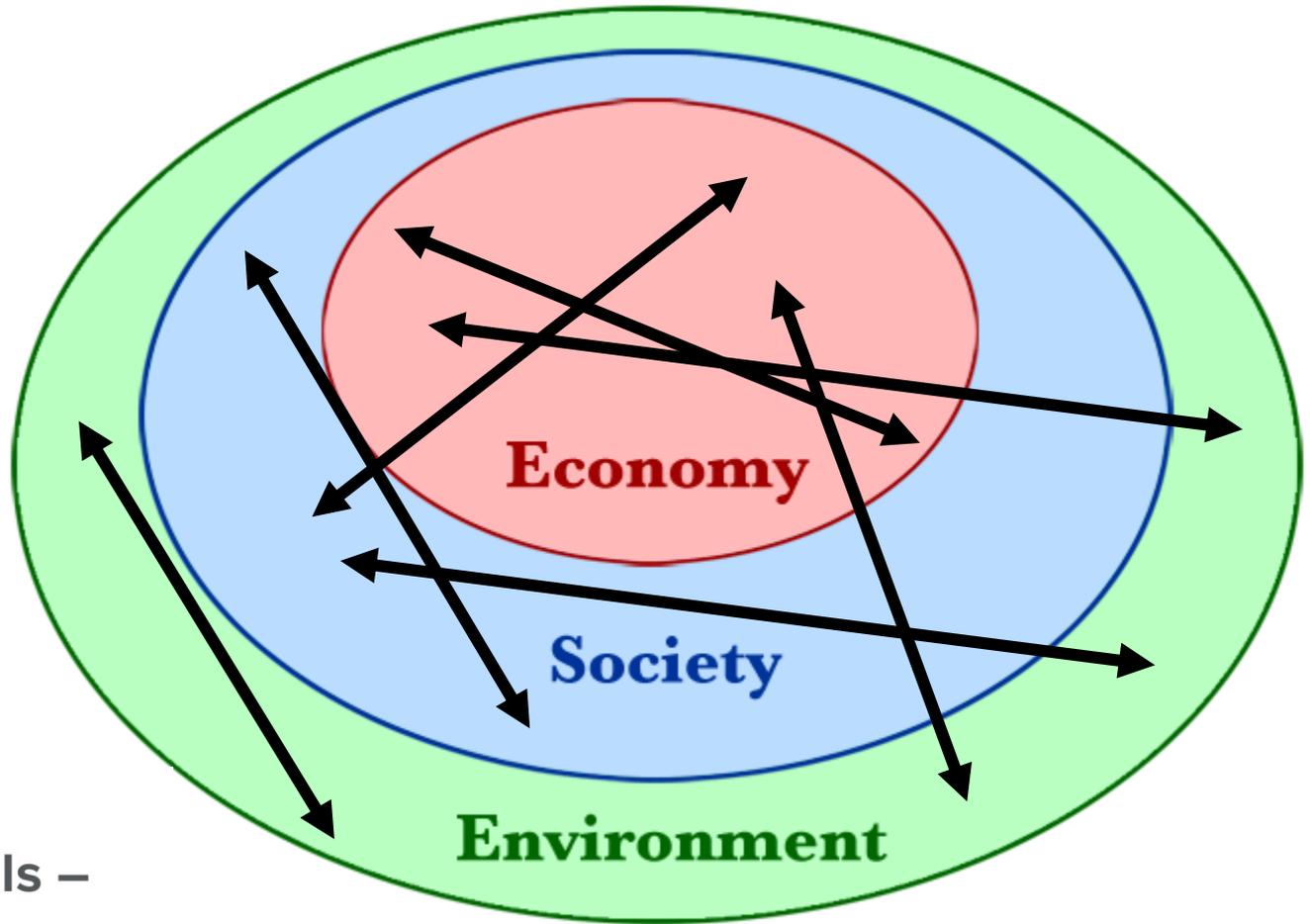
'Ecosystems'

*How Do We Connect Economy, Society
and the Environment...in 25 mins*



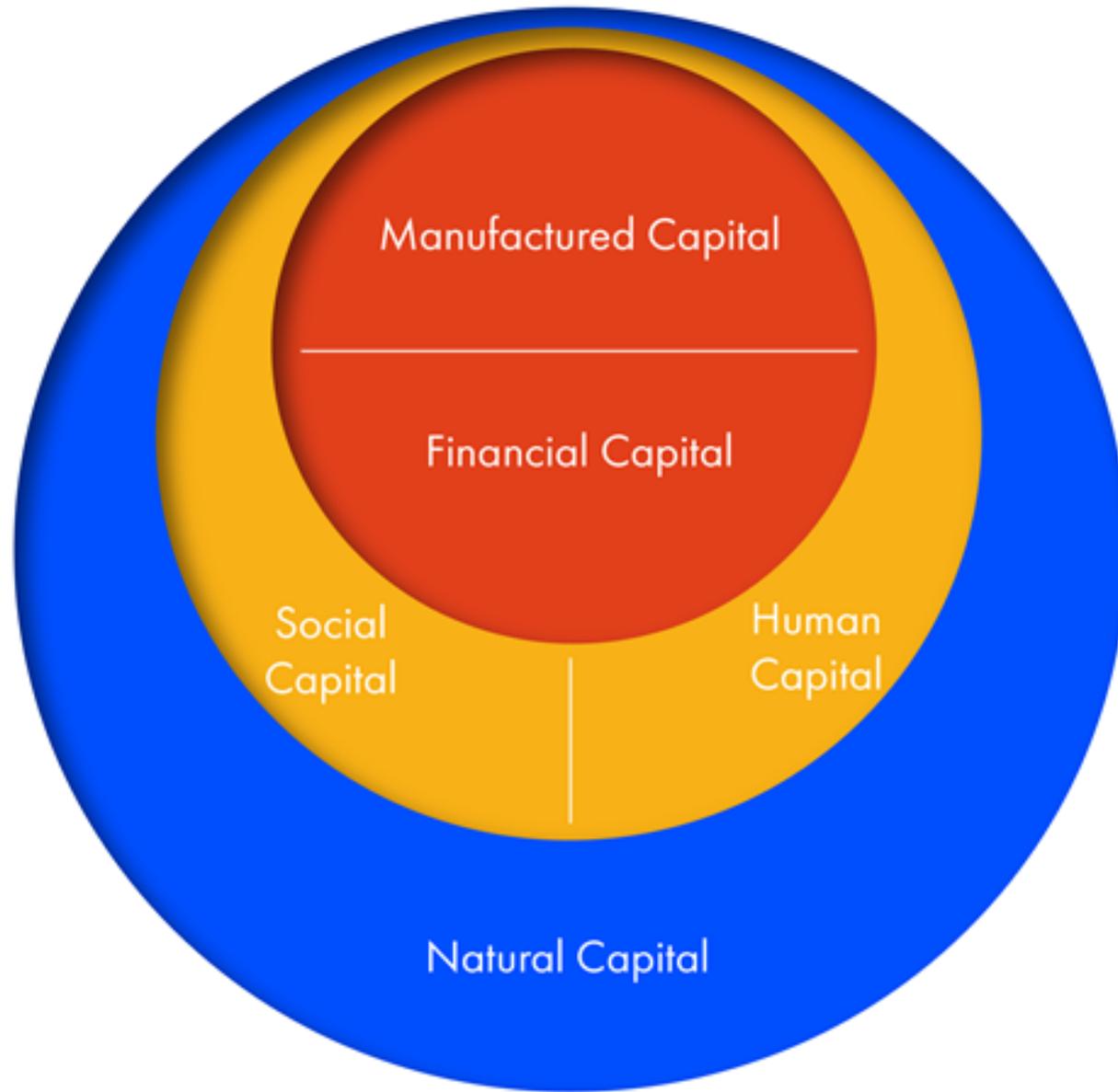
Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.





UN Sustainable Development Goals – SDGs





Ecosystems

A Primer



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Technological Forecasting & Social Change

journal homepage: www.elsevier.com/locate/techfore



A review of the ecosystem concept — Towards coherent ecosystem design

Masaharu Tsujimoto^{a,*}, Yuya Kajikawa^a, Junichi Tomita^b, Yoichi Matsumoto^c

^a *Tokyo Institute of Technology, 3-3-6, Shibaura, Minato-ku, Tokyo, Japan*

^b *Toyo University, 5-28-20 Hakusan, Bunkyo-ku, Tokyo*

^c *Kobe University, 2-1 Rokkodai-cho, Nada-ku, Kobe, Hyogo, Japan*



ARTICLE INFO

Keywords:

Ecosystem
Business ecosystem
Platform management
Multi-level perspective
Coherent ecosystem

ABSTRACT

The ecosystem concept is of increasing significance in the field of the management of technology and innovation. This paper provides an overview of 90 previous studies using the ecosystem concept in this field, all published in leading academic journals, and clarifies their four major research streams. The first stream is the *industrial ecology* perspective, which is based on the concept of industrial ecosystems. The second is the *business ecosystem*

MIT SLOAN MANAGEMENT REVIEW

DIGITAL

The Myths and Realities of Business Ecosystems

JACK FULLER, MICHAEL G. JACOBIDES, AND MARTIN REEVES

Before determining an ecosystem strategy, organizations must first shift to a new perspective and way of thinking.

'Jargon'

Collaborative

Co-evolution

In order to make use of ecosystems, organizations need to shift from using a traditional, static, company-centric perspective, and instead apply new ways of thinking about strategy from an ecosystems perspective.

Dynamic

Network oriented

***Looking outwards &
building relationships***

CONSERVATION



Nature's Roundabout

an introduction to Ecology



What is ecology?

'Ecology deals with the relationships or links between the various actors that live in a community'

What is an Ecosystem?

A biological community of interacting organisms and their physical environment (nature-focused)

Connectivity

A complex network or interconnected system (business-focused)

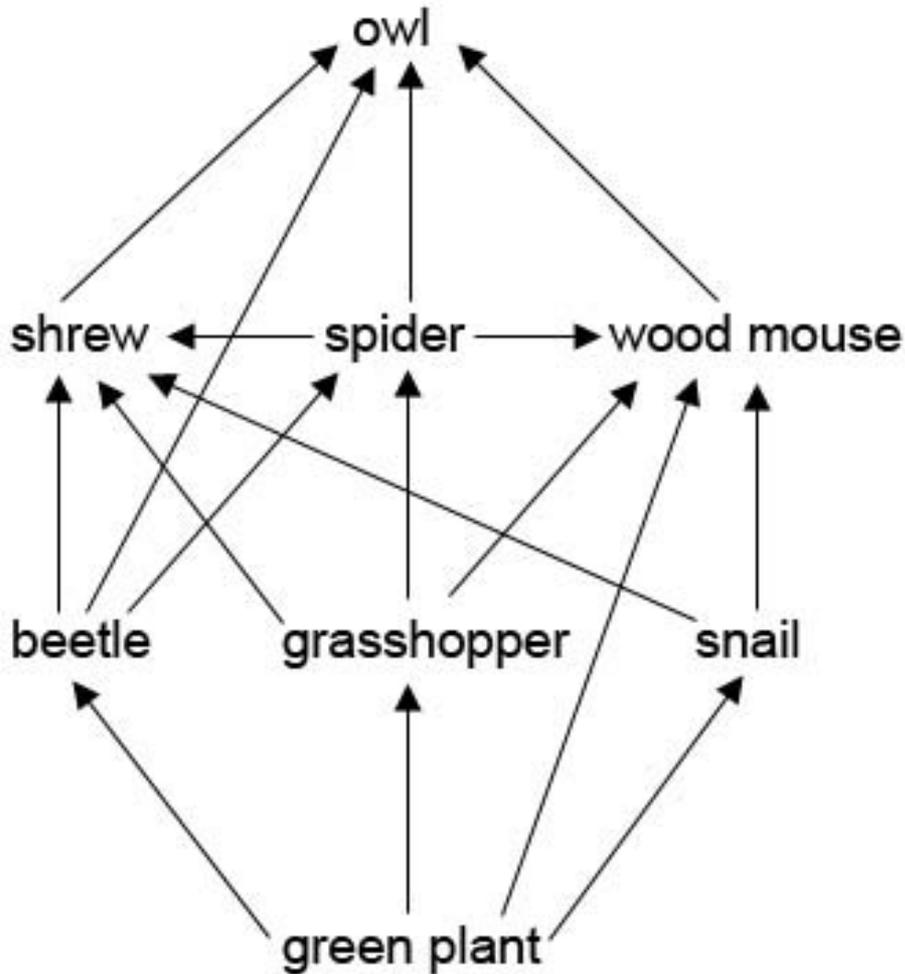
stability
dynamic



Interdependence
thresholds
resilience
succession

University of
Cumbria

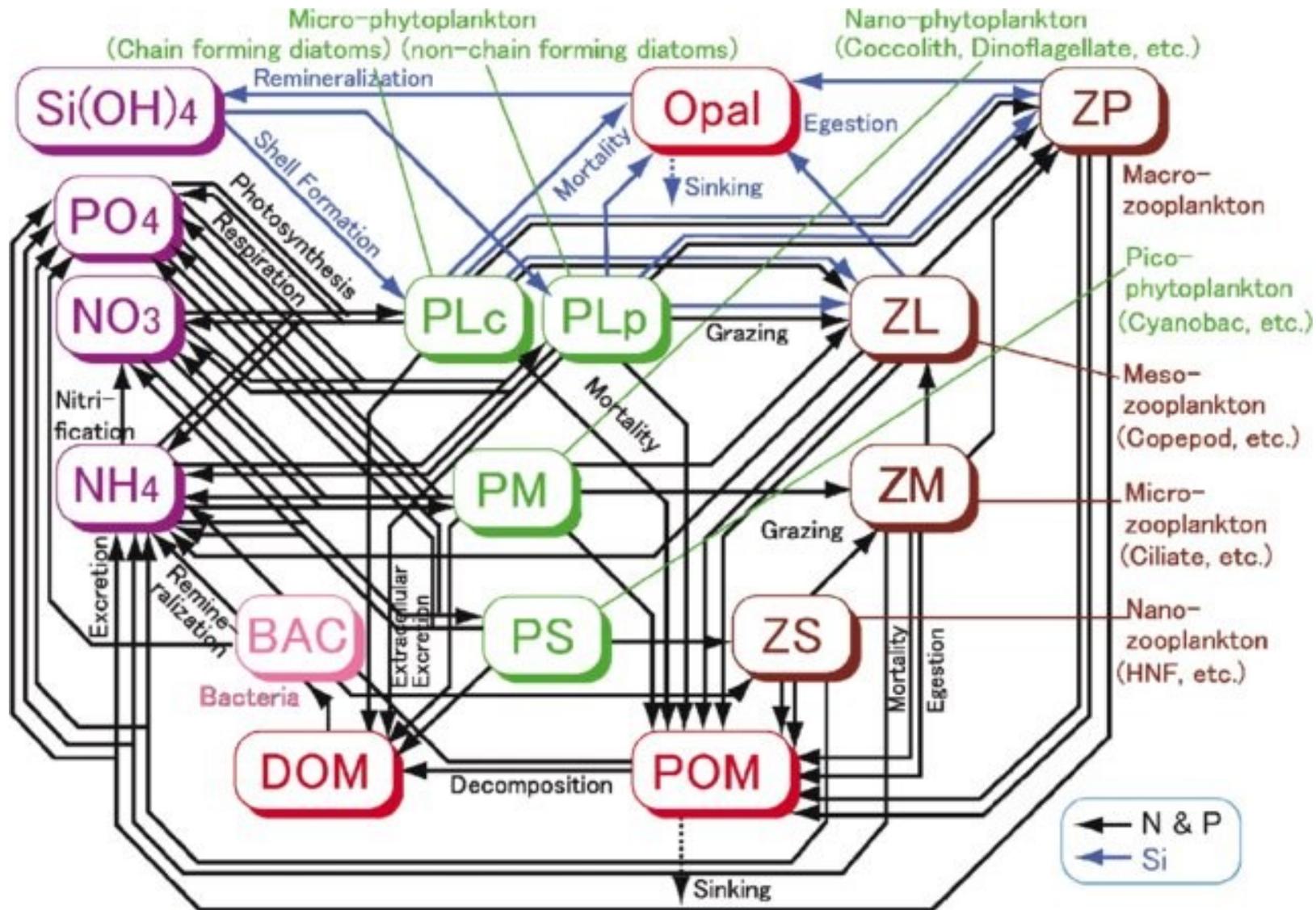


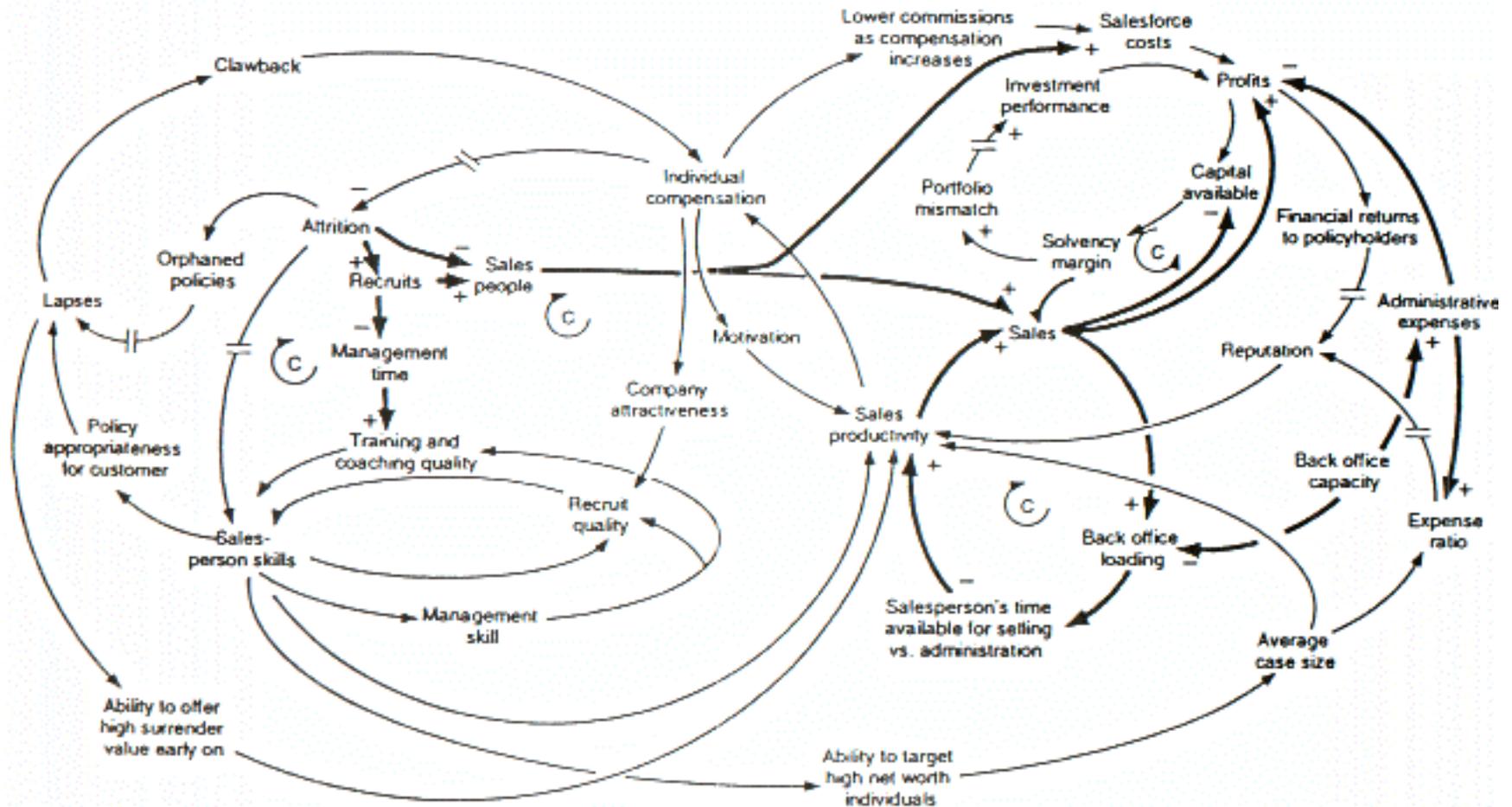


Food Webs of Influence – Woodland

Cultural/Economic Webs of Influence – Eden Arts Winter Droving Festival







A causal loop diagram (CLD) explains the behaviour of a business ecosystem; **cores, co-existence and connectivity**

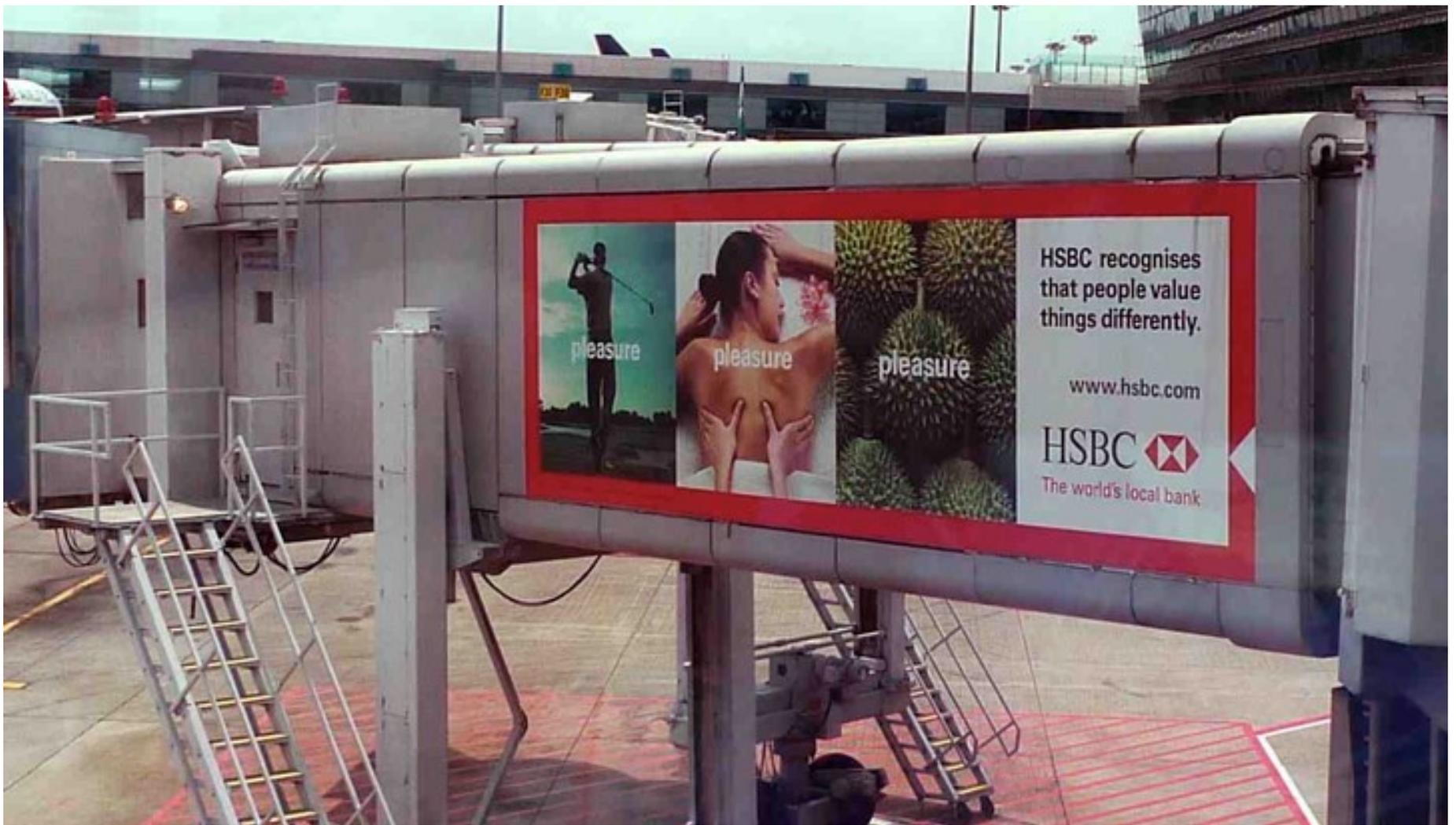
More Key Ecosystems Concepts



We all navigate our ecosystems differently

Umwelt and Seeing Things Differently







Robustness, Resilience...but Dynamic

Biological ecosystems respond to environmental changes (disturbance)...stability/threshold dynamics

Climate change

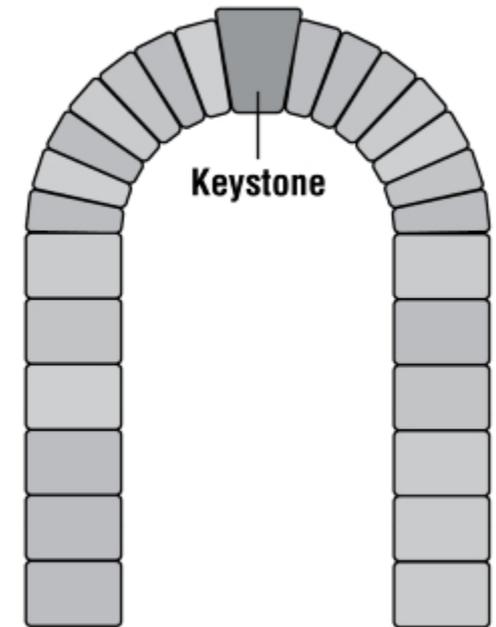
Similarly, a business ecosystem should be capable of surviving disruptions such as unforeseen technological change.

Brexit

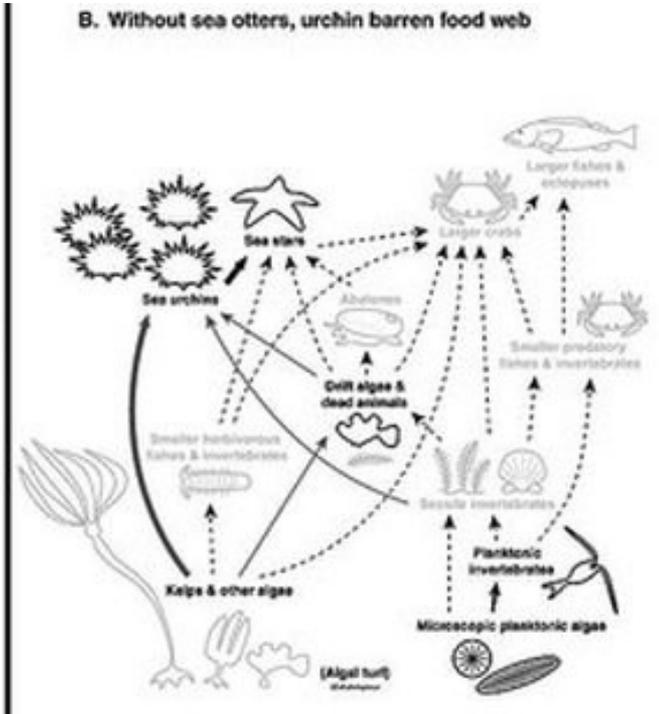
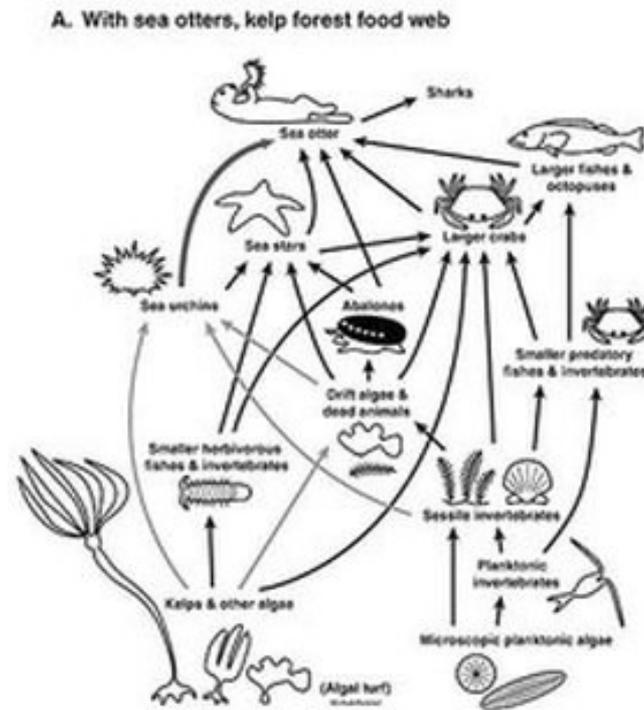


Keystone Actors

Keystone organisations play a crucial role in business ecosystems...they providing a stable and predictable set of common assets and/or connect network participants



In nearly eradicating sea otters, humans had disrupted a critical **keystone species** and **trophic cascade**: high sea otter numbers = low sea urchin populations = healthy kelp forests...



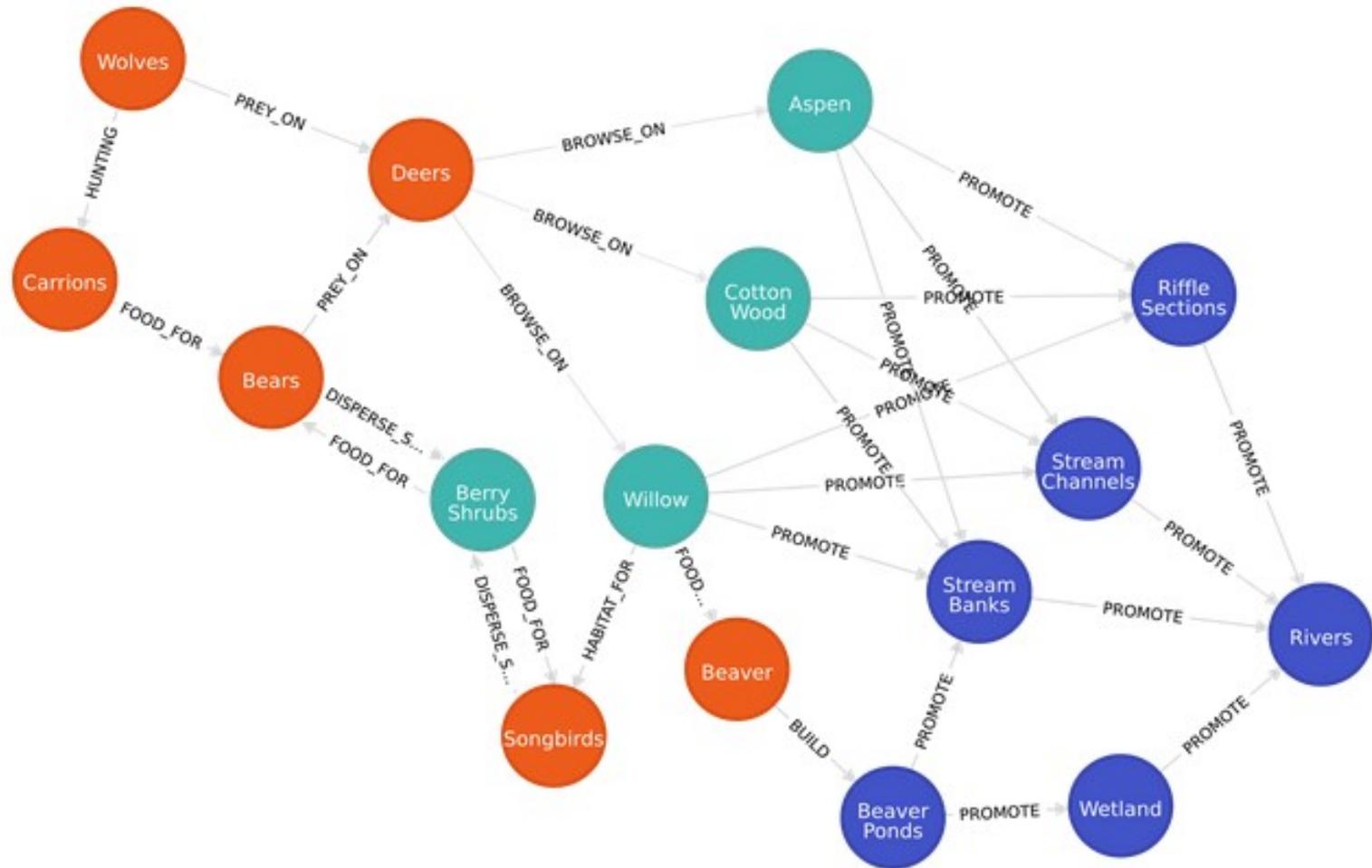




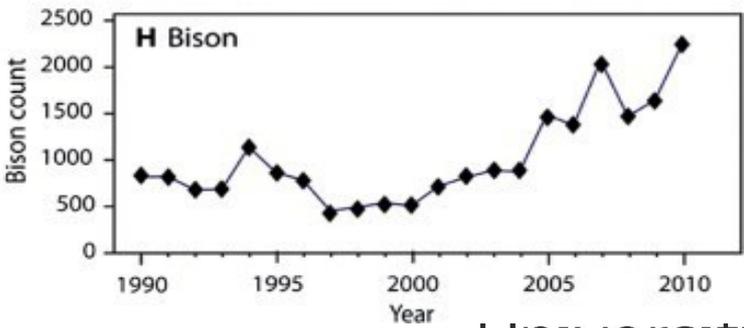
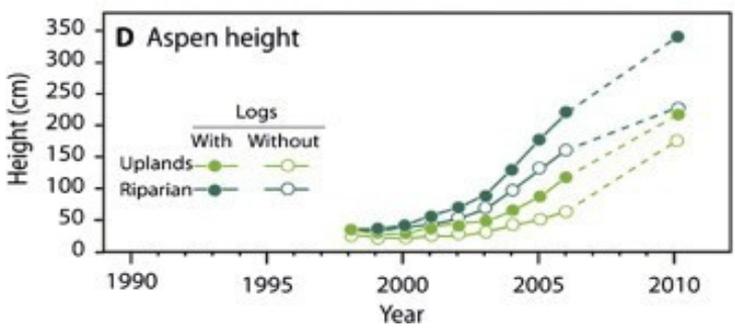
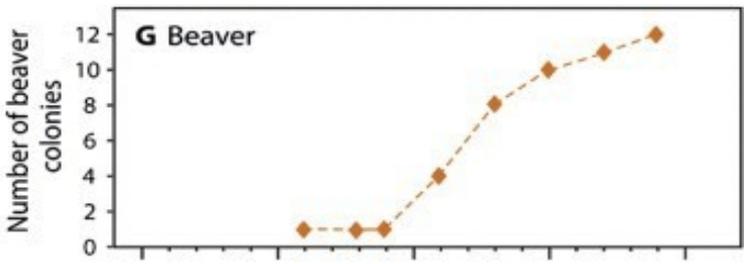
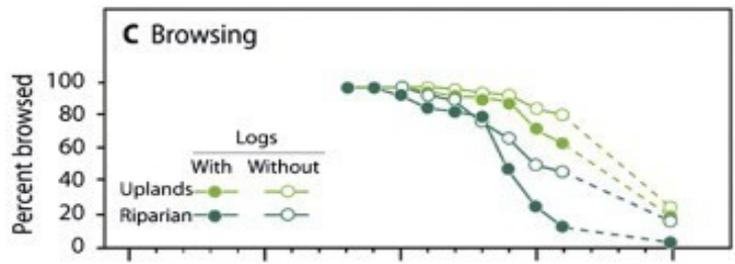
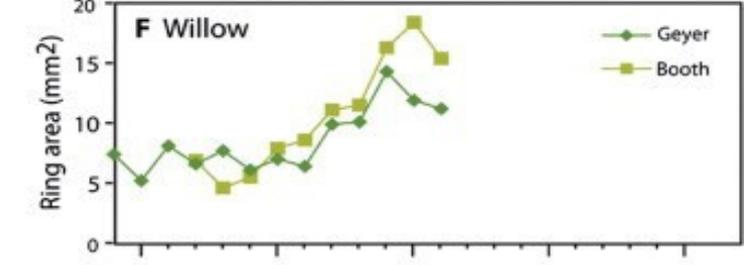
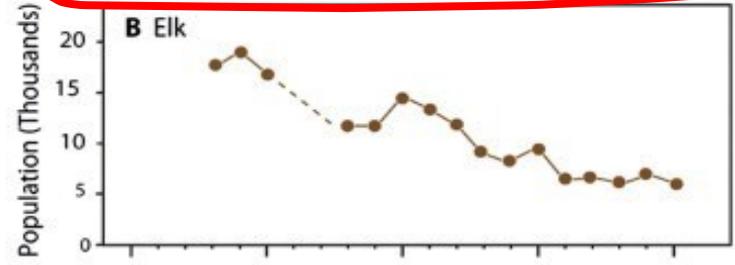
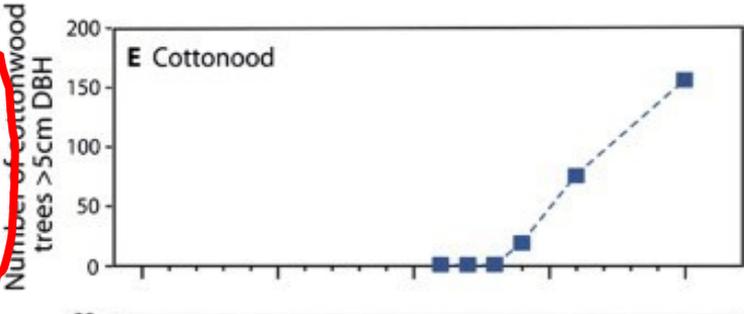
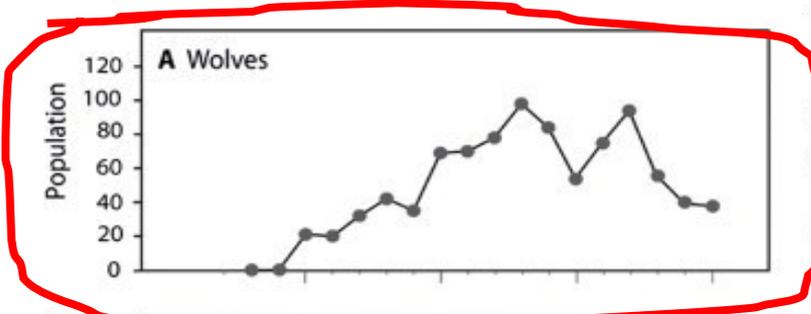
Aquatic Mammals 2010, 36(4), 331-341, DOI 10.1578/AM.36.4.2010.331

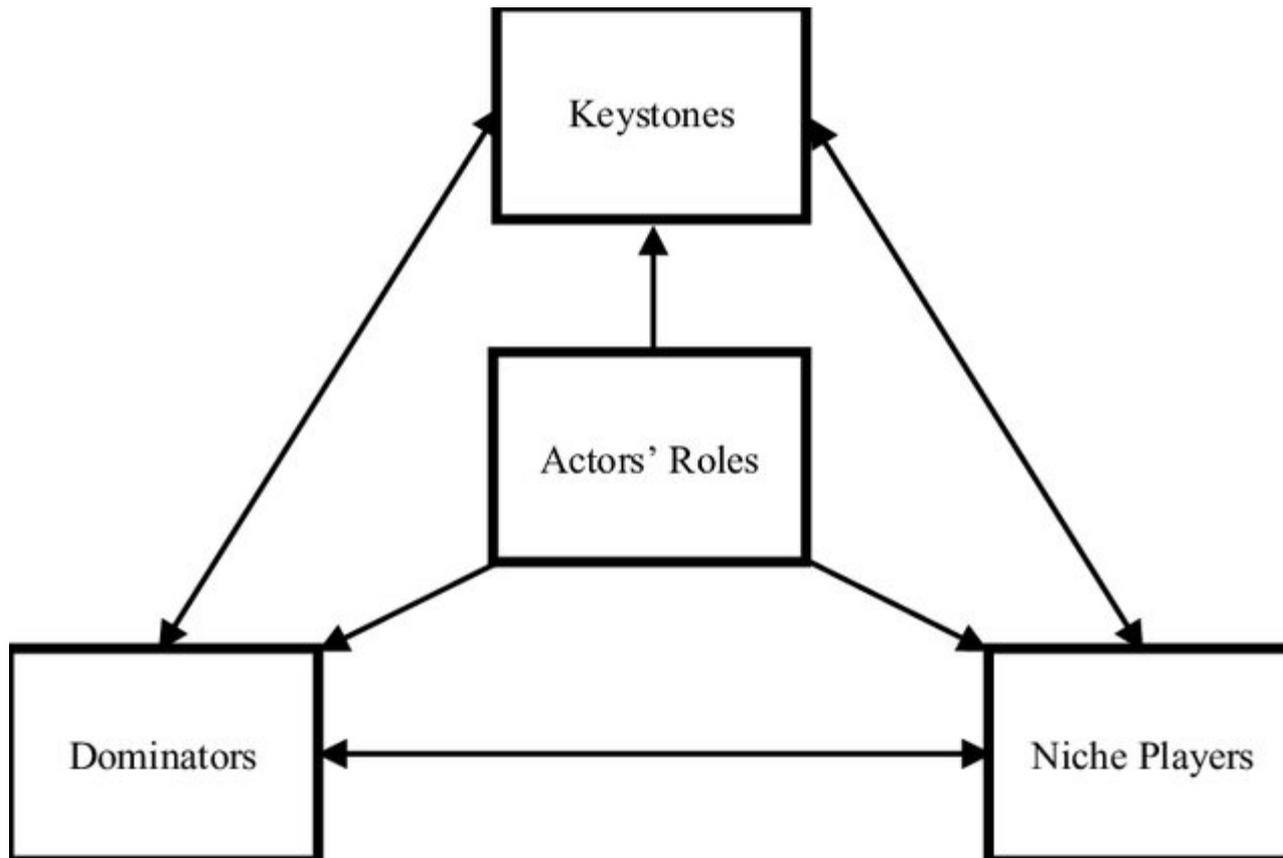
Lesions and Behavior Associated with Forced Copulation of Juvenile Pacific Harbor Seals (*Phoca vitulina richardsi*) by Southern Sea Otters (*Enhydra lutris nereis*)

Heather S. Harris,¹ Stori C. Oates,² Michelle M. Staedler,³ M. Tim Tinker,⁴
David A. Jessup,¹ James T. Harvey,² and Melissa A. Miller¹



A causal loop diagram explains the behaviour of Yellowstone ecosystem system after ‘**keystone species**’ returned





Available online at www.sciencedirect.com

ScienceDirect

Procedia
Social and Behavioral Sciences

Procedia - Social and Behavioral Sciences 221 (2016) 342 – 351

SIM 2015 / 13th International Symposium in Management

Framing the Competitive Behaviors of Niche Players: the Electric Vehicle Business Ecosystem Perspective

Elena Galateanu (Avram)^{a*}, Silvia Avasilcai^b

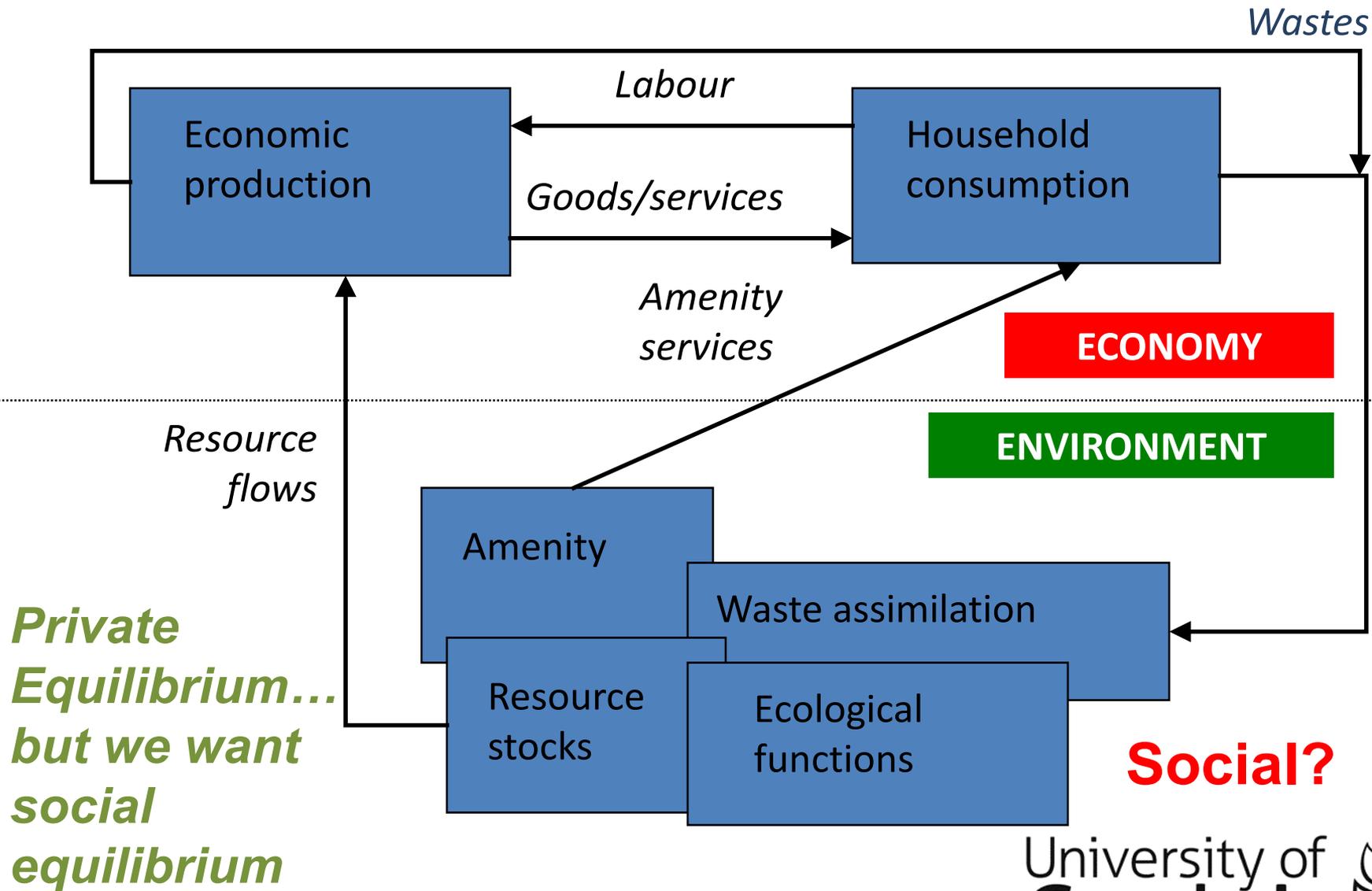


‘Ecosystems of Ecosystems’

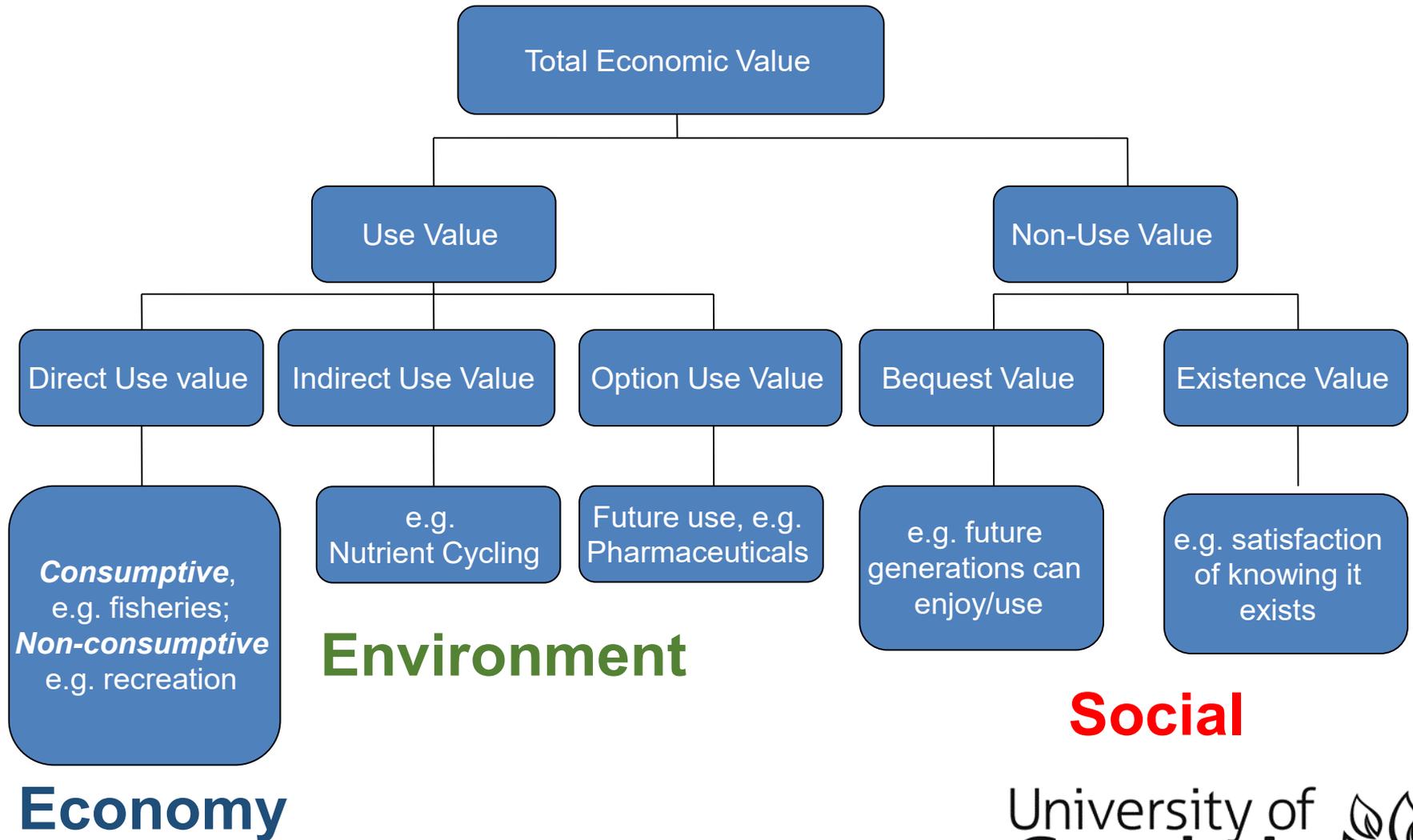
How to Build Connectivity



Standard Economic Model - EnvEcon



Total Economic Valuation: Marine



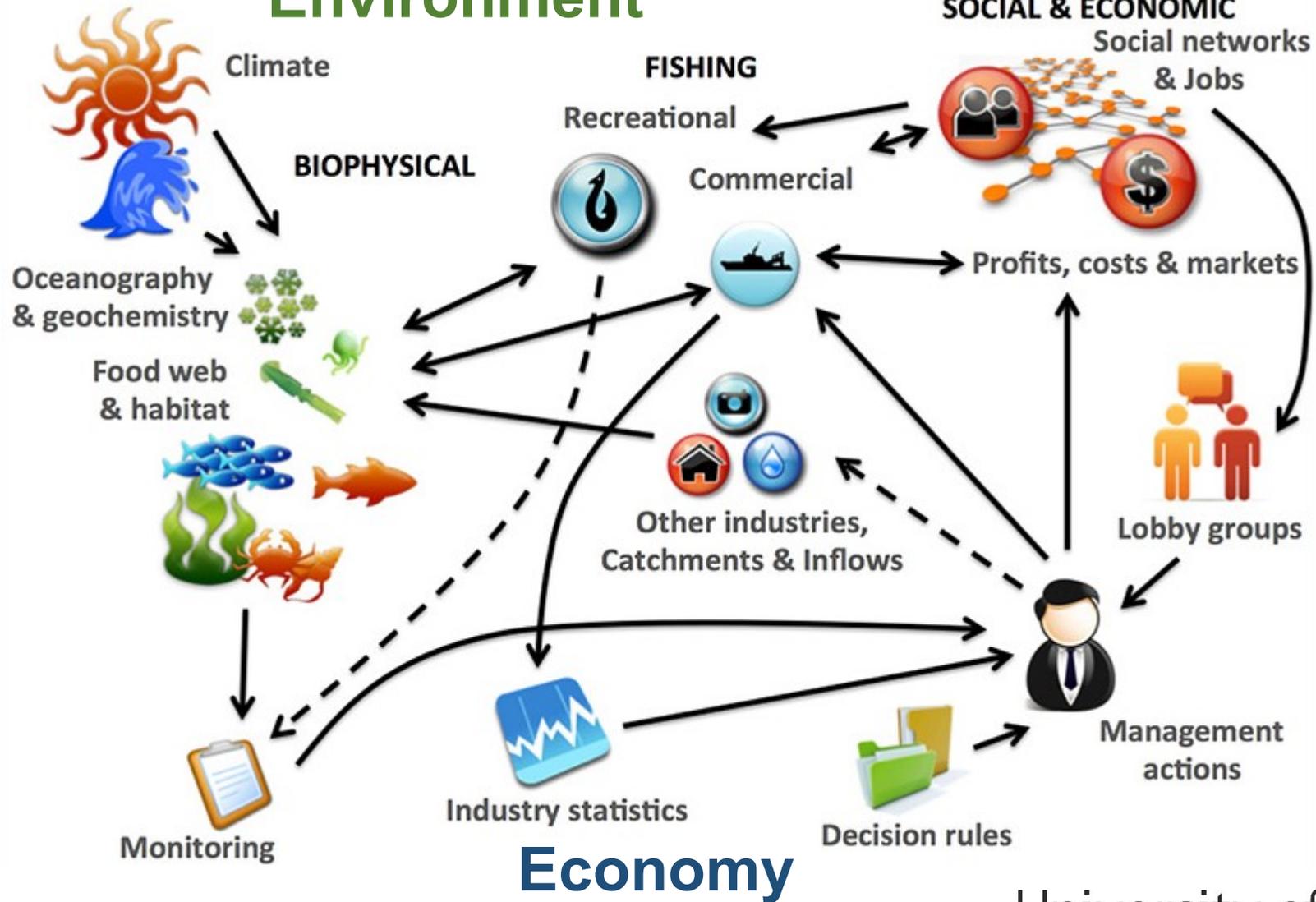
Economy

Environment

Social

Social

Environment



‘Why is this stuff important?’

*Understanding Connections between
People, Place & Values...*



HM Government

A Green Future: Our 25 Year Plan to Improve the Environment



Policy Direction:

Natural Capital/public
goods for public money

PBDM

Net Gain

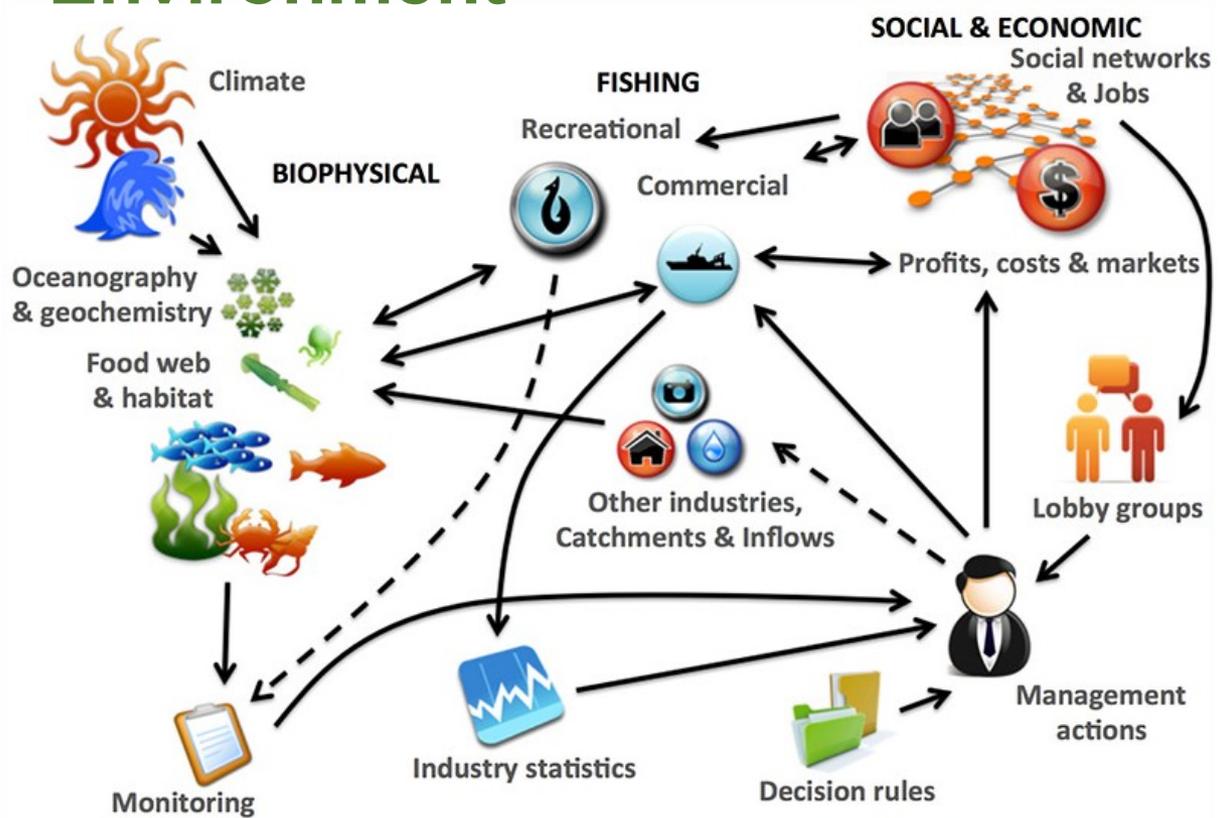
***Connectivity within
and between social,
economic and natural
ecosystems***

A Green Future: Our 25 Year Plan to Improve the Environment



Environment

Social



Economy

Ecosystems Concept

Discussion & Feedback