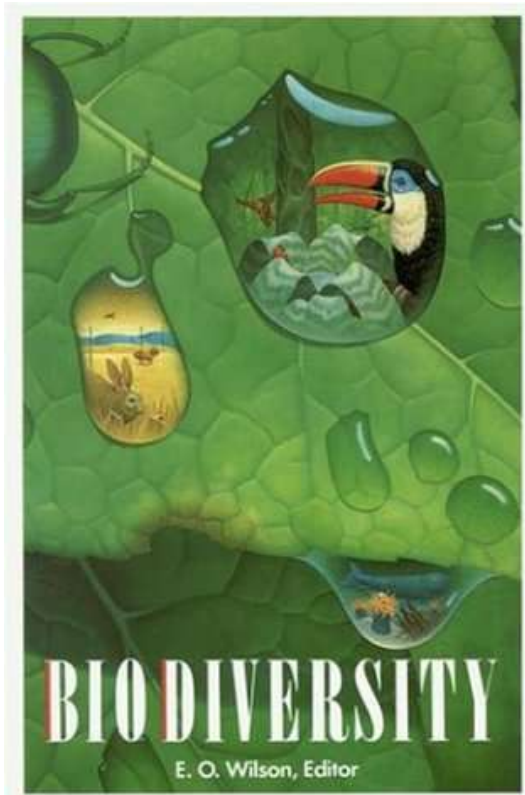


The importance of biodiversity in cities and ecosystem service

A new dialogue for the
21st century

University of
Salford
MANCHESTER

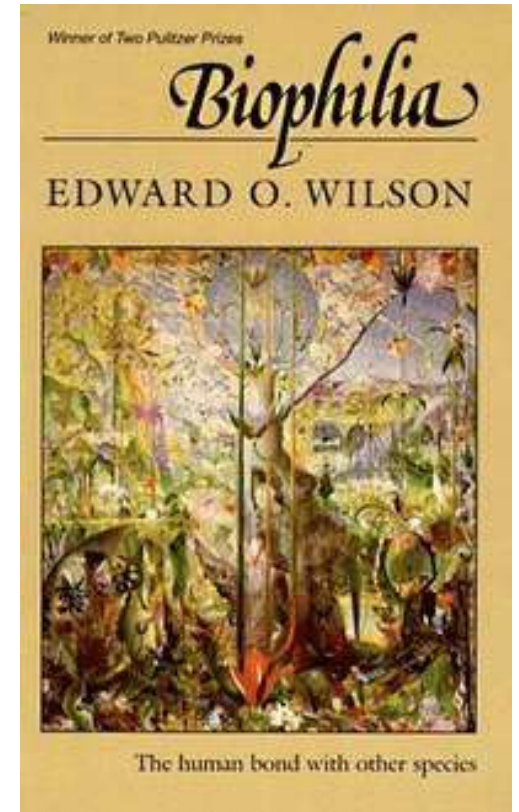




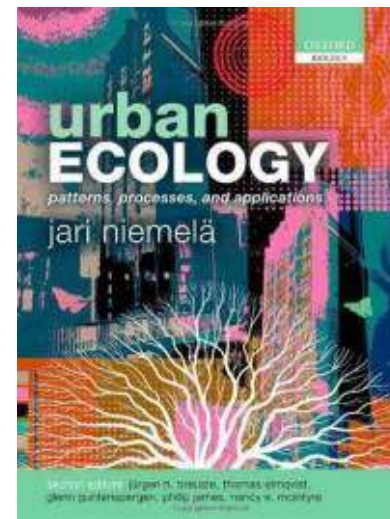
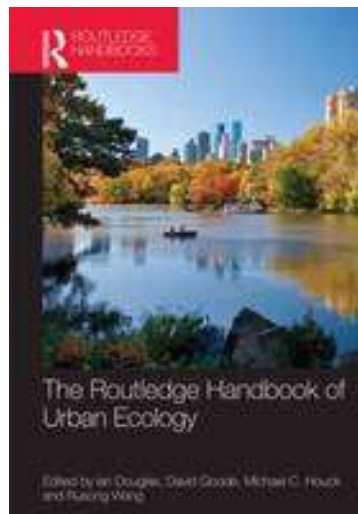
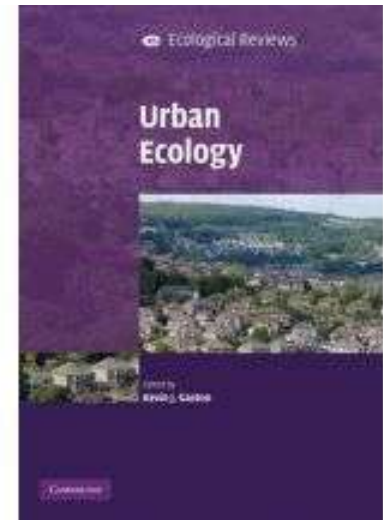
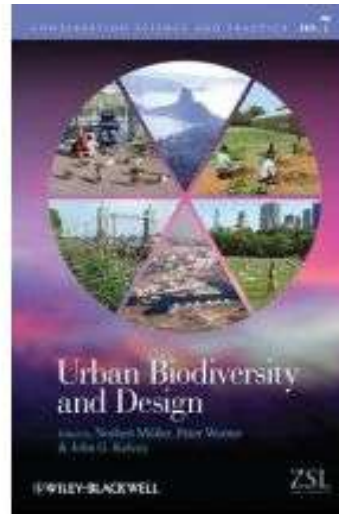
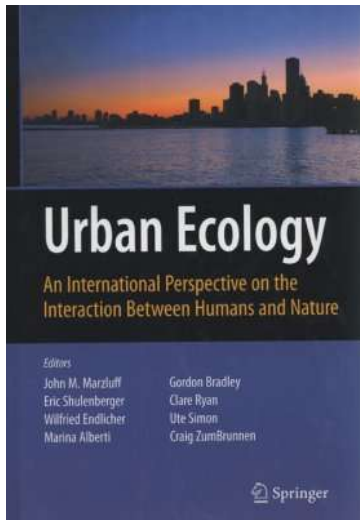
1988

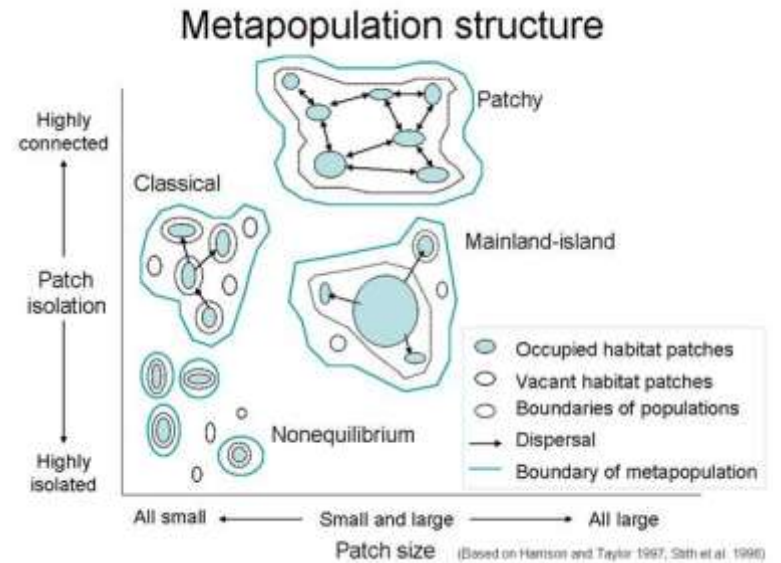
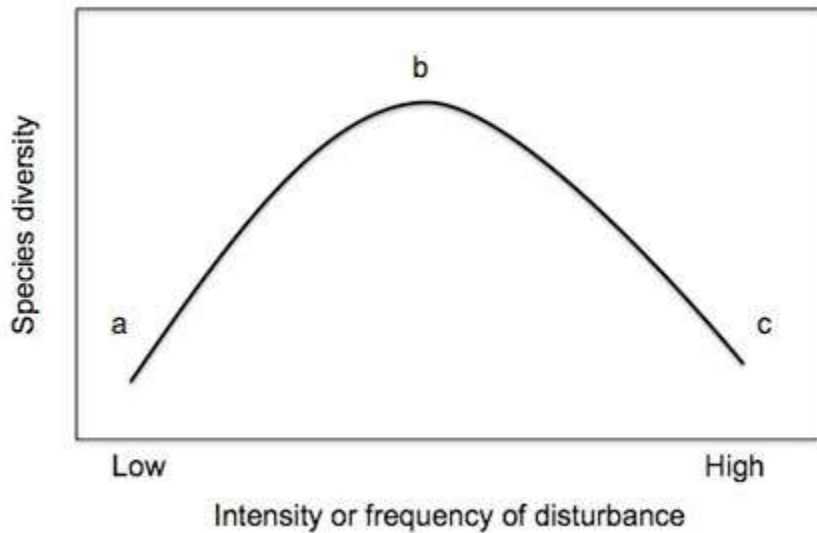


E. O. Wilson



1984





The intermediate disturbance hypothesis (IDH)

Metapopulation theory

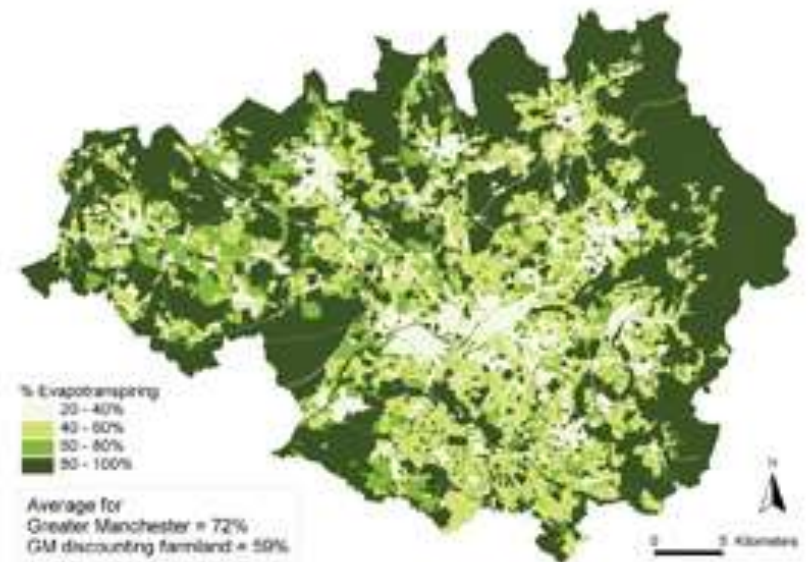
Biodiversity

- Biodiversity encompasses all living things -- plants, animals, and microbes -- and all the places where they are found.

(NERC, 2011a)

- 57% of urbanized Greater Manchester is covered by vegetated surfaces

- (Pauleit & Breuste, 2011)



What is this ...?



Spot the Blue tit (*Parus caeruleus*)

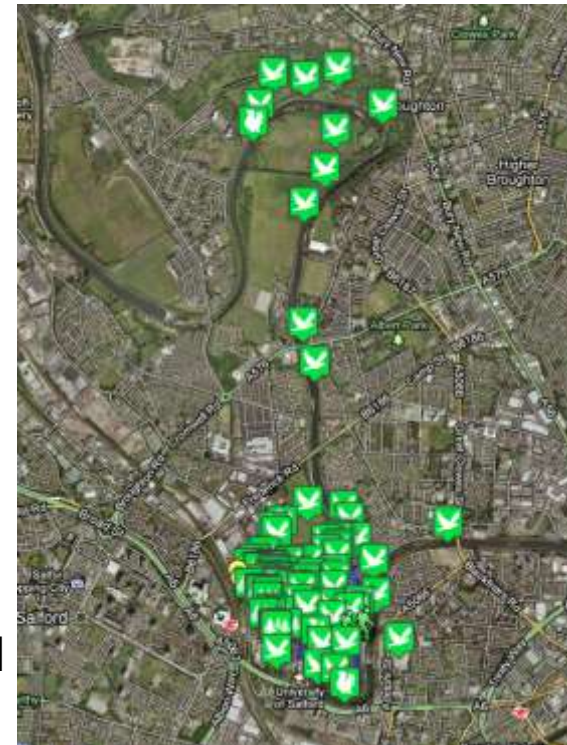


Human Society

- have hunter-gatherer societies
- nomadic pastoral societies
- horticulturalist or simple farming societies
- intensive agricultural societies
- industrial societies, and
- knowledge societies.

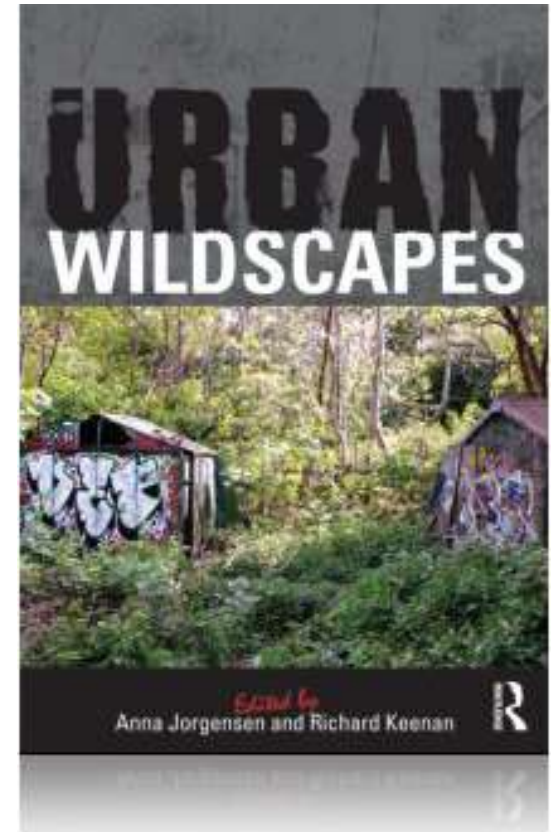
The Frontier Mentality / Empty World View

<http://maps.google.co.uk/maps?hl=en&tab=wl>



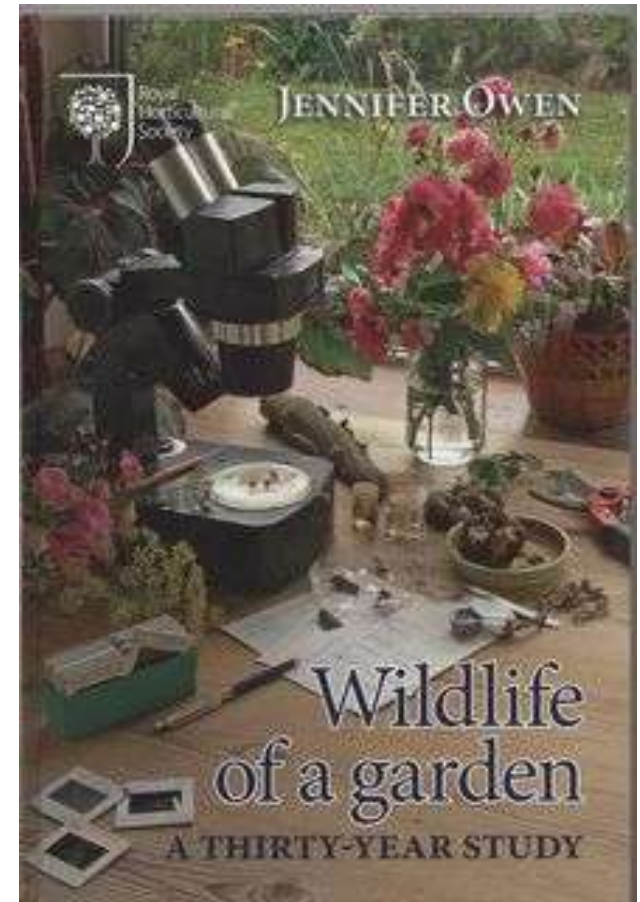
Manifesto du Tiers Paysage, Gilles Clément

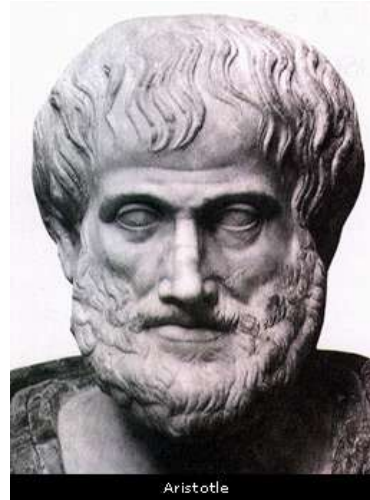
*THIRD LANDSCAPE:
a refuge for diversity
comprising leftover and
transitional spaces,
underdeveloped spaces, and
spaces set aside by
administrative decree. It
constitutes an
undetermined fragment of
the Planetary Garden.*



Wildlife in gardens

- 2,673+ species of plants and animals in a 741m² garden in Leicester.
- (Owen 2010)

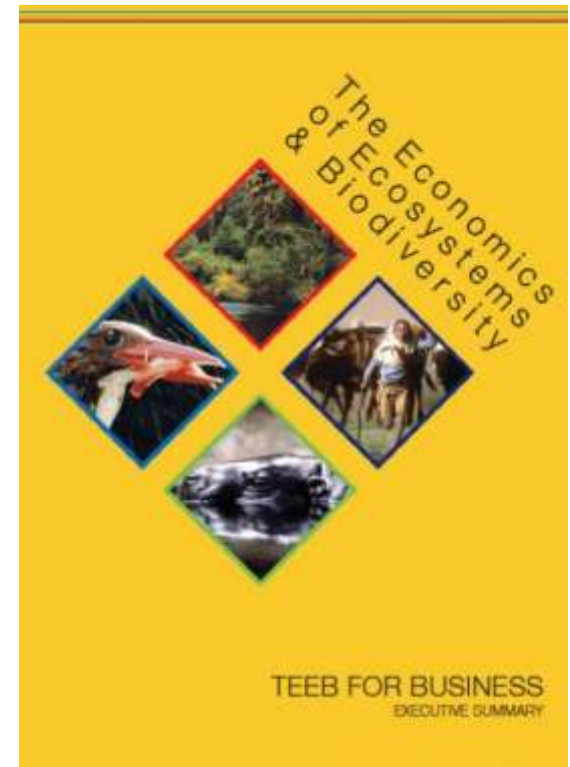
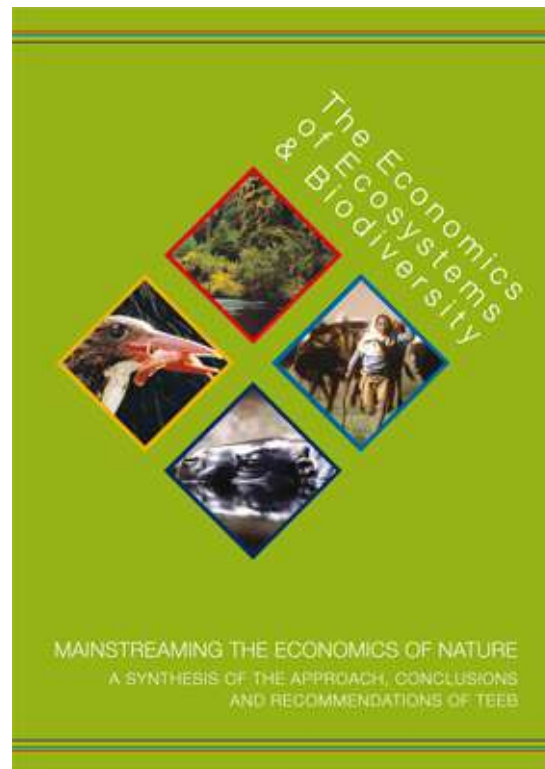
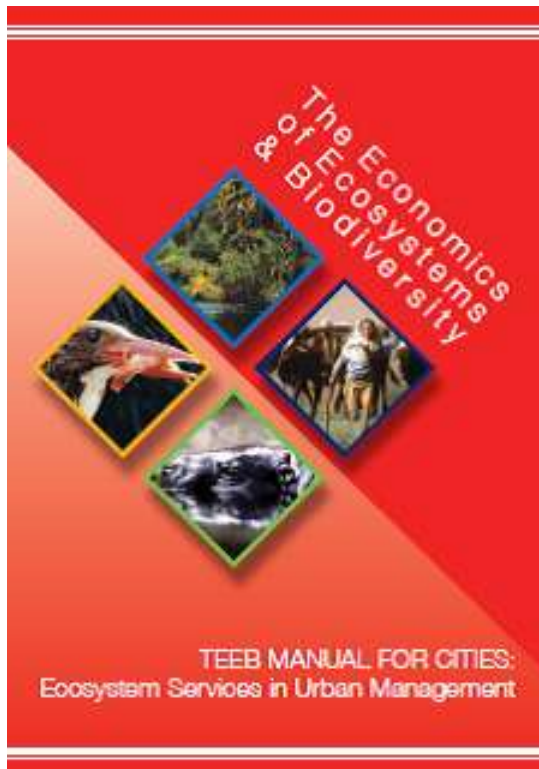




Aristotle (384 BC – 322 BC)

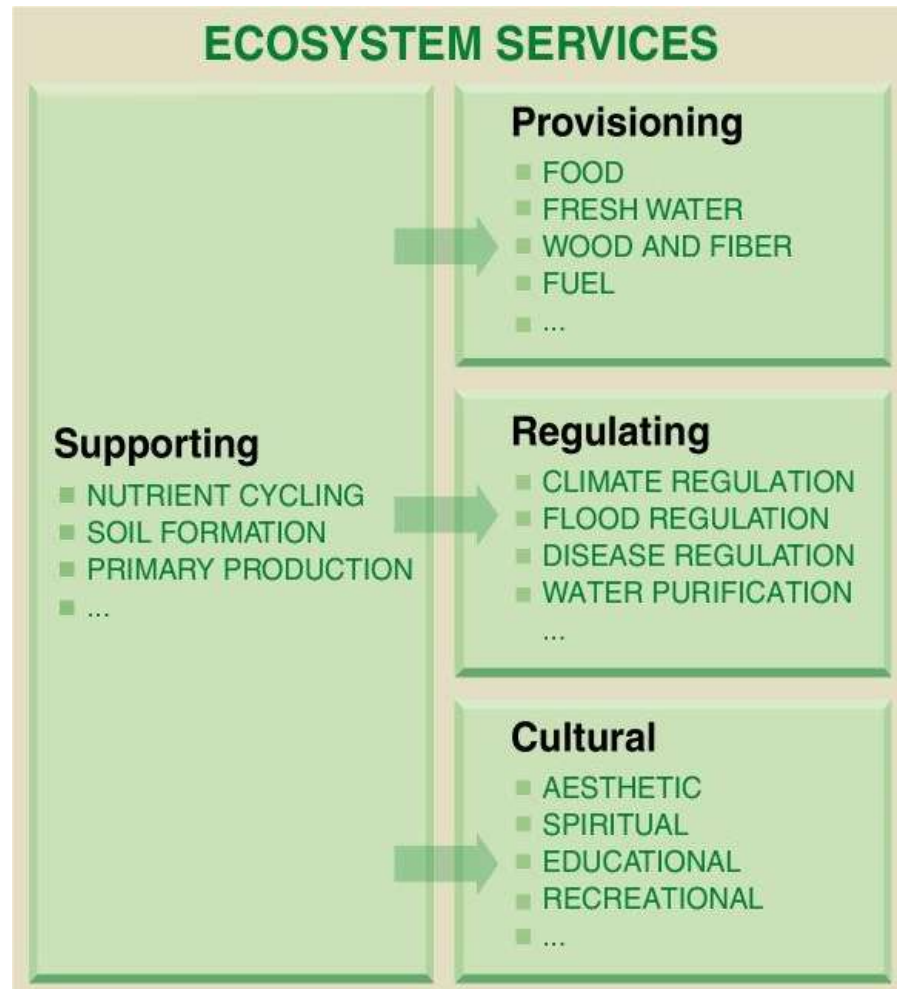
Nature made nothing in vain and that everything had a purpose. Plants were created for the sake of animals and animals for the sake of men. Domestic animals were there to labour, wild ones to be hunted. Thomas, 1984

TEEB



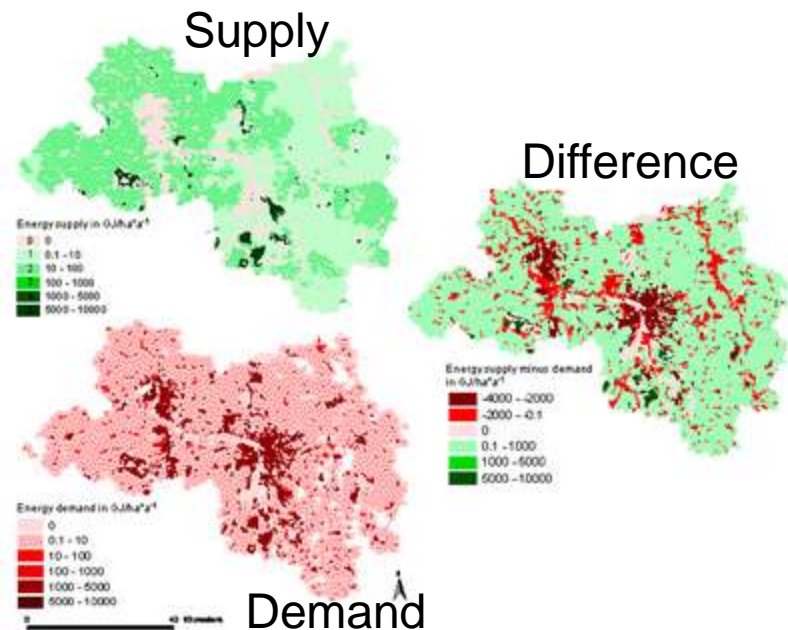
Biodiversity and Ecosystem Services

Millennium Ecosystem
Assessment Synthesis
Report



Ecosystem Services: provision and demand

- Provision and demand may be separated spatially and temporally.
- Need to focus on:
 - Provision site
 - Demand site
 - The link between the two



- (MacDonal & Marcotullio, 2010; Encyclopedia of Earth. Eds. Cutler J. Cleveland, 2010)

Sustainability Paying for Ecosystem Services—Promise and Peril

A. P. Kinzig, C. Perrings, F. S. Chapin III, S. Polasky, V. K. Smith,
D. Tilman, B. L. Turner II

The Millennium Ecosystem Assessment concluded that over the past 50 years, 60% of all ecosystem services (ES) had declined as a direct result of the growth of agriculture, forestry, fisheries, industries, and urban areas. This is not surprising: We get what we pay for. Markets exist for the products of agriculture, aquaculture, and forestry. But the benefits of watershed protection, habitat provision, pest and disease regulation, climatic regulation, and hazard protection are largely unpriced. Because existing markets seldom reflect the full social cost of production, we have incorrect measures of the scarcity of some ES and no measures for the rest.

Science 4 November 2011: Vol. 334 no. 6056 pp. 603-604 DOI: 10.1126/science.1210297

Research Agenda

We face challenges from peak oil, climate change, increased human population size, and from our culture.

We have many unanswered questions about ecosystem function, about the resilience of ecosystems to environmental change

We have much to take on board from psychology and sociology. The dialogue of the 20th Century has been of otherness, and of harm.

Our challenge – to developing a language that is laden with positive values, to provide evidence for the links between ecosystem service provision and demand.

Philip JAMES

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The text of this talk is available at:

<http://usir.salford.ac.uk/18989/>