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Influential publications in ecological economics revisited

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Influential Publications in Ecological Economics Revisited

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Introduction

Follow up of Costanza et al., 2004:

Results

- Broad range of influences on the field of ecological economics
- A field that was quite young
- Prediction: some articles published in the journal were receiving high numbers of citations per year

Why focus on Ecological Economics?

- Comparability, feasibility, representativeness

The dynamic of citation reflects the evolution and the structuration of a field

Has the field matured, and how?

Ma and Stern, 2006:

- Citation analysis
- Ecological economics tends to cite (but not be cited by) general natural science journals
- Influential themes: green accounting, sustainability, and EKC

Castro e Silva and Texeira, 2011:

- Theme analysis
- Influential papers are applied papers

Hoepner et al., 2012:

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Plumecocq, 2014:

- Lexicometric analysis of the abstracts
- The themes of « ecosystem services » and « monetary valuation » are growing



Data, method... and results

Citation analysis : counting citations between 2004 and 2014

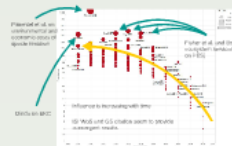
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Influential disciplines in Ecological Economics 2004-2014



Distinction between:

Outward influence → 289 articles 390 references ← Inward influence



Cluster method to characterize influential themes

- Weighting choices
- Clusterization of weighted titles according to the co-occurrence of words



Thank you

Conclusion:

The theme of "ecosystem services" is dominant, but other influential themes are emerging (e.g. input-output analysis)

A field that is getting more applied (maybe look at the influence of reports)

Importance of economic references

Founding publications disappear while other keep being cited



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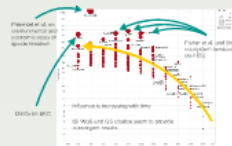
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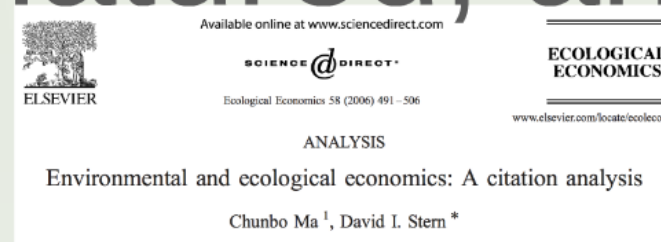
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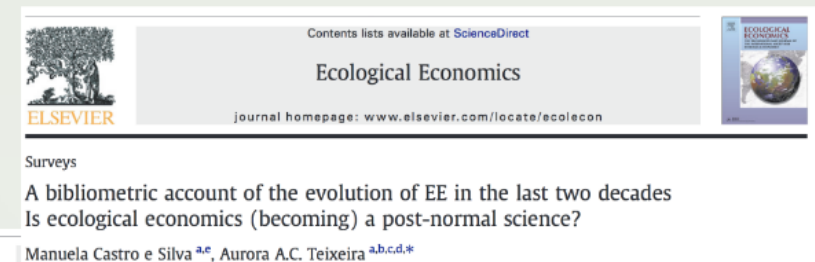
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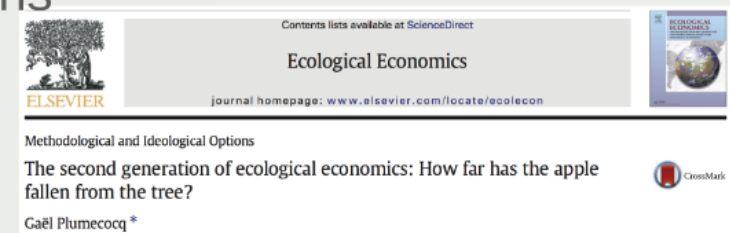
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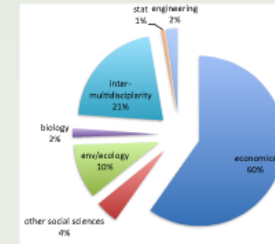


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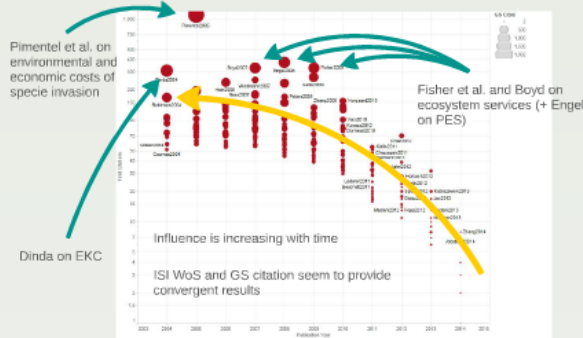
25% of the references most cited are books (vs. 57% before 2004)
27% of influential references are published in Ecological Economics

On the remaining half:

- Economics is the most influential discipline (60% vs. 68%)
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- Biology and other social sciences: 6% (vs. 11%)

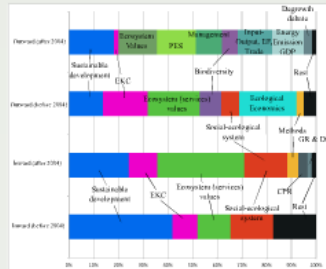
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Sustainable development (valuation, concept, principles) remains an important topic

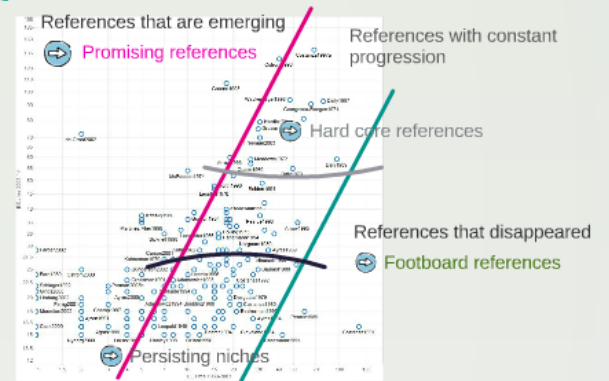
Ecosystem services is increasing both inward and outward



Energy issues (input-output) and emissions are emerging

Method: produced in early period of EE (transdisciplinary), but used as reference in later period (stat)

In the latest period: core ref of EE (GR + Daly), and niche (Degrowth debate)



Cluster method to characterize **influential themes**

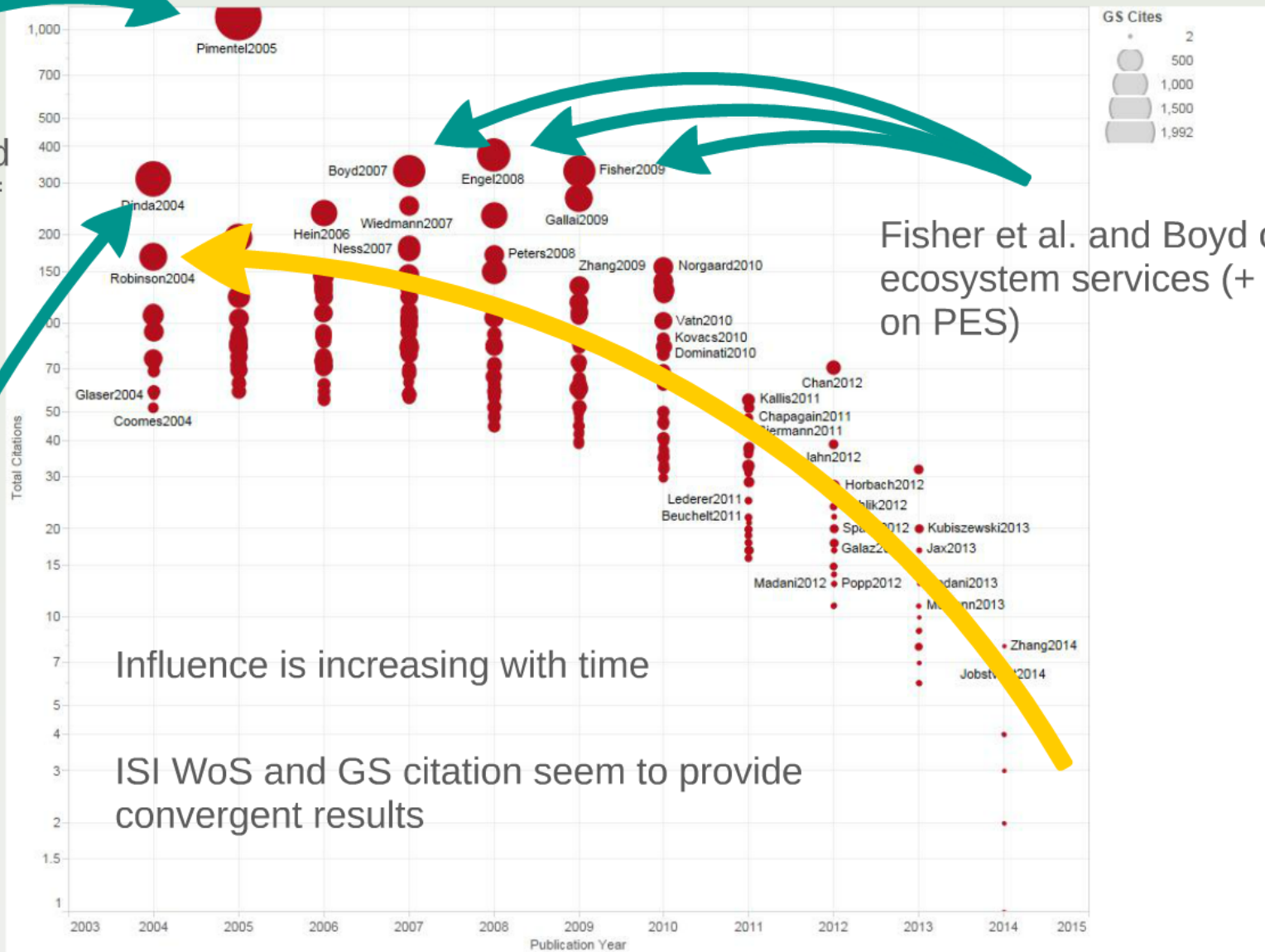
- Weighting choices
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	Outward	Inward
1989-2003	Sustainable development (13%) Ecological economics (13%)	Sustainable development (9%) Ecological Economics (8%) Resource economics (7%)
2004-2014	Ecosystem service (14.5%) Payment service (9%)	Ecosystem service (6%) Ecological footprint (5.5%) Environmental Kuznets curve (5%)

⚠ 5% of the titles: "case" + "study" since 2009

Thank you

Outward influence



Pimentel et al. on environmental and economic costs of specie invasion

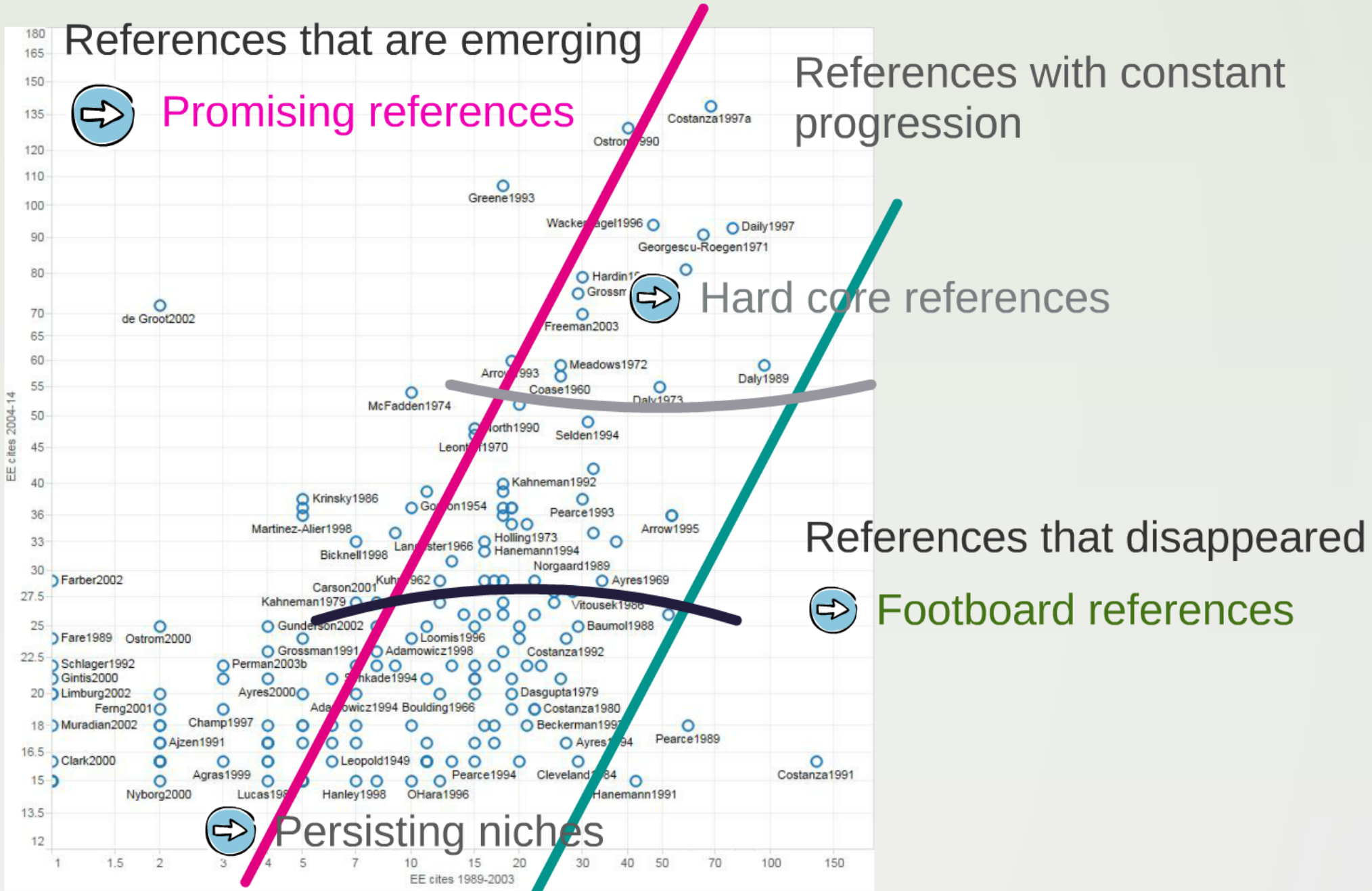
Fisher et al. and Boyd on ecosystem services (+ Engel on PES)

Dinda on EKC

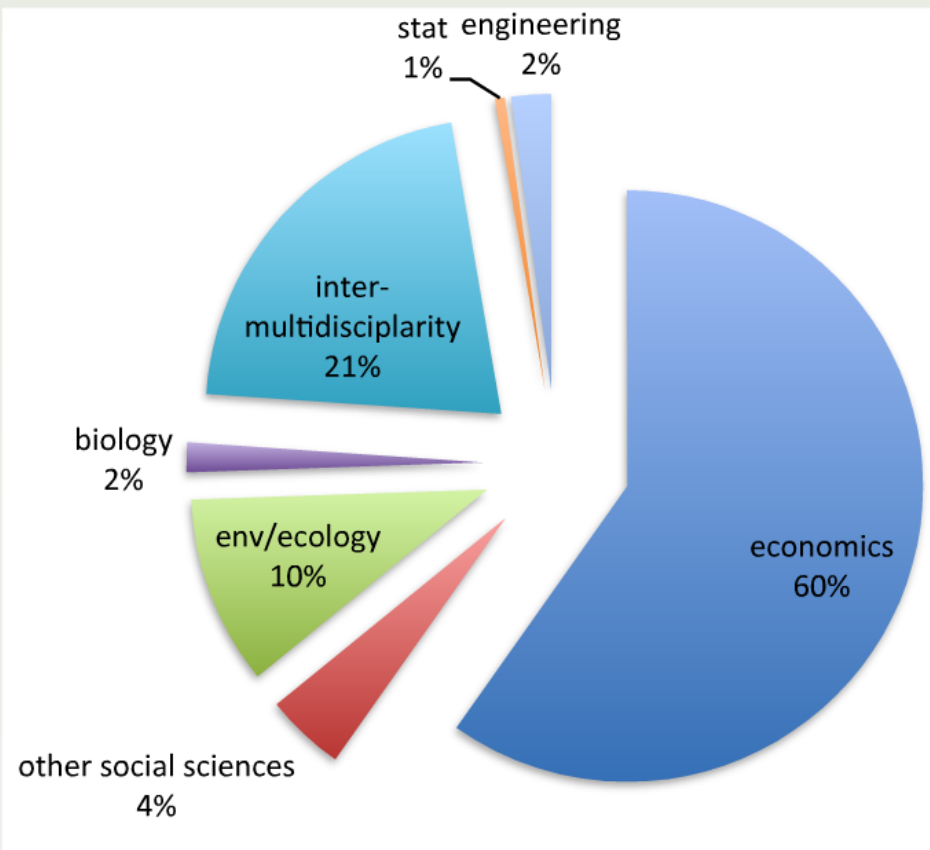
Influence is increasing with time

ISI WoS and GS citation seem to provide convergent results

Inward influence



Influential disciplines in Ecological Economics 2004-2014



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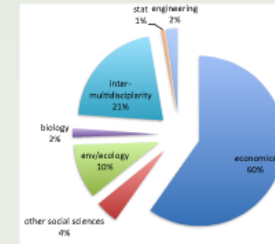
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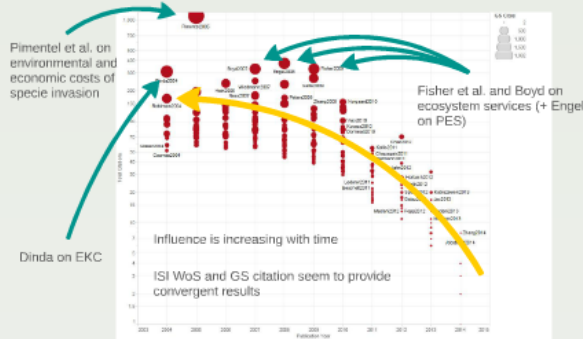
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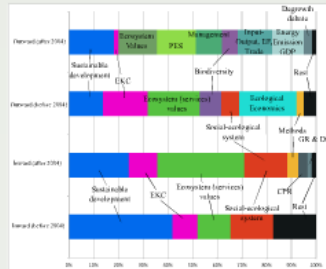
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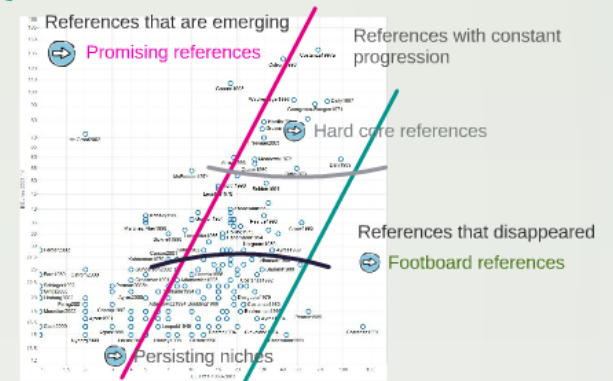
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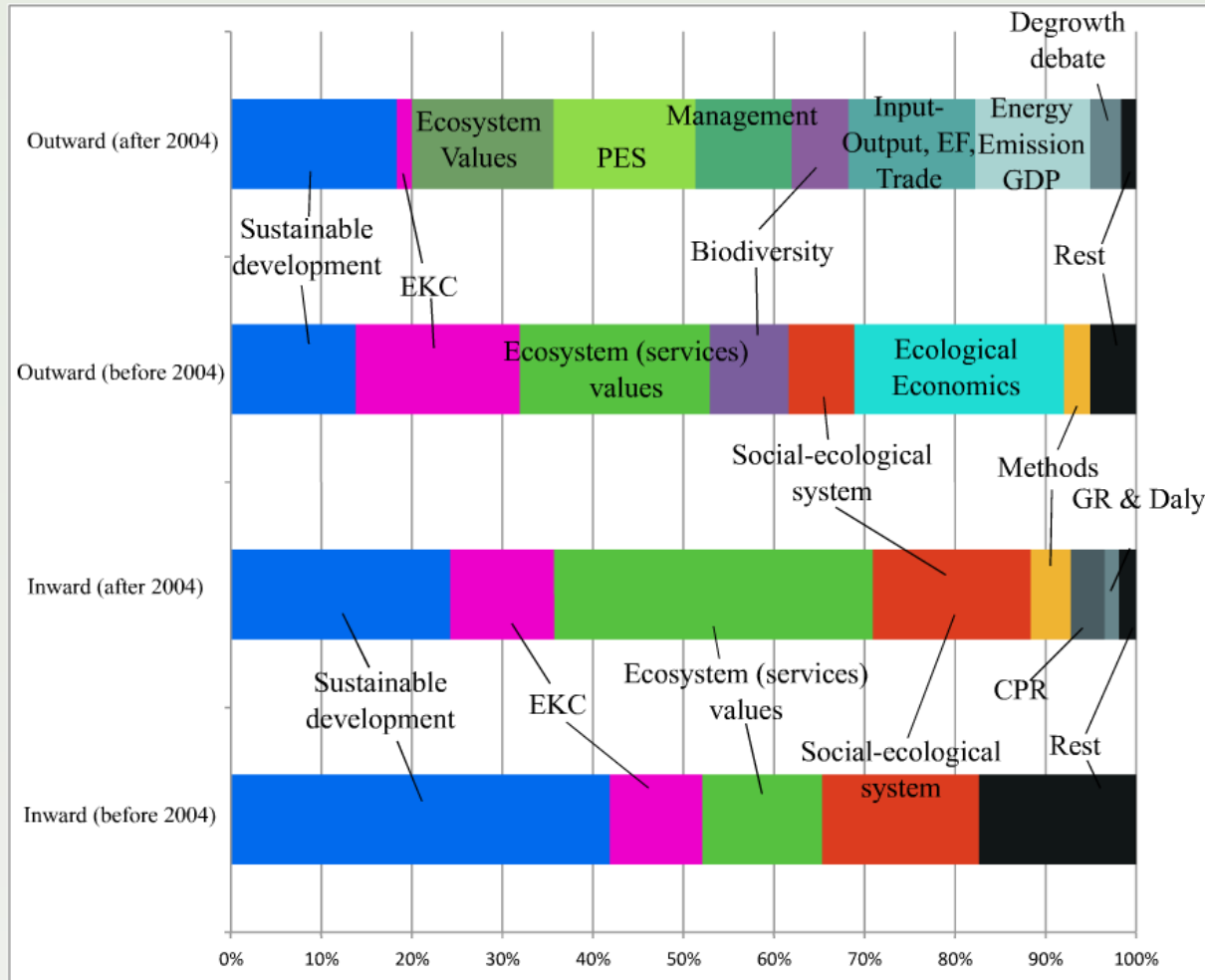
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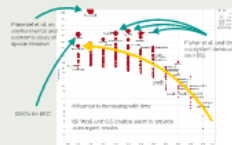
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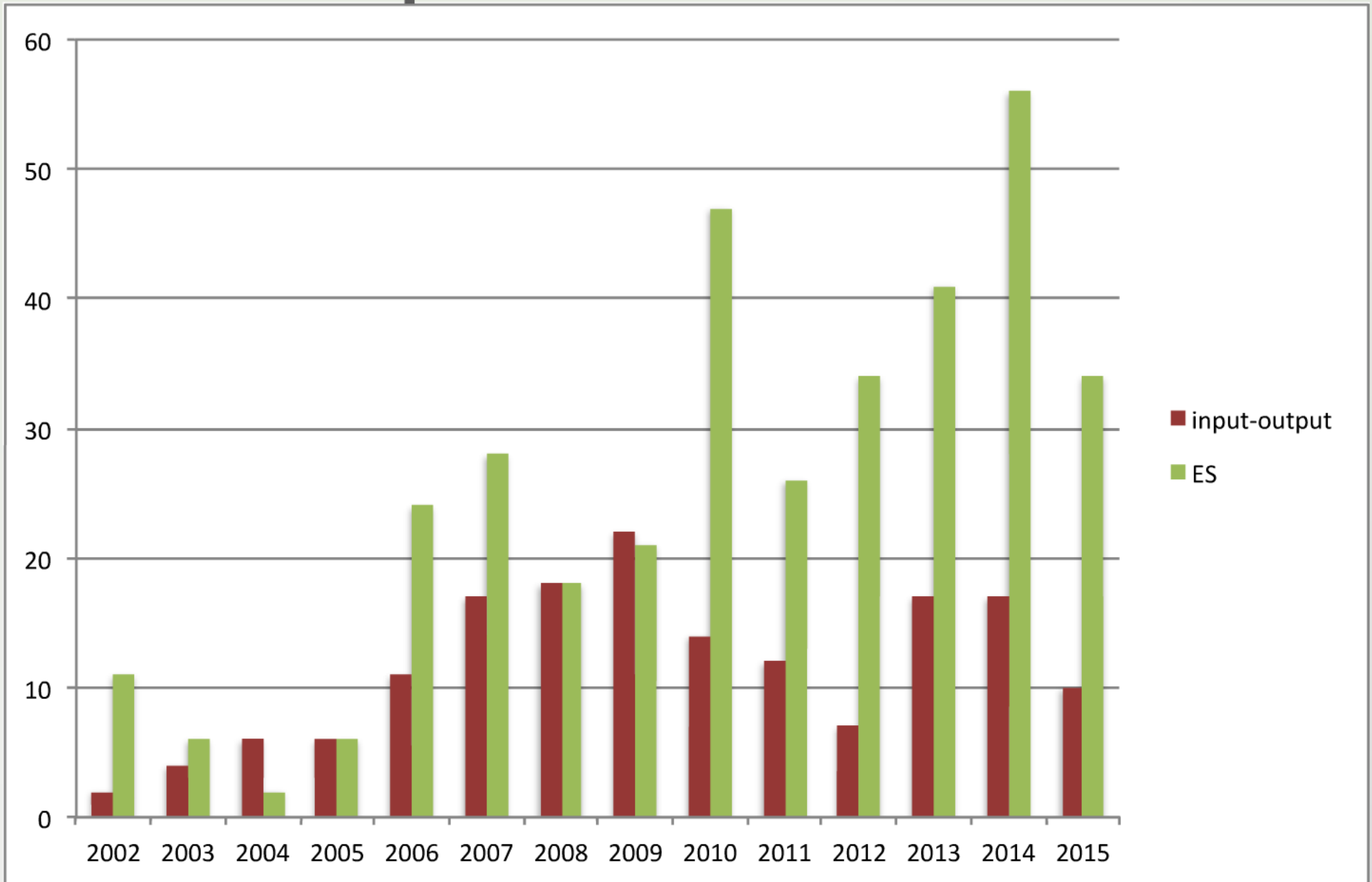
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Total publication in EE



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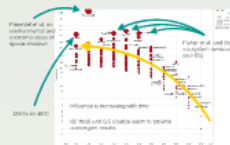
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