Economics and Environmental Policy Research Network

Research Symposium

October 29th – 30th, 2018

Session Notes for Lunch Keynote: Key Themes and Knowledge Gaps in Natural Capital Research

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1. Context of Discussion

This session explored key themes and knowledge gaps in the current state of natural capital research, as seen from the perspective of a research programme currently being undertaken by the Green Growth Knowledge Platform (GGKP's) Natural Capital Working Group.

The keynote kicked off with an overview of the concept of natural capital, defined by the UK Commission on Nature as "the elements of nature that directly and indirectly produce value or benefits to people, including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions". Identifying nature with natural capital and therefore economic benefits is generally problematic for many people. Notwithstanding, there is a need to identify and characterise the benefits produced by these natural elements, identify the natural capital that produces these benefits, find some way of assigning value to those benefits, and identify the links to policy. It is often helpful to structure a discussion of capital using the four capitals model as a heuristic: natural, human, social/organisational and manufactured capital. In this heuristic, there are two entry points from capital to welfare, namely ecosystem services and production processes.

The session then explored weak and strong indicators of sustainability (weak indicators assume broad substitutability between different capitals/elements of sustainability, while strong indicators suppose that the different capitals may be only partial substitutes, or not at all or may even be complements). Examples of strong indicators include planetary boundary/safe operating space metrics, ecological footprint calculations, the Living Planet Index and the Sustainability Gap (SGAP). Weak sustainability indicators typically calculate changes in the total capital stock to show net saving/maintenance of the capital stock, then adding or subtracting quantities from GDP to make it a better indicator of welfare/well-being. This adding/subtracting from GDP has fallen out of fashion in recent years, with a more comprehensive wealth accounting framework being very slow to develop, signaling a need for work in this area.

Finally, the session presented a number of leading research efforts underway that are focused on generating practical new knowledge. E.g. the Wealth Accounting and Valuation of Ecosystem Services (WAVES) Global Partnership Program; the Natural Capital Project; the Natural Capital Coalition; and the Green Growth Knowledge Platform Natural Capital project. This last project is a 5-year project focused on knowledge management, sharing and generation, structured into nine activities in three research areas:

- **Data and Metrics:**
  - Activity 1- scope out a clear set of use cases for natural capital metrics and data
  - Activity 2- scope out a complete set of data, layers, platforms and tools

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    - Activity 3- proposal for improving natural capital metrics and data
- **Natural Capital Valuation**
    - Activity 1- scope out a comprehensive list of natural capital valuation databases, strengths and weaknesses
    - Activity 2- scope out a complete set of natural capital methodologies, their strengths and weaknesses
    - Activity 3- develop criteria for state-of-the-art valuation studies.
- **Integrated Policy Frameworks**
    - Activity 1- scope out the elements of an integrated policy framework for natural capital and green growth
    - Activity 2- scope out a methodology for assessing countries' existing policies and incentives mix
    - Activity 3- design and test a methodology for assessing countries' natural capital needs to meet the Sustainable Development Goals (SDGs)

2. Research Questions Identified

- **Research that explores innovative ways of balancing both the economic growth targets and environmental constraints outlined in the SDGs.**

- **How to differentiate between critical and non-critical natural capital?** There is much uncertainty about where this boundary lies. This is still very much a frontier area of research, with not made much progress having been made on identifying boundaries for the planet.

- **How to think about innovation in human capital and how it interacts with sustainability and natural capital?** Obviously, interactions with institutions affect the relevant accounting values, and these shift over time.

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