

BOOK OF ABSTRACTS

This Book of Abstracts provides a comprehensive overview of the session content and is structured into three main sections:

- I. **Session Description** – an introduction to each session, including its objectives and expected outputs
- II. **Session Program** – a detailed schedule for each session, including speakers and timing
- III. **List of Abstracts** – a complete compilation of all accepted abstracts

I. SESSION DESCRIPTION

ID: T17d

Economist self-help group for a troubled economic system

Hosts:

	Name	Organisation	E-mail
Host (s):	Jomme Desair	Research Institute for Nature and Forest (INBO)	jomme.desair@inbo.be
Co-host(s):	Francesca Magnolo	Research Institute for Nature and Forest (INBO)	francesca.magnolo@inbo.be
	Jeanne Nel	Wageningen University Research (WUR)	jeanne.nel@wur.nl
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	Zsófia Kollányi	Environmental social science research group (ESSRG)	kollanyi.zsofia@essrg.hu
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Abstract:

Transforming our economies for nature and equity is one of the strategies in need of pursuit to achieve a sustainable society. Ecosystem services (ES) have long been promoted as one of the frameworks trying to achieve this through making the connections and interdependencies of nature, society and economy explicit. However, the fundamental structures of the economy, including the very values, desires and needs of humans supposedly driving it as well as power structures behind it, are rarely questioned or regarded explicitly within ES research, calling into question if an actual transformation can be supported by this framework. In this session, we will listen to and discuss with each other to understand our varying ways in which we aim to (not) transform the economy and why. Importantly, we will also reflect on how our different strategies can be complementary or not, and as such, come together as a community of different kinds of economists to increase the impact of our work. The discussions held and connections formed contribute to work at the interface of economy, finance and biodiversity in the Knowledge Exchange Networks (KEN) that are being set up by the BioAgora project for a future Science Service on Biodiversity.

Goals and objectives of the session:

In this interactive session we want to bring together the community of environmental and ecological economists, political economists and ecologists, working in science, policy and practice, to connect, share and learn. We want to foster reflection in this community on the different strategies that are used and their merits, flaws and complementarity. Building on this, we open the discussion on how successful they are in affecting policies and societies, why, and how the impact could be enhanced. As a secondary objective,

this session contributes to creating a Knowledge Exchange Network on economy and finance hosted by the BioAgora project in preparation of the launch of the Science Service for Biodiversity.

Planned output / Deliverables:

A first outcome will be an increased understanding of the different strategies that are pursued to change the economy, as well as the role that ES can or cannot play in this process. A second outcome will be the contribution to the Knowledge Exchange Network on economy and finance of the future Science Service, both in terms of insights we can further build on and people who will take active part in it.

Session format:

This two-hour session is divided into two parts. In the first part, we invite speakers to share in a speed talk their vision of how their work is contributing to transforming the economy and, importantly, how it is not. In the second part, we will foster a discussion with all participants through a fishbowl, reflecting on the different strategies' merits, flaws and complementarity, as well as their impact and how they could be enhanced.

Related to ESP Working Group:

TWG 17 – ES Accounting & Greening the economy

II. SESSION PROGRAM

Room: Lounge

Date of session: Friday 22, May 2026

Time of session: 11:00 – 12:30

Timetable speakers:

Time	First name	Surname	Organization	Title of presentation
11:00 – 11:10	Jomme	Desair	INBO	Presenting the Transformative Change Knowledge Exchange Network
11:11 – 11:20	Laqiqige	Zhu	Trinity College Dublin	Applying Real Options Theory to Farmers' Afforestation Decisions in Ireland
11:21 – 11:30	Stefania	Tonin	University luav	Time, value, and sustainability: exploring how we value future wealth and nature
11:31-11:40	Joseph	Eastoe	University College London	The Interactions Between Natural Capital and Built, Human, and Social Capitals: Lessons from the Genuine Progress Indicator
11:41-12:50	Nico	Polman	Wageningen Social and Economic Research	Property rights are key to investment, sustainable management, and recognizing the multifaceted value of natural capital.
11:51-13:00	Jeanne	Nel	WUR	TBC
13:01-13:10	Francesca	Magnolo	INBO	How to measure progress towards a Nature Positive Economy?
13:11-13:30	Jomme	Desair	INBO	Fishbowl

III. ABSTRACTS

The first author is the presenting author unless indicated otherwise

1. Applying Real Options Theory to Farmers' Afforestation Decisions in Ireland

First author: Laqiqige Zhu

Other author(s): Martha O'Hagan-Luff

Affiliation: Trinity College Dublin

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Farm afforestation is central to climate and biodiversity goals in Ireland, yet farmer uptake remains persistently low despite decades of generous government incentives. This paper investigates the drivers of reluctance through the lens of Real Options Theory, which emphasises the value of waiting under conditions of irreversibility and uncertainty. Drawing on 24 in-depth interviews with Irish farmers, the study demonstrates that hesitation is not a failure of rationality but its expression. Farmers consistently described afforestation as uniquely risky compared to alternative land uses, citing profound irreversibility (legal, financial, and socio-cultural), multidimensional uncertainties (policy, market, biological, and social), and the attractiveness of more flexible alternatives. Together, these conditions elevate the option value of delay, rationalising inaction despite the financial incentives on offer. Theoretically, the paper extends Real Options Theory beyond its traditional focus on price volatility to encompass institutional and socio-cultural dimensions of irreversibility and uncertainty. Methodologically, it demonstrates the value of qualitative inquiry to capture how farmers perceive and assign option value. This study contributes to land-use policy debates by integrating behavioural insights with investment-under-uncertainty theory to explain persistent barriers to afforestation adoption.

Keywords: Afforestation, Land-use decision-making, Real Options Theory, Uncertainty, Irreversibility, Farmer behaviour, Agricultural policy

2. Time, value, and sustainability: exploring how we value future wealth and nature

First author: Stefania Tonin

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This study investigates the estimation of individuals' intertemporal discount rates, a critical component of both public and private decision-making involving costs and benefits distributed over time. In the public sector, discount rates play a central role in cost-benefit analysis, particularly in the evaluation of investments in public goods and long-term policies such as climate change mitigation. Beyond public decision-making, intertemporal preferences also shape individual choices across a wide range of contexts, often requiring the estimation of discount rates that reflect household-level borrowing constraints and transaction costs.

In general, two approaches have been employed to estimate discount rates: (i) an exogenous approach, in which the discount rate is estimated outside the valuation model and subsequently used to compute the present value of future costs and benefits; and (ii) an endogenous approach, in which the discount rate is estimated directly within the valuation model as a parameter that depends on variations in the timing of benefits or payments. This study reports a series of experiments designed to elicit individual discount rates using the exogenous approach, based on a survey administered to a nationally representative sample of 1,000 respondents in Italy. In particular, we used a multiple price list procedure, in which respondents have to choose between two options that differed only in the price they would receive in the present or future. The same experiment was implemented using identical numerical values but framed in two different contexts: one strictly financial and the other related to the creation of marine protected area, and ecosystem services. This design allows us to assess whether respondents' intertemporal preferences vary across domains while holding the underlying monetary trade-offs constant.

Keywords: discount rate; Intertemporal preferences; Marine protected areas; Environmental valuation

3. The Interactions Between Natural Capital and Built, Human, and Social Capitals: Lessons from the Genuine Progress Indicator

First author: Joseph Eastoe

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The Genuine Progress Indicator (GPI) attempts to fix the shortcomings of Gross Domestic product by adding the omitted value and subtracting the omitted costs related to GDP across Human, Built, Social, and Natural Capital. However, since it was first suggested in 1989, GPI has been interpreted and calculated in a variety of ways based on data availability and the preferences of the researchers. As a result, there is no agreed-upon methodology for calculating GPI.

This work conducts a meta-analysis of the GPI literature to identify which components are essential to include. Following this, the research calculates GPI for the most countries possible using public data, creating the most comprehensive research on GPI based on number of countries and number of years included. Using 10 different Natural Capital inputs (some of which would constitute ecosystems services – e.g. cost of wetlands loss), this work maps the stock and flow of natural capital per country over time. Natural capital can then be compared to changes in human, built, and social capital to map how changes in one capital interacts with other capitals. Overall, this research provides an alternative method to standard national account for mapping national wealth, and more accurately maps changes across the four capitals over time.

Keywords: Genuine Progress Indicator, Ecological Economics, Wellbeing Economics, Natural Capital, National Accounts

4. Property rights are key to investment, sustainable management, and recognizing the multifaceted value of natural capital

First author: Nico Polman

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Property rights are key to investment, sustainable management, and recognizing the multifaceted value of natural capital.

Property rights, natural capital, valuation,

Institutions, particularly property rights, are crucial for stimulating investment in natural capital and unlocking its various services to human kind. Natural capital includes soil, air, water, and living organisms. It provides various types of value, including instrumental, intrinsic, and relational. The quantity and quality of natural capital are under considerable pressure worldwide. Property rights are essential for the sustainable management of natural capital and for unlocking all of its values. Investment in natural capital increases when property rights are protected. However, many states do not provide secure property rights for natural capital, nor do they adjust property rights in response to changes in scarcity value. This paper examines the crucial role of institutions, particularly property rights, in promoting investment in natural capital and conserving and restoring its diverse values. We will analyze how specific investments influence the development of these values.

Property rights determine the incentives for sustainably using natural capital and have multiple values. These values may include ecosystem service consumption, conserving intrinsic values, and/or linked to the relationship with nature. Values are often location-specific and context-dependent. Property rights consist of a bundle of rights including the right to use natural capital for ecosystem services, the right to exclude others from access, and a right to transfer resources. This bundle of rights exists on a spectrum, ranging from open access, in which anyone can use natural capital without restrictions or to fully specified private bundle of rights.

Therefore, a robust system of property rights is fundamental to valuing and sustainably managing our natural capital. Such a system involves rights of use, income, modification, exclusion, and transfer.



Property rights encourage investments in location-specific and human capital, which are essential for developing and realizing these diverse values simultaneously.

Keywords: Property rights, natural capital, valuation, investment