A short summary of TERRAE's Intersecting Perspectives on Climate Change: An Economic Approach

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The seminar in a nutshell

This seminar highlighted the value of interdisciplinary dialogue in confronting climate change. While each speaker approached the issue from a different angle—empirical evaluation, public risk governance, regulatory benefit-cost analysis, and ethics—a shared insight emerged: economic tools are indispensable, but they must be adapted to the complexities, uncertainties, and normative choices that climate policy demands.

From Nina Guyon's call for evidence-based causal inference using impact evaluation methods, to Clémence Thébaut's ethical reflections on distribution and intergenerational fairness, the event underscored that effective climate policy requires both scientific rigor and normative clarity.

The presentations also aligned closely with the ambitions of TERRAE, Université PSL's flagship research initiative on transitions and sustainability. TERRAE encourages the co-production of knowledge across disciplines and sectors to support systemic transitions. The tools and concepts discussed during the event—whether econometric modeling, benefit-cost analysis, or distributional ethics—are directly relevant to TERRAE's thematic "hotspots," particularly those concerning climate, health, and inequality.

Speaker interventions

1. Nina Guyon – Paris School of Economics, ENS – PSL

Dr. Nina Guyon opened the event by highlighting how economists can rigorously evaluate the effectiveness of climate-related policies. Drawing on her expertise in empirical methods, she introduced the key concept of "counterfactual": measuring the impact of a policy consists in finding what would have happened in the absence of the policy to get a good comparison point. This is essential, she argued, to really understand how and how much policies manage to change individual behaviors or to address environmental risks. She illustrated how impact evaluation methods could be used to measure the short or medium-run impact of the 'hotspot' programs identified in PSL's TERRAE research initiative. Concluding her presentation, Dr. Guyon advocated for the necessary joint development of structural models to project the long-term effects of policies, extending the short or medium-run causal insights into future scenarios.

2. Véronique Raimond & Karine Fiore – ANSES

Representing ANSES's Social Sciences, Economics & Society Department, Véronique Raimond and Karine Fiore explained how socio-economic analysis (SEA) is increasingly integrated as a tool to help decision-making regarding health and environmental risks management. They emphasized ANSES's commitment to a multidisciplinary, participatory approach that includes both qualitative and quantitative methods. Their work covers a wide range of climate-related issues, from occupational exposure during heatwaves to the spread of vector-borne diseases.

They presented ANSES's structured framework for SEA, including analysis of socio-economic factors in risk exposure, evaluation of disease burden, and controversy analysis. They also addressed how economic evaluations can help navigate uncertainty, inequality, and redistribution issues in climate-related risks and policies. Notably, they stressed the importance of viewing economic valuation and benefit-cost analysis in particular as a process of collective deliberation—one that supports decisions without necessarily producing a single 'net benefit' figure.

3. Lisa A. Robinson – Harvard T.H. Chan School of Public Health

Lisa Robinson provided a comprehensive overview of the U.S. framework for benefit-cost analysis (BCA), particularly as applied to environmental and health regulations. She emphasized that, like any other form of economic evaluation, BCA reflects normative

judgments about how to define "value"—focusing on individuals' willingness to exchange their own income for the outcomes they themselves experience.

Robinson discussed the Biden Administration's estimates of the Social Cost of Greenhouse Gases, which were used to value the impacts of mitigation policies; this value has now been decreased to "zero" by the Trump Administration. She also noted that the Trump

Administration's deregulatory approach may discourage assessment of the benefits of regulations, especially given the challenges of estimating these impacts. She underscored the importance of combining quantitative estimates with distributional and political considerations, arguing that BCA must be complemented by broader reflections on feasibility, equity, and uncertainty.

4. Clémence Thébaut – Université de Limoges & Université Paris-Dauphine

Clémence Thébaut addressed the ethical dimensions of climate policy, drawing on her expertise in health economics and theories of social justice. She highlighted the similarities between ethical challenges in health policy and those faced in climate policy—both require balancing efficiency with fairness and deciding how to distribute limited resources.

She reviewed a variety of justice theories (Rawls, Sen, Fleurbaey) and showed how tools like equivalent income, distributional cost-effectiveness analysis (DCEA), and capability-based metrics like ICECAP could enrich economic evaluation. Thébaut called for integrating ethical concerns into standard benefit-cost frameworks, especially when addressing intergenerational equity, inequality aversion, and intangible environmental benefits.