

# SWG

## Scenarios for Climate-related Financial Analysis





# The “Finance SWG” Charter

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Facilitate discussion of the potential use and development of IAM scenarios for the finance sector, to

- assess financial risk due to climate change (physical risk) and climate policy (transition risk)
- inform about the potential role of finance in low carbon transition pathways

between IAMC members and support dialogue between the IAMC community and the finance community (regulators and private sector)

SWG operates a mailing list. If you are interested to become a member and be added to the mailing list, send an email to

[jae@pnnl.gov](mailto:jae@pnnl.gov), [kriegler@pik-potsdam.de](mailto:kriegler@pik-potsdam.de), [monica.eberle@iamconsortium.org](mailto:monica.eberle@iamconsortium.org)





# Agenda

- 10:50 Welcome, Elmar Kriegler & Jae Edmonds
- 10:55 Report on IAMs and the NGFS
- 11:05 ClimateWorks activities
- 11:10 Bezos activities
- 11:15 Open floor for member reports
- 11:25 Discussions of potential directions for IAMs to inform climate-related financial analysis
  - Meshing with Short term Statistical Macro-models
  - Closing the IAMs (concurrent physical and transition risks)
  - Granularity—spatial, sectoral, markets, policies (the real ones)
  - Other
- 11:35 Adjourn

# Member Reports

# Imperial College – Alex Köberle

## Recent finance-related work

### Projects

**Principal Investigator.** *Finance, Nature and Food Transitions*. Project Funded by NatureFinance Foundation. Multi-institution international team. Duration: June to December 2022. Grant Amount: €85k.

**Principal Investigator.** *Finance-Nature-Climate nexus in the context of Sustainable Development (FiNaClim-SD)*. Project funded by Finance for Biodiversity (F4B) and the UK Natural Environment Research Council (NERC). Supervising one Post-doc. Duration: March to October 2022. Grant amount: £95k

### Publications

- Köberle AC, et al. [Finance, Nature and Food Transitions. Opportunities for the Brazilian agri-food system](#). 2022 Report. NatureFinance, Switzerland.
- Høltedahl P, Köberle A, Wilkins M. (2022) Future of Food Part 3 – Can Markets Save Nature? Investing in Nature to Tackle Biodiversity Loss and Enhance Food Security. Briefing Paper.
- Köberle A, et al. (2021) [Future of Food Part 2: Nature-based solutions and the quest for low-carbon and climate-resilient agriculture](#). Briefing Paper.
- Köberle A.C., et al. [Financial risks to coal value chain from a cost-conscious shift to renewables in India](#). (2022) *Environ. Res. Lett.*

# Climate finance ongoing work

**IAMC**

*Washington, 30 November 2022*



- Cost of financing (WACC)
- Financial stability (macro-financial ABM)
- Debt sustainability (debt model)
- Public finance (in IAMs)
- Financial expectations (theory)



# Sectoral pathway comparison tool

- PIK and IIASA with UNEP-Finance Initiative
- Two years, starting early 2023
- Develop a webtool for user-provided assessment/alignment of sectoral pathways
- Activities:
  1. Mapping of IAMC variables to NACE/GICS/BICS sector definitions
  2. Curation of vetted scenario set for comparison
  3. Development of a comparison methodology (upscaling/downscaling)
  4. Development of user-interface for upload and assessment



## Contribution to IAMC Working Group 2022

Joined Workshop on Experimental Economics and Behavioural Game Theory in May 2022 with „Wirtschaftsweise“ Veronika Grimm

### Main Focus of Research Group Stefan

Combine Scenario Analysis with Special Visual Analytics Techniques

- Define different Risk Measures

Design and evaluate different FONDS-Constitution Concepts

- Integrate Game-Theoretical Properties („epsilon-core“):

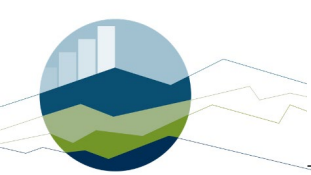
Model Damage versus Climate Impacts

- Determine Optimal Investment Strategies and Pathways („tau-value“)

**see You in person 2023!**

„Maybe I can add a few socio-economic criteria (´ properties`) to one of Your distinguished scenarios...“





# The Climate Finance SWG Report

**IAMC**  
Founded 2007

Facilitates discussion of the potential use and development of IAM scenarios for the finance sector

- Report from major member activities

- NGFS Research consortium—produced 3 generations of scenarios for central banks and supervisory institution
- Supported by philanthropies, spearheaded by ClimateWorks (thanks for support for this session and the IAMC annual meeting in general)

- Heard from two important philanthropic organizations

- Bezos Earth Fund represented by Leon Clarke
- ClimateWorks represented by Seth Monteith
- European Central Bank represented by Mario Morelli

- Heard from SWG member activities

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