

ISIMIP Sectoral Overview Session

Tuesday, 6.6.23

Good Morning!

If you signed the participant list...

EUCRA Viewer



Username: predictia
Password: demo

Scenario-MIP Survey

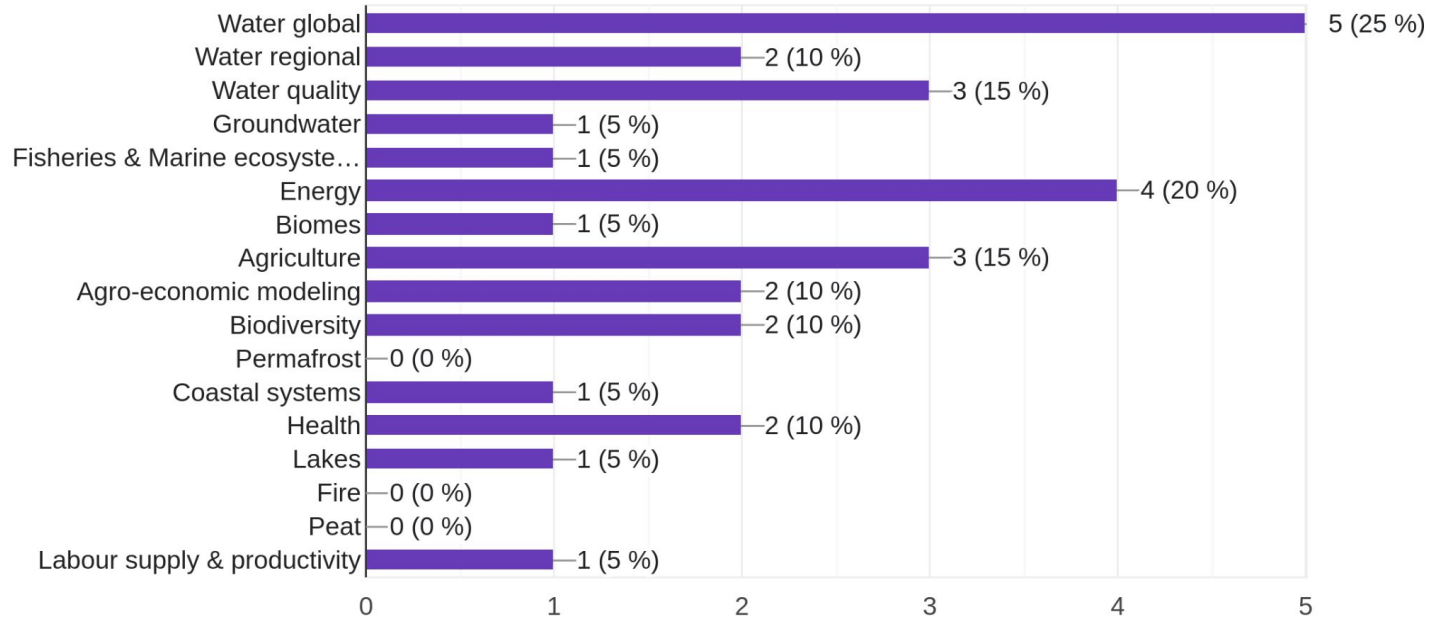


Origami challenge



Every Vote Counts!

1. What sector do you most identify with?



32

ISIMIP3a output data sets

Impact models with ISIMIP3a simulations submitted.

- fisheries: 2
- agriculture: 12
- water (global): 10
- lakes: 2
- biomes: 5
- fire: 3
- permafrost: 1

34

ISIMIP3b output data sets

Impact models with ISIMIP3b simulations submitted.

- fisheries: 15
- agriculture: 12
- water (global): 5
- lakes: 0
- biomes: 2
- fire: 1
- permafrost: 0

ISIMIP Sectors



Water (global)

Simon Gosling
Hannes Müller Schmied



Water (regional)

Valentina Krysanova
Fred Hattermann



Water Quality

Maryna Stokal



Groundwater

Robert Reinecke
Inge de Graaf



Fisheries & Marine Ecosystems

Julia Blanchard (lead)



Energy

James Glynn
Michelle van Vliet
Franziska Piontek



Regional Forests

Christopher Reyer



Global Biomes

Jinfeng Chang
Christopher Reyer



Agriculture Sector

Jonas Jägermeyr
Sam Rabin



Agro-economic Modelling

Hermann Lotze-Campen



Terrestrial Biodiversity

Thomas Hickler
Christian Hof



Permafrost

Eleanor Burke



Coastal Systems

Matthias Mengel
Jochen Hinkel



Health

Veronika Huber
Elizabeth Robinson
Shouro Dasgupta
Joachim Rocklöv



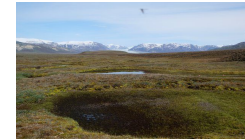
Lakes

Rafael Marce
Don Pierson
Daniel Mercado-Bettín
Wim Thiery



Fire

Chantelle Burton
Fang Li
Stijn Hantson



Peat

Sarah Chadburn
Angela Gallego-Sala
Noah Smith
Michel Bechtold



Labour supply & labour productivity

Shouro Dasgupta

Two metrics

1. Experiment Ratio = number of experiments in sector / total experiments in ISIMIP3 [%]
2. Number of Variables

total experiments in ISIMIP3: 55

total variables: at least 293

ISIMIP Sectors



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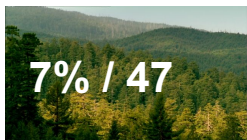
Fisheries & Marine Ecosystems

Julia Blanchard (lead)



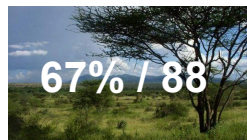
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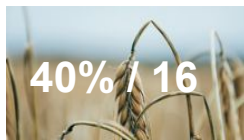
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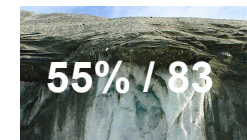
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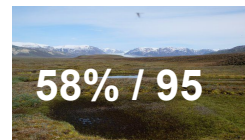
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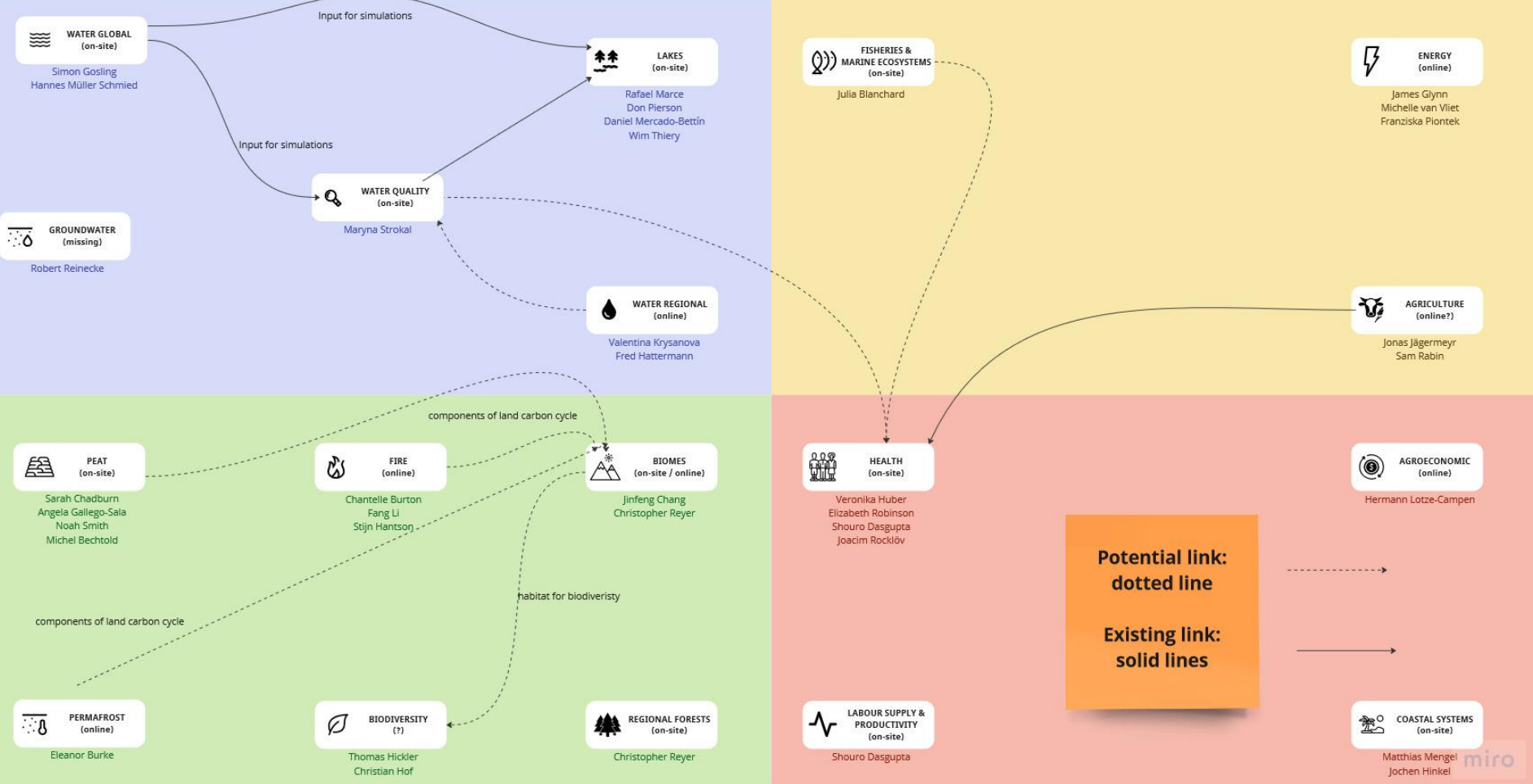
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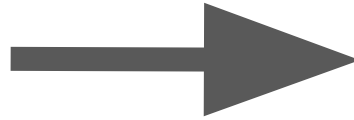
Labour supply & labour productivity

Shouro Dasgupta

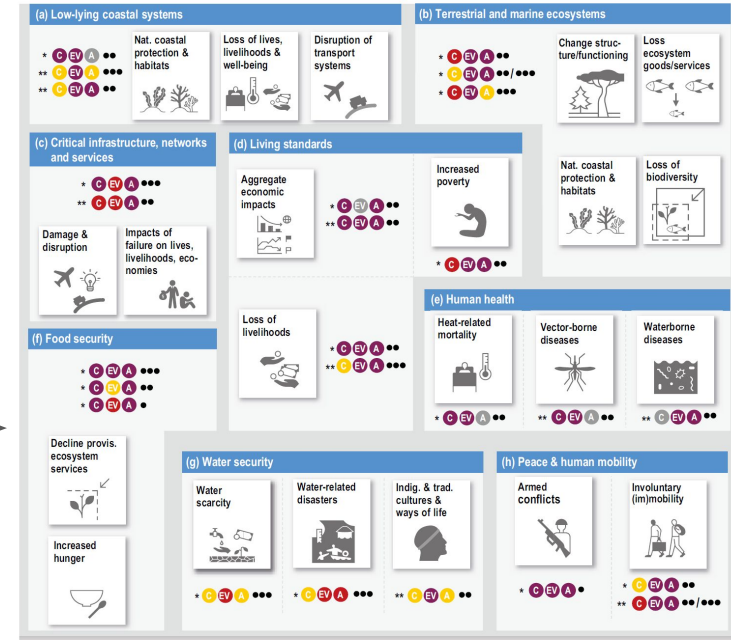
Cross-sectoral interactions



IPCC Representative Key Risks & ISIMIP sectors



Synthesis of the severity conditions for Representative Key Risks by the end of this century



Risk severity conditions by the end of this century

N.B.: only sets of conditions assessed in the chapter are reported

Type and level

- (C) Climate (warming)
- (EV) Exposure and Vulnerability
- (A) Adaptation

- High
- Medium
- Low
- High
- Low

● Not fully assessed

Scope

- Broadly applicable (risks are severe pervasively and even globally)
- Specific (risks are to particular areas sectors or groups of people)

N.B.: for details and examples, see Table SM16.24 in the supplementary information associated with the chapter.

Confidence levels

- High
- Medium
- Low

3 Panels, 20 min each

Aim:

to inform about the ISIMIP sectors and to generate understanding of possible cross-sectoral interactions in relation to the IPCC representative key risks.

Key Questions:

- What is your sector about?
- How does your sector relate to the key risks?
- How is my sector linked to other sectors?

Panel 1

Risk to terrestrial and ocean ecosystems

Transformation of terrestrial and ocean/coastal ecosystems, including change in structure and/or functioning, and/or loss of biodiversity.

Risk to low-lying coastal social-ecological systems

Risks to ecosystem services, people, livelihoods and key infrastructure in low-lying coastal areas, and associated with a wide range of hazards, including sea level changes, ocean warming and acidification, weather extremes (storms, cyclones), sea ice loss, etc.

1. peat (onsite)
2. permafrost (online)
3. regional forests (onsite)
4. biodiversity (online)
5. coastal systems (onsite)
6. biomes (online/onsite)
7. fisheries and marine ecosystems (onsite)

Panel 2

Risk to food security

Food insecurity and the breakdown of food systems due to climate change effects on land or ocean resources

Risk to water security

Risk from water-related hazards (floods and droughts) and water quality deterioration. Focus on water scarcity, water-related disasters and risk to indigenous and traditional cultures and ways of life.

1. agroeconomic (online)
2. agriculture (online)
3. groundwater (onsite)
4. lakes (onsite)
5. regional water (online)
6. water global (onsite)
7. water quality (onsite)

Panel 3

Risk to human health

Human mortality and morbidity, including heat-related impacts and vector-borne and waterborne diseases.

Risk to living standards

Economic impacts across scales, including impacts on gross domestic product (GDP), poverty and livelihoods, as well as the exacerbating effects of impacts on socioeconomic inequality between and within countries.

1. fire (online)
2. energy (online)
3. health including subsectors (onsite)
4. labour supply and labour productivity (onsite)
5. water global (onsite)

Throughout the day

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Origami challenge

