

Workshop on “Opening up Earth Observations for Climate Adaptation”, 8–12 December 2025

Monday, 8 December 2025		
Objective: Setting the Stage & Earth Observations for Adaptation		
Time	Topic	Chair
14:00-15:15	Plenary Session 1: Introductions and scene-setting	Narelle van der Wel
	<ul style="list-style-type: none"> • Introduction to ISSI (Mike Rast) • Convener introductions • Workshop objectives (Ana Durán-Quesada) • The My Climate Risk framework (Regina Rodrigues) • Tour de table: motivations 	
15:15-15:45	<i>Coffee Break</i>	
15:45-17:00	<ul style="list-style-type: none"> • Scene-setting talks (20 min each incl. Q&A) <ul style="list-style-type: none"> - Sarah Connors (Outcomes from recent ISSI Forum on EO for Climate Adaptation, https://forum.issibern.ch/climate-adaptation/) - Aida Diongue-Niang (IPCC and GCOS perspective) - Ted Shepherd (Storylines and conditional attribution) • Plenary Discussion 	Michaela Hegglin
18:00	<i>Welcome Reception - Hallerstrasse 6, 1st floor</i>	

N.B. Suggested readings are provided at the end of this document

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Tuesday, 9 December 2025

Objective: Deep dive into challenges associated with EO; Paper 1 brainstorming

Time	Topic	Chair
9:00-10:30	Plenary Session 2: Challenges in EO usability Panel Discussion (with opening 5 min remarks) Panellists: Cromwel Lukorito, Elinah Kuya, Carlo Buontempo, Chris Merchant, Johanna Nalau	Claudia Notarnicola
	Topics: <ul style="list-style-type: none"> • Impacts of data scarcity • Calibration/validation gaps in data-poor regions • Data consistency and epistemic injustice • Identification and communication of uncertainties • Utilization of different risk attitudes and preferences in adaptation 	
10:30-11:00	<i>Coffee Break</i>	
11:00-11:30	Paper brainstorming/guidance in Plenary Paper 1 objective <ul style="list-style-type: none"> • Introduction: EO's adaptation relevance • Core sections: CIDs, storylines, case studies 	Patricia Nying'uro Mason Majszak
11:30-13:00	Breakout Groups on the content of Paper 1 (see chair and rapporteur assignments at end of document)	
13:00-14:30	<i>Lunch</i>	
14:30 -15:45	Plenary: Breakout group presentations by rapporteurs, followed by discussion	Pier Luigi Vidale
15:45-16:15	<i>Coffee Break</i>	
16:15 -17:30	Plenary: Case study presentations (15 min each incl. Q&A) on use of EO in the context of: <ul style="list-style-type: none"> • Heat extremes (Patricia Nying'uro) 	Sophie Hebden

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	<ul style="list-style-type: none">• Drought (Will Turner)• Rainfall extremes (Paola Arias)• Ice-loss narratives (Julienne Stroeve) Plenary Discussion	
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Wednesday, 10 December 2025

Objective: Philosophical framing of EO challenges; Paper 2 brainstorming

Time	Topic	Chair
9:00 - 10:30	Plenary Session 3: Philosophy & EO intersections Panel Discussion (with opening 5 min remarks) Panellists: Vincent Lam, Julie Jebeile, Anna Sörensson, Douglas Maraun	Rodrigo Estevez
	Topics: <ul style="list-style-type: none"> • Calibration gaps as epistemic injustice • Storylines and epistemic injustice • Beyond data access: Open Science limitations • Entanglement of epistemic and ethical (& justice) issues Discussion questions: <ul style="list-style-type: none"> • How do case studies illustrate Fricker/Lionelli frameworks? • What philosophical tools resolve issues highlighted in paper 1 obstacles? • Do we need a political philosophy of (adaptation) science? 	
10:30-11:00	<i>Coffee Break</i>	
11:00 - 11:30	Paper brainstorming/guidance in Plenary Paper 2 objective <ul style="list-style-type: none"> • Introduction: Epistemic gaps in EO • Core sections: Justice-driven solutions (e.g., co-production, calibration equity) 	Patricia Nying'uro Mason Majsza
11:30 - 13:00	Breakout Groups on the content of Paper 2 (see chair and rapporteur assignments at end of document)	
13:00 - 14:30	<i>Lunch</i>	
14:30 - 15:45	Plenary: Breakout group presentations by rapporteurs, followed by discussion	Ryan Stauffer
15:45 – 16:15	<i>Break</i>	

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16:15 - 17:15	<p>Plenary Session 4: Epistemic injustice</p> <ul style="list-style-type: none"> • Scene-setting talks (20 min each incl. Q&A) <ul style="list-style-type: none"> - David Ludwig (Knowledge system diversity) - Greg Lusk (Values in science, with a focus on policy) • Plenary Discussion <p>Discussion questions:</p> <ul style="list-style-type: none"> - Credibility deficits and Bias in local EO testimony (e.g., Indigenous knowledge vs formal structure). - Normative frameworks for "interpretive resources" (Fricker, Leonelli). - Context and intersectionality (local, regional global + intersecting vulnerabilities) - Co-production of knowledge SDG-aligned calibration equity, IPCC pathways aligned to policy choices (WGIII centred) - Alignment of epistemic and social justice 	Heather Maseko-Msyale
19:00	<i>Workshop Dinner (organised by ISSI): Rosengarten, Alter Aargauerstalden 31b</i>	

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Thursday, 11 December 2025

Objective: Working out detailed outlines for the two papers

Time	Topic	Chair
9:00 - 9:30	Plenary: Recap	Convenors
9:30 – 11:00	Breakout Groups: Paper 1 Writing (see chair and rapporteur assignments at end of document) Groups develop assigned sections (provisional): <ul style="list-style-type: none"> • Group A: EO ↔ CID linkages. • Group B: Storyline methodologies. • Group C: Case study integration. • Group D: Openness limitations. • Group E: Community-defined indicators. 	
11:00 - 11:30	<i>Coffee Break</i>	
11:30 – 12:45	Plenary: Breakout group presentations	Christina Greene
12:45 - 14:15	<i>Lunch</i>	
14:15 - 15:45	Breakout Groups: Paper 2 Writing (see chair and rapporteur assignments at end of document) Groups develop assigned sections (provisional): <ul style="list-style-type: none"> • Group A: Epistemic and social injustice. • Group B: Calibration gaps. • Group C: Storylines. • Group D: Social justice in the use of EO. • Group E: Policy pathways for EO access. 	
15:45 – 16:15	<i>Coffee Break</i>	
16:15 - 17:30	Plenary: Breakout group presentations	Stefan Brönnimann

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Friday, 12 December 2025 Objective: Synthesis of Papers 1 and 2		
Time	Topic	Chair
9:00 - 10:30	Plenary: Bridge the two papers Discussion: <ul style="list-style-type: none"> Clarifying the handoff point between the two papers (what is and is not included in each paper) <ul style="list-style-type: none"> Go over challenges again...What are we missing? Solidify list of challenges/gaps for Paper 1 Solidify “topics or tools” to be discussed in Paper 2	
10:30 – 11:00	Coffee Break	
11:00 – 13:00	Breakout Groups: Paper writing Paper 1 Writing <ul style="list-style-type: none"> ... Paper 2 Writing <ul style="list-style-type: none"> Introduction: Epistemic gaps in EO. Core: Outline the desired “toolbox” - Justice-driven solutions (e.g., co-production, calibration equity). Policy pathways: SDGs, IPCC <i>Potentially...</i> Suggesting new frameworks/methodologies that are consistent with previous guidelines 	
13:00 - 14:30	Lunch	
14:30 – 16:00	Final Plenary: Closing remarks and next steps <ul style="list-style-type: none"> Wrap-up what has been done during the week Assigning outstanding tasks Set deadlines 	
End of Workshop		

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Breakout groups

Tuesday (paper 1, overall)

	A	B	C	D	E
Chair	Vidale	Connors	Diongue-Niang	Shepherd	Durán Quesada
Rapporteur	Tosic	Ghoms	Kpaka	Hunt	Wang

Wednesday (paper 2, overall)

	A	B	C	D	E
Chair	Arias	Kuya	Nying'uro	Sörensson	Maraun
Rapporteur	Turner	Brönnimann	Massot	Estevez	Greene

Thursday (paper 1, by topic)

	A	B	C	D	E
Chair	Rast	Lukorito	Stroeve	Buontempo	Merchant
Rapporteur	Van der Wel	Stauffer	Notarnicola	Hegglin	Hebden

Thursday (paper 2, by topic)

	A	B	C	D	E
Chair	Lam	Jebeile	Ludwig	Lusk	Nalau
Rapporteur	Majszak	Maseko Msyale	Kimani	Greene	Khumbanyiwa

Suggested readings:

Anderson, K., et al. (2017). Earth observation in service of the 2030 Agenda for Sustainable Development. *Geo-spatial Inform. Sci.*, <https://doi.org/10.1080/10095020.2017.1333230>

Baylis, K. et al. (2025). Five Lessons for Closing the Last Mile: How to Make Climate Decision Support Actionable. *Earth's Future*, <https://doi.org/10.1029/2024EF005799>

Eicken H, Danielsen F, Sam JM, Fidel M, Johnson N, Poulsen MK, Lee OA, Spellman KV, Iversen L, Pulsifer P, Enghoff M. Connecting Top-Down and Bottom-Up Approaches in Environmental Observing. *Bioscience*. (2021) Apr 28;71(5):467-483. doi: 10.1093/biosci/biab018. PMID: 33986631; PMCID: PMC8106998.

Fricke, M. (2007). *Epistemic Injustice: Power and the Ethics of Knowing*. Oxford University Press, <https://doi.org/10.1093/acprof:oso/9780198237907.001.0001>

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Hegglin, M.I., et al. (2022). Space-based Earth observation in support of the UNFCCC Paris Agreement. *Front. Env. Sci.*, <https://doi.org/10.3389/fenvs.2022.941490>

Leonelli, S. (2023). *Philosophy of Open Science*. Cambridge University Press, <https://doi.org/10.1017/9781009416368>

Lloyd, E.A. & Shepherd, T.G. (2023). Foundations of attribution in climate-change science. *Env. Res. Clim.*, <https://doi.org/10.1088/2752-5295/aceea1>

Popp, T., et al. (2020). Consistency of Satellite Climate Data Records for Earth System Monitoring. *Bull. Amer. Meteor. Soc.*, <https://doi.org/10.1175/BAMS-D-19-0127.1>

Radeloff, V.C., et al. (2024). Need and vision for global medium-resolution Landsat and Sentinel-2 data products. *Remote Sensing Env.*, <https://doi.org/10.1016/j.rse.2023.113918>

Rodrigues, R.R. & Shepherd, T.G. (2022). Small is beautiful: climate-change science as if people mattered. *PNAS Nexus*, <https://doi.org/10.1093/pnasnexus/pgac009>

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