

Arqus Winter School 2021: Rethinking climate risk

Day	Monday Feb 22nd	Tuesday Feb 23rd	Wednesday Feb 24th	Thursday Feb 25th	Friday Feb 26th
Theme	Rethinking climate risk and science	Mapping the natural causes of climate risk	Making connections: climate risk and social transformation	Scenarios of responding to climate risk	Climate risk and European Citizenship
Morning plenary	<p>0900–1200 (CET)</p> <p><i>Official welcome to the Arqus Winter School</i></p> <p><i>A short round of introductions from all seven ARQUS institutions</i></p> <p>Framing the winter school: studying sustainability and citizenship in an uncertain world Jakob Grandin, University of Bergen</p> <p>European citizenship, environmental challenges and populist discourse in perspective Pietro De Perini, University of Padova</p> <p><i>break</i></p> <p>Transdisciplinary ways of studying climate risks (double lecture) Scott Bremer (Bergen) & Silke Beck (Leipzig)</p> <p>Moderated discussion</p>	<p>0900–1100 (CET)</p> <p><i>Intro to the day's theme by moderator</i></p> <p>High Risks of Climate Change (especially on hot drought) Douglas Maraun, University of Graz</p> <p>The impact of climate change on the risk of flooding Andrea D'Alpaos, University of Padova</p> <p>Climate change and habitat shifts. Who are the winners? Alius Ulevičius, Vilnius University</p> <p>Global warming in the coastal strip: from the origin to the impact mitigation interventions assessment of scenarios Presenter: TBC – University of Granada</p> <p>Moderated discussion</p> <p>Brief intro to the workshops</p>	<p>0900–1100 (CET)</p> <p><i>Intro to the day's theme by moderator</i></p> <p>How climate risks emerge from connections between natural and social worlds (double lecture) Scott Bremer (Bergen) & Silke Beck (Leipzig)</p> <p>Individualisation of risk and implications for future climate risks Christian Kuhlicke, University of Leipzig</p> <p>Undoing the unique temporality of the Anthropocene” (and of the carbon market). Timescapes vs. timescales Sacha Loeve and Bernadette Bensaude-Vincent, Lyon University</p> <p>Moderated discussion</p> <p>Brief intro to the workshops</p>	<p>0900–1100 (CET)</p> <p>Disruptive, top-down policy mixes for rapid decarbonization Alfred Posch, University of Graz</p> <p>Bottom-up grassroots initiatives for climate change mitigation and adaptation Ilona Otto, University of Graz</p> <p><i>Panel Discussion:</i> Governing climate risk a) Stina E. Oseland, climate director, Bergen Municipality b) To be identified, EU c) Alfred Posch/Ilona Otto, University of Graz <i>moderated by: to be confirmed</i></p> <p>Brief intro to the workshops</p>	<p>0900–1100 (CET)</p> <p><i>Arqus Forum on European Citizenship 2020:</i> Changing conceptions of citizenship and collective identity in the context of climate change Pawel Karolewski, University of Leipzig</p> <p>Shooting for the stars: keys to enhancing citizenship to mitigate climate risks Ozana Olariu, University of Granada</p> <p>The law of climate change and public/citizen participation Isabelle Michallet, Lyon University</p> <p>How Fairness Considerations are Relevant for Effort-Sharing in Responding Lukas Meyer, University of Graz</p> <p>Moderated discussion</p> <p>Brief intro to the citizenship workshop</p>
Workshops	<p>11–15 (CET): workshop and lunch</p> <p>Local group work: Creatively introducing each city and its climate risks.</p>	<p>11–15 (CET): local workshop and lunch</p> <p>Interpreting maps of climate risks: - What natural processes? - How are these processes translated to risk maps? - What are the uncertainties?</p>	<p>11–14.30 (CET): local workshop and lunch</p> <p>Local group work: Systems mapping: - what social, economic, cultural and environmental processes combine in 'creating risk'</p>	<p>11–15 (CET): local workshop and lunch</p> <p>Plotting future scenarios</p>	<p>11.00–14.30 (CET):</p> <p>Inter-university workshop: Engaging with climate risk - European citizenship in a turbulent future</p>
Afternoon plenary	<p><i>none</i></p>	<p>15–16 (CET): In plenary: students share (i) their creative introduction to risks in their city; and (ii) one map describing processes behind these risks. <i>Evening: Virtual speed dating.</i></p>	<p>14.30–16 (CET): Communication and dissemination workshop</p>	<p>15–16 (CET): In plenary, students share their (i) systems maps and (ii) scenario work: Climate risk quiz: Fun quiz on risk facts from around Europe.</p>	<p>14.30–15.30 (CET): Ending of the winter school</p>

Infrastructure:

Communication platforms:

Plenary sessions – including the lectures and afternoon plenaries – will be run on Zoom, administered and moderated by the University of Bergen (UiB), using the UiB license.

Communication between students within each university will be the responsibility of the university. We are still planning for each universities six students to meet physically in a class-room on campus, and join the plenary sessions via a large screen. Some universities might be prevented by pandemic measures from convening physical groups of students and will need to find their own solutions for facilitating communication between their six students.

File sharing platform:

Course resources and recorded lectures will be shared on the Graz-based Moodle of the challenge-based learning programme.

The plenary lecture sessions:

Plenary lecture sessions will last between 2-3 hours, starting at 09.00am each day. The sessions will combine lectures, student discussion in breakout groups and a moderated plenary discussion between students and the lecturers.

Lectures will be streamed on Zoom and last for 15 minutes, with 10 minutes for questions and for transitions between lectures. Lectures will be moderated by the University of Bergen, responsible for time keeping and collecting questions.

All lectures will be recorded, and published on the course's Moodle.

At the end of the lecture session, the moderators will lead a 20-minute moderated discussion on the topic.

Suggested amendments:

- De Perini lecture: how does citizenship take shapes around environmental challenges?
- All four lectures on Tuesday: can we relate these talks to down-scaling of climate projections, translating projections to maps and especially ways of interpreting these maps?
- Kuhlicke lecture: how are risks 'created' in these different population groups?
- Loeve lecture: how are climate risks mediated by time scales? (perhaps less on carbon markets?)
- Posch/Otto lectures – can we link to how people develop strategies of action for projected future conditions?

Workshops:

Please note we will provide detailed workshop instructions and resource requirements in the first week of December. We are also deliberately designing activities in a way that they can be adjusted to changing conditions, so that if groups cannot meet physically, they can do some work individually and meeting virtually.

Monday: Introducing climate risks in each city

Groups at each University will be expected to have read *existing reports on climate risk management for their city* (see below) in advance of the course. Their first group task is to creatively introduce their city and its climate risks as represented in reports by institutions responsible for managing these risks. This could be through flash cards (i.e. Granada) or through a short (unprofessional) film, a photo montage, a recorded interview, a power-point...Groups and universities have full flexibility.

Tuesday: Interpreting climate risk maps

Groups at each University will be supplied with a portfolio of maps downscaling climate projections and translating these to maps of climate risk. They will have a targeted session interpreting these maps according to key questions about (i) how climate projections are downscaled; (ii) translated to risk maps; (iii) what natural processes are behind risks; (iv) and how to critically read maps – uncertainties for example. We will have experts available on Zoom to help groups with their interpretative work. Groups select one map relevant to describe climate risks in their city, and present this in plenary.

Wednesday: Systems maps of elements connected in creating risks

Groups will be introduced to rapid systems mapping approaches and asked to draft a systems map (of linked nodes and arrows, Wikipedia's entry on fuzzy cognitive maps gives a visual example) showing how one prominent climate risk in their city is 'created' through diverse connected elements. For example, how coastal development pressure, in combination with weak regulation, and strong developers, and sea-level rise and extreme events combines to assemble coastal flooding risk. They will then identify the "leverage points", ie. the most pressing parts of the system where an intervention would be most effective. This will require desktop research and creative thinking. Through the exercise, students will be made aware of their own "cognitive maps" and "mental models" of how societal and natural trends interact to create climate risk, and will be able to negotiate these ideas with those of other team members in order to create a shared understanding of the system.

Thursday: Scenario mapping

Groups be introduced on how to use to a simple, well-established qualitative scenario method to map and plan for key future uncertainties related to climate risk. Using the four quadrant-scenario method - also known as "Shell scenarios" - students will identify important and uncertain future trends and then create four different scenarios that explore how the future might play out depending on these trends. They will then use these scenarios to "back-cast" strategic action in the present. This workshop will draw on the systems mapping exercise, and require desktop research and creative thinking.

Friday: Inter-University workshop Engaging with climate risk - European citizenship in a turbulent future

In this workshop, students will synthesize the results from the preceding day's workshops and relate climate risk to European citizenship and their own personal agency. The workshop starts with an individual reflexive walk, where participants will individually reflect on the key insights they have gained during the week and how that relates to engaged European citizenship and personal agency. After the walk, participants will reconvene in inter-university groups (1 person from each university) to collaboratively identify 5–10 principles of engaged European citizenship that are meaningful to them. These principles will later be shared with the other groups.

After the workshop, students will get time to meet in their university groups in order to compile the "maps" that they have created during the winter school and send these to the Winter School coordinators.

Winter School Output

The outputs from each workshop will be compiled in a rough Atlas/Notebook that will be made available online.

Material:

All materials will be shared on the course Moodle. Some resources will be common, and some will be contained in folders specific to each city/case, but all resources will be open to all course participants.

Reading corpus:

All lecturers are asked to suggest one English publication relative to their talk, and accessible for under-graduate students from across very different disciplines and backgrounds. This can be a scientific paper or chapter, but it does not have to be. These readings need to be identified as soon as possible and made available on the Moodle well in advance.

Existing reports on climate risk management in each city:

Existing reports on climate risk management will be made available for each city, as essential reading in advance of the course. This will be the current understandings of climate risk steering the institutions responsible for managing climate risk in each city, and could be a municipality plan, or other government agency report, or NGO strategy document. These documents can be in the local language.

Portfolio of scientific maps relevant to downscaling climate risk projection:

A collection of the scientific maps that are used by institutional decision-makers, or scientific advisory bodies, to determine actual and potential climate risks in each city. This will typically, but not exclusively, include maps downscaling projected climate change to local scale, in climate services or COPERNICUS data.

Workshop templates and guidelines:

The UiB will provide detailed guidelines on each activity for the lecturers and course facilitators at each university by early December 2020. The UiB will also provide English guidelines and resources for students by the end of January 2021, and these will be shared in a Moodle folder. UiB will also provide training for workshop facilitators.

Lectures:

Recorded and shared on the Moodle