

## BRIDGING DIFFERENCES THROUGH CLASSROOM SIMULATIONS: TEACHING GLOBAL ENVIRONMENTAL GOVERNANCE TO INTERNATIONAL AND INTERDISCIPLINARY PHD STUDENTS

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### The challenge of teaching and learning across disciplines

The course Global Environmental Governance Today–Actors, Institutions, Complexity is an interdisciplinary PhD course and has welcomed participants from a wide range of disciplinary backgrounds with equally varied prior knowledge on environmental governance practices and theories. Thus, every year, participants include students who are not familiar with international relations theories such as realism, institutionalism, or constructivism, as well as PhD candidates in political science who are entirely familiar with such theories and corresponding concepts. We aim to provide an inspiring course for all of them that provides them with new ideas and insights on global environmental governance with its key actors, institutions and processes.

### Pedagogical method: Combining lectures, seminars and simulations

We have chosen a teaching approach where we combine three formats: information-intensive lectures, participatory seminars, and simulation exercises. The *lectures* are classical, frontal types of sessions in which the readers' theoretical and conceptual knowledge is offered in an accessible way for different disciplinary backgrounds and discussed with the participants. In the *seminars* we focus on the students' PhD projects and their links to questions of environmental governance. As our third element, the *simulation exercises* pursue an experiential learning approach (Brock and Cameron 1999). Here we elaborate on the design of two simulations: a gamified and alternative approach to negotiations inspired by Bruno Latour's Politics of Nature (2004) and Earth Summit type negotiations.

### Politics of Nature–the board game

The aim of Politics of Nature (PoN) (Raffn and Lassen 2021) is to catalyze a reflection on current political systems by subjecting them to an alien take on politics; one inspired by Latour's eponymous book (2004). It is a game play in which players experience a different take on what exists politically (cf. Simon 2020). The players will have to become ambassadors of beings that normally only enter the political space as objects–not subjects. Not only to express yet another angle, but to clarify various stakes of those with and without voices in decision making, for ex-

ample of non-humans and how they influence, depend on and need one another. PoN exists in the Pluriverse - a place where everything that can be imagined and attributed a name exists. It is an iterative political and community-building process shaped as a board game and can be—as we did in 2020 - augmented with a digital interface.

The four stages that comprise a round of PoN were quickly outlined. These are 1) identification and representation, 2) association, 3) ideation, and 4) resolution, with each stage being limited by a certain time and/or a predefined number of actions allowed to each participant. The Pluriverse expansion by *identification* of beings is iterative and mediated by the participants, who must become ambassadors of beings identified in stage 1, in order to articulate their associations with other beings later on. In stage 2, as the borders of PoN unfreeze, the ambassadors have a chance to move beings from the Pluriverse and on to PoN by providing a direct association with one or more beings already there (the being central to the theme starts on PoN).

On PoN, humans, animals, things and concepts are all denoted as *beings* and thereby treated ontologically equal. This is not to disregard the special abilities of humanity, hereunder its capacity to craft political speech and parliaments; however, such differences in attributes and capacities always emerge through their *associations* with other beings. Course participants are assigned into groups, each having one of the six *skill sets* required for upholding the customs and procedures of PoN. The six skill sets are the *Scientist* who ensures that everything said is followed by an empirical source. The *Politician* who ranks the identified beings in terms of their ‘current endangerment’ and their ‘indispensability’ in relation to the theme and must also look out for representatives considered legal or legitimate spokespersons for beings. The *Diplomat* keeps track of time and speaking order and generally ensures a civilized dialogue. The *Moralist* is constantly on the lookout for beings that have been forgotten in the discussion. The *Administrator* keeps the formal rules and makes sure things get to protocol. Finally, the *Artist* will have to make a visual mapping of the associations between beings on PoN offering an alternative lens of the network. At the start of each round skill sets are drawn anew, so that participants get to learn the different procedures and tenets, and their embedded power and influence gets reshuffled.

Each of the groups were then to carry out the following steps (see Raffn and Lassen 2021). The process is here exemplified with the case of an open-pit copper mine in the Eastern Andean Amazonas in Ecuador:

- *Stage 1: Taking into account.* Here participants identify the beings relevant to the theme. Let us say there are mestizo settlers, the Shuar indigenous people, the government represented by the mining ministry, the Chinese mining company, the water ecosystem that may be affected by the mining, and the poor of the country that may benefit from the tax income generated from selling the concessions and industry development. The participants then explore how they themselves are related to these beings to assign the best-equipped ambassadors to represent them.

- *Stage 2: Association, Ranking and Mapping.* Here players seek to move the beings from the pluriverse into the PoN collective. As mentioned earlier, they do so by providing a direct and empirically founded association with one or more beings already on PoN. The Moralists will add overlooked beings to the Horizon and the Artist will create a network of beings and associations. This allows visualisation and analysis of the emerging network-graph. The Politician then makes a ranking of the endangerment of the beings and a ranking of their indispensability. The other participants can attempt to influence the Politician to change the rankings. Ultimately, this is an exercise in explaining and debating choices - as the Politician has the final say. However, the power is only temporary as the skill sets are shuffled in the next round. The Artists in each group were then to provide a description and analysis of the network.
- *Stage 3: Scenarios for the future,* is a stage where desired futures and possible pathways of implementations are explored. It starts with understanding the fears and desires of beings. Then possible ideas accommodating these can be explored. When one or more of these have been turned into concise proposals outlining the vision, mission and anticipated actions, the players move on to Stage 4.
- *Stage 4: the Parliament of Things.* Here proposals are presented and discussed. It is explored how each proposal will affect the collective by asking each ambassador how the beings they represent will react to the actions proposed. Only if a proposal is assessed to compromise the existence of a being, can the ambassador object on its behalf. Proposals that come out favourable to the status quo are allowed to be implemented - if there are beings willing to perform it. When all proposals have been processed, the participants evaluate if they are ready to implement proposals.

### **Earth Summit simulation**

The goal of the session is to teach students the diversity of stakeholders in global environmental negotiations and the legitimacy of their interests, using the tool of empathy to understand different stakeholders' interests and enable negotiations in consensus-based decision making. Furthermore, an intended side lesson is to better capture the power of rules in these negotiations, for example, who is allowed to vote, who has the right to speak and intervene, and when this is the case. We start the session by outlining the setting with a practical example. In the 2020 and 2019 versions of the course it was forest fires and biodiversity conservation, previously it was a reform of the United Nations (UN) and climate change negotiations. We use techniques from Model UN (Engel et al. 2017), and Open Space (Owen 2008), among others. In what follows, we describe a typical but somewhat artificial outline, as we generalize across class-specific settings, which varies over the years.

- *Setting the stage by outlining the goal of the simulation:* We task the students with formulating a joint statement on which they can all agree. We prepare them that they will most

likely fail. This is in part expectation management, but it is also a transparency aspect of the Brechtian 'epic theatre' that makes the students aware that this is a game and distances themselves personally a bit from it (Brecht 1961). This allows them to both immerse into actor perspectives and interactions *and* critically reflect on the simulation and the actor's role—a distance, which has been shown to facilitate learning (Squire and Jenkins 2003).

- *Behind the veil preparation by making-up actor roles:* We have prepared actor cards, which are based on real-life actors in international environmental policy making ranging from politicians, to business leaders, and civil society actors. Students are invited assigned one of these actors and are given time to acquaint themselves with 'their' actor. This allows each student to develop ownership and start immersion.
- *Let the herd roam free and play, then reign them in far too soon:* We open the forum. We only have few formal rules (as the main lesson in this workshop is on actor perspectives, not on institutional negotiations). Nonetheless, there is a chair whom the actors elect to impose a more formal feeling. While this could also be a student, so far the group has elected teachers to the role. This is partly intended and has the benefit that the students thereby legitimized the chair (aka the teacher). By legitimising the teacher in the role of the chair, they have given up part of their authority and set someone in power to decide upon speaking times, etc. We normally reflect briefly on this passing-by lesson in the end of the session.
- *Actors/students are invited to issue a brief statement of their interests.* Following this, there is an informal break-out time where actors can meet, ally, and strategize with whomever they want. By now, it is possible that not all are entirely aware that nation states are, in the end, the ones deciding the outcome of the negotiations. Across these various steps, the teacher acts as timekeeper and coordinator of the workshop phases. We employ this power to keep up a certain pressure to get to a joint outcome. Time is constantly running out: the first announcement on remaining times comes, for instance, already barely five minutes into the forum session. Next, participants are reminded that the goal is a joint statement. Once the time is indeed over, we reconvene. This mix of pressure and engagement seeks to simulate an atmosphere similar to real-world diplomacy: enjoying the adrenaline rush of negotiations while feeling time restrictions throughout.
- *The difficult task to find agreements:* We ask the students whether they have drafted a statement. They may or may not yet one or several, often sketchy, inconsistent or contradictory proposals with no one knowing how to proceed. We display their proposal(s) as a live document, possibly together with one that we as teachers (or any other chairperson) have drafted in the meantime. We have ten minutes left to agree on wording and start haggling over formulations. Most likely there is no proper agreement, and if so, it is very general leaving room for interpretations. We then end the simulation and step out again.
- *Stepping out of the roles:* Here, the goal is to give students a somewhat disillusioning reality

check regarding the power and efficacy of international negotiations in order for them to contemplate how the current state of affairs could be structurally reformed. In this, we intentionally balance between reality (what these summits can do) and feasibility (trying not to destroy motivations and optimism for continued institution building).

- *Reflect on what just happened:* We have a 5-minute session to reflect on what the students experienced. They tend to be a bit exhausted, but have normally developed quite some insight on the practices of international environmental diplomacy. Among others, the difficulty (or impossibility) in finding a common position among a variety of transnational actors with very different yet legitimate interests in a formal international diplomatic setting.

### **The course, the students, and the lecturers**

The course Global Environmental Governance Today–Actors, Institutions, Complexity aims at providing students with an improved understanding of policy making and transnational diplomacy for environmental protection. It is a 1-week, 35 hrs PhD student course offered by the ClimBE-co graduate school (Climate, Biodiversity and Ecosystem Services in a changing world) at Lund University, Sweden. In recent years, class sizes roughly oscillated between 12 and 20 students. We mainly have international students, largely based at European universities. Most of them tend to be social science students, mainly political science, but we always have an interdisciplinary setting, ranging from Earth and Environmental Sciences to Philosophy.

The course has been offered since 2013, and has been continuously developed, method, and content-wise. The assessment is based on a final essay where students apply global environmental governance concepts or methods to a question of their own choosing. They are encouraged to closely relate this to their own PhD research. There are only pass/fail grades. While not part of the grade, active participation of students in the course is strongly encouraged.

### **Collected sources of data and analytical methods**

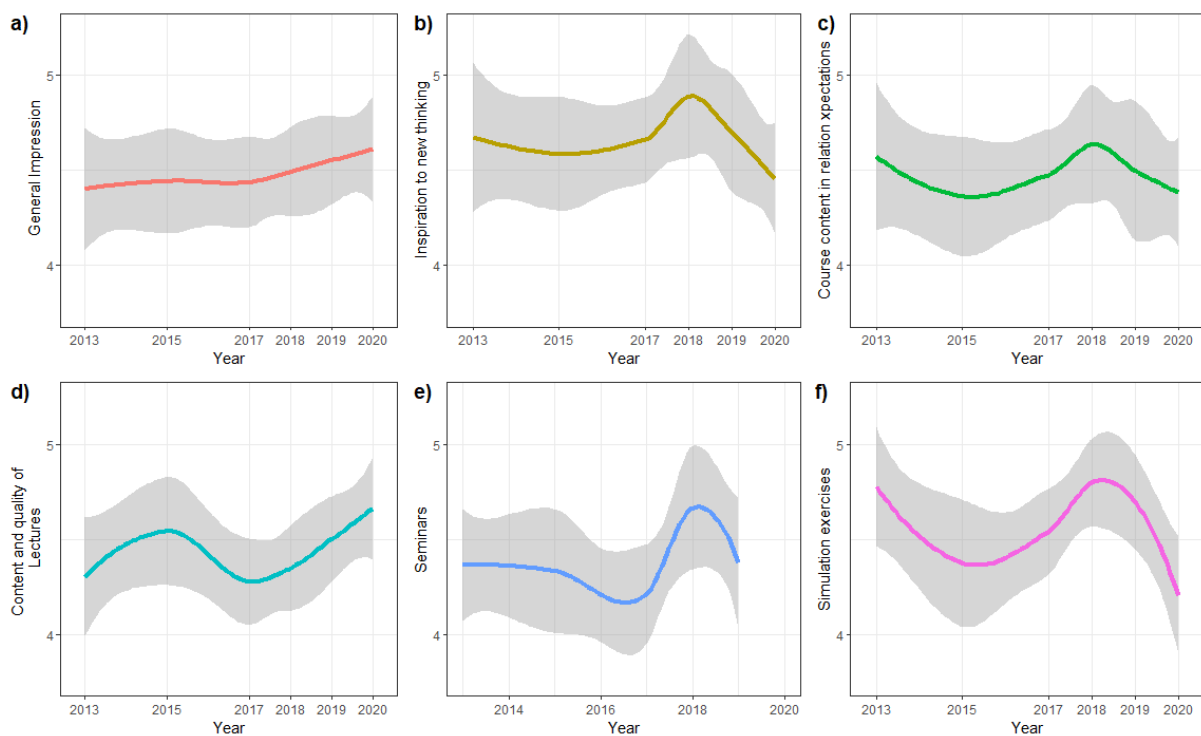
Our major source of student evaluations are feedback sheets from each year the course was held (2013, 2015, 2017, 2018, 2019, 2020). The sheets ask 10-11 questions with an answer on a 5-point Likert scale, and an open, qualitative answer field. Furthermore, there were final discussions, often with the use of Mentimeter to gather additional information from oral statements and interactive data collection. The data we gather from the replies is read into R, to plot the descriptive statistics, and into NVivo to sort through the qualitative data. We thereby analyse the course evaluations through mixed methods, both quantitatively and content-wise. The latter type of feedback was read and discussed among the authors of this article to derive further interpretations and conclusions, which are reasoned out below. Furthermore, we considered some of the joint reflections we received in the final course session where we had asked the students what went well and what they would advise for improving the course.

## Findings

Generally speaking, we can draw five lessons from our course experience, the first two from quantitative data, and the second three from a qualitative interpretation of the feedback:

- I. The overall impression that students had of the course developed, on average, with a positive trend (see Figure 1, panel a). The perceived quality of lectures (Figure 1, panel d) is highly correlated with the overall impression scores (Figure 1, panel a) with a correlation coefficient of 0.65, 74 degrees of freedom and a p-value of 2.226e-10—a much higher correlation than with the seminars (Figure 1, panel e) or the simulations (Figure 1, panel f). This shows that the content and quality of lectures played an important part for the perceived overall quality of the course.

Figure 1. Scores from a selected set of questions from the course evaluation sheets over time.



- II. The inspirational outcome the students took from the course (Figure 1, panel b) and the performance of the course in relation to expectations (Figure 1, panel c), however, exhibit patterns that rather resemble the development of the quality of seminars (Figure 1, panel e) and the simulation exercises (Figure 1, panel f). This may indicate that the simulation exercises and applied seminars have been rather unexpected elements for the students and that it is these simulations and seminars that make the course both perform beyond expectations and inspire to new thinking.

III. From the qualitative feedback we gather that these experiential learning aspects of international diplomacy and an inclusive approach to policy simulations make the course very well suited for an international student group from diverse backgrounds (see Figure 2, for a word cloud of the general impression from the feedback sheets). This corroborates the quantitative findings in the sense that our diverse set of participants through the years have perceived the simulations and seminars as a very inspiring and fun learning exercise.

Figure 2. Word cloud about what the participants said about the course.



- IV. There are also lessons learnt for the design and the implementation of the simulation exercises. The analysis of the qualitative feedback suggested that course participants perceived one factor as crucial: the quality of the information provided before the simulation, as time is always very short in the actual classroom exercise. Experiences with the online version of the course particularly underlined this. Given the ambition and intensity of the course, we can imagine that a perceived lack of information, especially in an online format, may create a feeling of being somewhat overwhelmed, which in turn would hamper a successful learning experience. Thus, up front provision of preparatory material can help students strive in a challenging learning environment.
- V. And lastly, we can draw a lesson about the relation of course elements to one another. In general, the combination of theoretical lectures and applied elements such as seminars and simulations has been highly appreciated. However, whenever multiple applied aspects are

featured in the same course, such as a UN-simulation and the PoN game, our experience is that it is crucial to not only keep the different teaching elements well connected but also to keep them sufficiently different from one another. This gives students the opportunity to experience topics from different angles.

### **Replicability in a different context**

The general approach to simulations should, by our reasoning, be applicable in different settings. Possibly the complexity of decision-making processes simulated would have to be reduced a bit for Bachelor students and to a lesser extent for Master students. Through the years, we mostly had international students, often with some background in Western type of educational systems, but not exclusively so. Therefore, we would reason that it should also be possible to adapt a simulation of international environmental politics negotiations in other cultural contexts and with high likelihood across OECD countries. Mainly however, we would argue that simple, but strict rules and guidelines that structure the activities and at the same time provide enough room for creativity from the students to come up with innovative solutions, in principle allow for replicability independent of education and cultural background.

### **Conclusions**

In this contribution, we presented our approach of using simulations for teaching an interdisciplinary and international group of PhD students about key concepts, theories, and practices of international environmental governance. It is, in our view, the overall mixture of information-intensive lectures, with applied seminars and simulation exercises that makes this a successful and highly scoring course. The simulations as an intentionally challenging exercise help students understand why international negotiations sometimes move so slowly and seem to reach so little. We furthermore place an emphasis on empathy for the ones represented in international diplomacy, also showing how understanding different stakeholders' perspectives can lead to improved and productive negotiation outcomes. This helps building bridges between different perspectives, nations, humans, and non-humans. However, it also provides an experience to the limits of those representations within the current governance system. Overall, the combination of different elements such as theory heavy lectures with more applied and different experiential learning exercises in seminars and simulations provides for a stimulating learning environment.

For future versions of the course, we shall work on improving the guidelines provided before the simulations such that students feel better prepared—and integrated from the start. We see global environmental problems determined by problems of human interaction both in the way that they originate and in the way they are addressed. Teaching students about such challenges in a realistic way is a somewhat frustrating but, as the experience from leading a course on global environmental governance shows, rewarding and empowering way to meet these challenges.



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## Summary

This chapter discusses the use of simulations of international negotiations of environmental politics (and beyond) for a PhD course on global environmental governance. We present the intended learning outcomes and the specific outline of two simulation exercises: Politics of Nature and Earth Summit. Following this, we analyse data from the course evaluations. Notwithstanding the generally very positive assessments from the participants, we find that providing a high-quality information package up front is a factor that may well improve student experience of the simulations.

## Keywords

environmental governance, experiential learning, global governance, politics of nature, simulations



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