Scenario workshop on assessing future security risks of geoengineering as part of the seminar "Governing the future(s) - Scenario Planning in Security Politics"

On November 29-30, ten students on the MA program "Peace and Security" at the IFSH took part in a scenario exercise on the future security risks of geoengineering. All members of the group had 3-5 years' prior professional experience in federal ministries, humanitarian aid organizations, NGOs, the development sector or federal bureaucracies, were trained engineers, teachers, anthropologists, linguists or economists, and had diverse linguistic and cultural backgrounds. On the first day, students were briefly introduced to a variety of scenario methods and academic debates surrounding anticipatory security politics. In order to develop profound and diverse knowledge on geoengineering technologies and associated risks quickly, students were asked to develop their own portfolio of sources and connect the topic of the workshop their own professional experience. The workshop leaders provided a couple of mandatory readings as well as a range of preparatory pop culture and journalistic sources such as films, newspaper long reads, NGO reports, interactive maps and blog articles about geoengineering to support the participants. Finally, an external guest expert, Earth System scientist Dr. Sebastian Sonntag from the Max-Planck-Institute of Meteorology in Hamburg, held a Q&A with the participants on different geoengineering methods, their advantages and disadvantages as well as overall scientific possibilities for predicting or otherwise assessing future changes in the Earth system.

During the second day, the students of the seminar applied the explorative scenario method introduced, with the aim of developing their own future scenarios for the year 2050.

As a first step, the students worked in groups to discuss *drivers* and *uncertainties* related to the future development of SRM technologies, using the STEEP/V scenario categories *society*, *technology*, *economy*, *ecology*, *politics* and *values*.

Next, the groups presented their results and clustered them thematically. The participants then scaled the possible *impacts*

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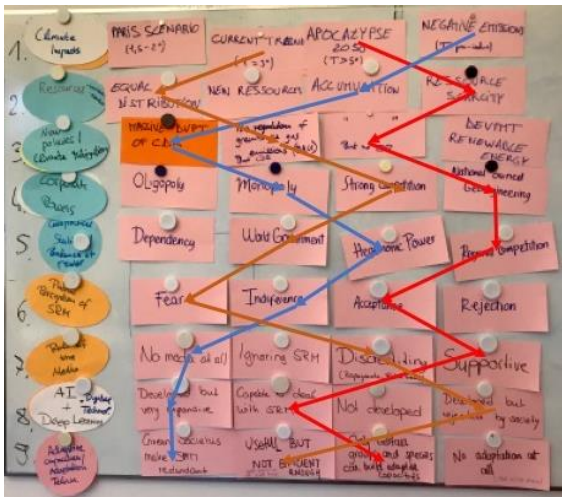
and *certainties* of each predicted driver / uncertainty on a graph.

Thirdly, the students were asked to name four possible future developments for each category, which had to be exclusive.

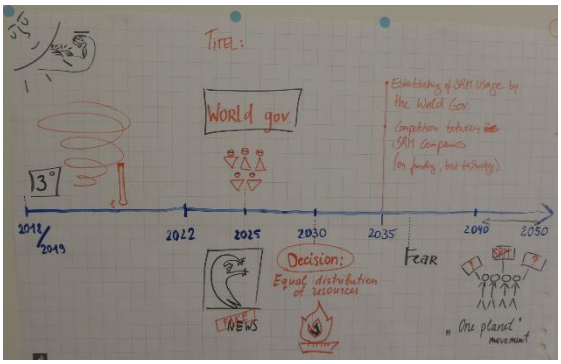


The *morphological box* approach allowed them to evaluate three different future scenarios.

Finally, the students developed creative narratives, explaining the future developments of each of the three scenarios by drawing time maps and additional illustrations.

The first outcome scenario of the workshop, called *Highway to Hell*, predicted massive global warming of around 5°C due to a lack of political will and agreements on reducing CO^2 emissions. Consequently, the world's population will demand an extensive use of SRM technologies with all means.

A second outcome scenario, called *Nozama Eco Vision 2050*, anticipated an early development of carbon dioxide removal (CDR) technologies by the year 2025. In this scenario, the multinational corporation Nozama will gain a competitive advantage on the world market allowing it to establish an eco dictatorship until 2050, powered by satellite surveillance and an eco-citizen credit system.



The third outcome scenario predicted a global fear of the development of SRM technologies. Lead by a world government, new developments will be pushed forward quickly and rigorously thus prompting civil unrest and the emergence of a populist transnational counter-movement.

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