

Tipping points

Prof. Dr. Matthias Braun

Study programs: MSc Climate & Environmental Sciences

ECTS: 5 (2 SWS)

Number of participants: 20

Language: English

Content: The seminar will be guided along major tipping points in the climate and ecosystem research. Participants will be provided with an introductory paper on tipping points and at least one paper per specific topic/tipping points addressed in the seminar. Each participants are requested to read all those papers and to pose at least one question per paper in advance in a forum in order to stimulate discussion.

Each participant will be assigned one specific topic. The participants will provide a detailed review of the general background and current state-of-the-art science/knowledge to each specific topic/tipping point in a presentation. For this, students will take the papers provided as points of departure and develop from there a more profound overview on each topic. This involves a detailed research on literature from peer reviewed journals in order to capture most recent developments in science. Where necessary, students will explain (physical/ecological) mechanisms and processes necessary to better understand the tipping points and potential impacts. A critical evaluation of the presented papers is expected (e.g. by presenting different scientific views/statements). In addition to the presentation, participants will summarize their literature review in a term paper adhering strictly to international scientific standards (citation rules etc).

Seminar aims:

- Deepen your understanding of physical processes and mechanisms in the climate and ecosystem
- Get a better idea of (tele-/inter-)connections between processes and systems
- Deepen your skills in critical literature review and scientific writing
- Improved your writing and presentation skills

Entry requirements: background in natural sciences, basics in climatology

Assessment: presentation of 40 min + discussion and term paper (20 pages)

Start of class / first meeting see UniVIS