Visual storytelling about future weather extremes in Norway

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Extreme floods with severe impacts have hit municipalities in Western Norway in recent decades and they will become more intense and frequent with global warming. We present a project that focused on providing an approach for visualizing climate change information for decision-makers challenged with planning resilient infrastructure and preparedness measures for future flood impacts. We have chosen visual storytelling through a short film as the most suitable and effective tool for building a communication strategy to reach out to local and regional decision-makers on the one hand and the research community on the other.

The objective was to present and communicate results from a research project in a film by focusing on low-probability high-impact events using a storyline approach. The scope of the research project was to provide Norwegian stakeholders with a realistic representation of how an observed high-impact event of the past will look like under projected future climate conditions (Schaller et al. 2020, Hegdahl et al. 2020). Recent high-impact flood events in Norway have emphasized the need for more proactive climate change adaptation. This requires local, actionable and reliable climate information to support the decision making as well as awareness and consideration of barriers to adaptation. Thus, a seamless chain from global climate system modelling over high-resolution hydrological modelling to impact assessments is needed. We have therefore taken a novel "Tales of future weather" approach (Hazeleger et al. 2015), which suggests that scenarios tailored to a specific region and stakeholder context in combination with numerical weather prediction models will offer a more realistic picture of what future weather might look like, hence facilitating adaptation planning and implementation.

The film we produced particularly focuses on the extreme flood event in October 2005 that affected people (including fatalities) in Bergen municipality, how the event can be seen in context of historic floods and its atmospheric drivers. It tells the story of people having experienced this event and how Bergen municipality was responding to that event. One key objective of the film is to drive interest and attention to the event-based storyline approach (Sillmann et al. 2020) to facilitate uptake of climate information and to empower decision makers with new knowledge and tools to assist them in their decision making.

References

