HAZARDSUPPORT

Risk-based decision support for adaptation to future natural hazards.



Tailor-made climate impact studies and a better collaboration between climate experts and stakeholders will lead to improved decision support for adaptation to climate change. In a future climate, some extreme weather events are likely to occur more often, increasing the risk of natural hazards. For society to adapt, it needs quantitative information about the frequency and intensity of these hazards.

BETTER INFORMATION ABOUT NATURAL HAZARD OCCURRENCE IN THE FUTURE

The use of scientific knowledge of climate effects is still limited when planning adaptation and implementation. This is mainly because studies are designed from the top (i.e. top-down studies).

Within Hazard Support, studies to ascertain climate impacts will be designed in collaboration with users (i.e. from the bottom-up).

Decision makers here are defined as users who need to make decisions regarding physical levels or thresholds to which adaptation needs to occur, for example bridge design levels.

CASE STUDIES IN STOCKHOLM, SWEDEN'S WEST COAST AND KARLSTAD

Methods will be developed in three case studies with identified key stakeholders from different natural disasters:

- Heat waves (City of Stockholm)
- Torrential rains and floods (Karlstad and rescue service)
- Coastal Floods (Länsförsäkringar)

Researchers from SMHI in the fields of climatology, hydrology, oceanography and air environment will pool their expertise to improve the methods used for climate impact analysis for hydrology, coastal flooding, and heatwaves.

SEI will introduce and improve methods for participatory modelling, stakeholder mapping and decision processes.

ABOUT THE PROJECT

The project will last between Sep 2015 and Aug 2020. The project is funded by the Swedish Civil Contingencies Agency. The project is a collaboration between SMHI and SEI (Stockholm Environment Institute).

PROJECT GOALS

1. To produce guidelines for climate adaptation studies focusing on how stakeholders can obtain the quantitative impacts of climate change necessary for adaptation decisions, as well as take into account constantly updating and changing climate projection information in their adaptation plans.

2. To produce best scientific practice guidelines for climate experts who carry out tailored climate impact studies for stakeholders.

3. To establish a science-stakeholder arena for collaboration and mutual learning on climate adaptation and natural hazards

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