

ESPON CLIMATE - Climate Change and Territorial Effects on Regions and Local Economies: Inception Report Summary

The project has an explicit territorial focus. The outcomes of each action will be focused on what impacts global climate change will have for the different European regions and how the regions can cope with the projected impacts in order to become less vulnerable to climate change.

The impacts of climate change depend on exposure to climatic stimuli on the one hand, and on the sensitivity to climate stimuli on the other hand. Thus, a strong impact can be either a result of high exposure or high sensitivity or both. However, the impacts also depend on the adaptive capacity of a region, which in turn are influenced by non-climatic factors. The project's research framework is shown in the diagram below.

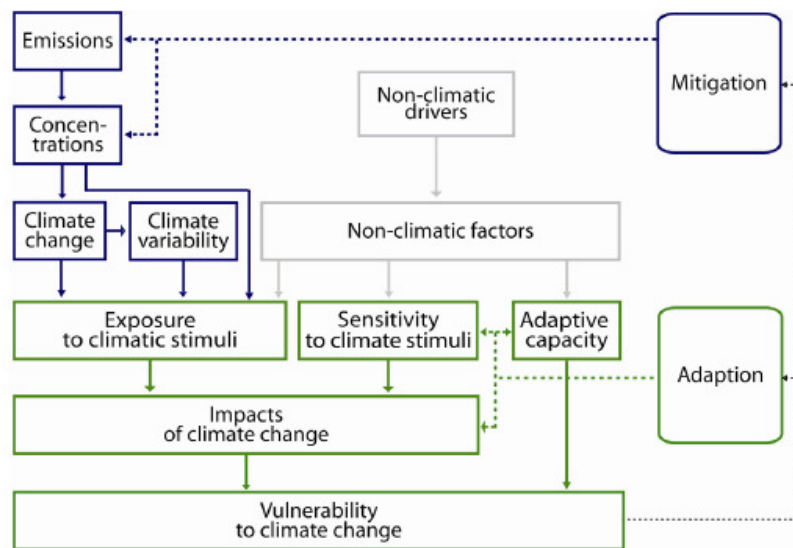


Figure 1: Research framework (adapted from Füssel & Klein, 2002, p. 54)

The project views climate change sensitivity as made up of six dimensions: physical, social, economic, environmental, cultural and institutional / governance.

Indicators, typologies and maps

For each of these dimensions of sensitivity, high-level indicators will be defined based on a literature and data availability review for two aspects: long-term/creeping changes (e. g. in temperature and precipitation) and extreme events (if possible one indicator per aspect).

Data will be generated for the six identified dimensions. Where no indicators exist, proxy variables will be used. Regional and local case studies will be used for producing indicators on the basis of local knowledge (from interviews, workshops).

Further, combined indicators will be produced such as climate change impact indicators (as a result of exposure and sensitivity) or climate change vulnerability indicators (as a result of climate change impact and adaptation). Factor analysis will be undertaken, seeking to optimise the analysis around 6-8 cluster points. For each of the 'cluster hearts' ideal regional types will be identified and from that the description of each cluster point will be determined. This will be linked back to the NUTS-3 level list to identify which regions correspond to which type of region. Finally the spatial and political distribution of these various regional classes will be explored and mapped. A range of case studies are proposed, as below.

Case study area	ESPON three-level approach*	Geographic coverage			Planning systems covered (category)	Climate change relation		
		Macro-geographic regions	Geomorphological character	INTER-REG IVB cooperation areas		Climate change impacts	Climate change vulnerability	Adaptive/mitigation capacity
Coastal Zone Aquifer	transnational	Finland, the Netherlands, United Kingdom, Spain, Romania	coastal area, lowlands	Baltic Sea Region, North West Europe, Western Mediterranean, South East Europe	A, B, C	+	+	+
North Rhine-Westphalia	regional	Western Europe	river basin, hilly land	North West Europe	A	0	+	+
Bergen	local	Northern Europe	coastal area, mountain area	North Sea Region	A	+	+	+
Tisza river	trans-national	Central & Eastern Europe	river basin	Central Europe, South East Europe	A, B, C	++	+	-
Coastal Mediterranean Spain, Balearic Islands	regional	Southern Europe	coastal area	Western Mediterranean, South West Europe	A	++	+	0
The Netherlands	national	Western Europe	coastal area, river basin, lowlands	North Sea Region, North West Europe	A	++	++	+
Alpine space	trans-national	Central and southern Europe	mountain area	Alpine Space, Mediterranean, South Eastern Europe	A, B, C	++	++	0

++ = very high, + = high, 0 = average, - = low, -- = very low
 * The European level is not covered by case studies but by the whole project approach.

Project Homepage

The webpage is installed and will stay online after the termination of the project to keep data available online. See www.espon-climate.eu.