

## ADAPTATION TO CLIMATE CHANGE: RISKS, RESPONSIBILITIES AND COSTS (12/2015)

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### Abstract

Climate change brings gradually changes to prevailing weather conditions and it also alters the patterns of extreme weather conditions. These impacts will be felt across society directly and indirectly, increasing the risks to human well-being and economic activity. The combined uncertainty related to changes in the natural world as well as in societies themselves is the key challenge for adaptation to climate change.

The Finnish Climate Act defines adaptation as measures that are developed to prepare for the negative impacts of climate change, as well as those measures that can be used to take advantage of the positive changes. Adaptation also requires managing risks in situations when a full assessment of risks is scientifically challenging.

Climate change risks is composed to three separate dimensions: *hazards* that refer to the changes in physical conditions, *exposure* that is considered to be the physical location of people or assets that are exposed to the hazards, and *vulnerability*, which is the function of the sensitivity of the exposed system and its adaptive capacity. For individuals, climate risk is manifested together with many other risks since economic and other types of risk are present in everyday decision-making.

From a legal perspective, climate change adaptation introduces an entirely new issue. As the society can be regarded at least partly responsible for climate change, there is a need to develop new policies, legislation and guidelines to clarify who is responsible for alleviating the effects of these changes and compensating for the damages. At the moment, it is nearly impossible to assign responsibility in the absence of suitable environment related regulation.

This report examines the responsibilities associated with flood and crop damages in agriculture, in particular. Legislation for managing flood risk aims to prevent flood risk, alleviate the damages and support preparedness for flooding. The legislation clarifies the preparedness process and division of tasks of public authorities and private actors. Insurance is a way to adapt to some changes brought about by climate change, for example home and care insurance can provide compensation for some damages associated with storms.

State provided compensation for crop damages will be discontinued from the beginning of 2017. The aim is to create an insurance based mechanism for yield losses and other damages associated with extreme weather events. Thus, state will no longer compensate for damages but the private insurance sector would provide services instead. It remains to be seen what kind of insurance systems this change in policy leads to.

The privatisation of compensation mechanisms has an effect on how individuals perceive and act upon climate change related risks, and thus have on their and also broader vulnerability of society. Transfer of risks management to the private sector has far reaching consequences that go beyond the responsibility for compensation. Given these developments, there is an increasing need to examine adaptation as a cross-cutting activity across all sectors of government, as well as more widely in society.