Adaptations

The Uppsala County Administrative Board did a thorough analysis on Uppsala's vulnerability to climate changes in 2009. The aim of the analysis was to describe the expected climate changes in the county of Uppsala up to the year 2100 from a regional to a global perspective.

The analysis also describes the consequences of these changes and how they will affect society and its inhabitants. The main purpose of the analysis is to be used as basic data in the ongoing process of adaptation to the clime changes. The expected climate changes up to 2100 in Uppsala County are:

- The temperature is expected to increase between 5-7 degrees Celsius during winter time and between 3-5 degrees Celsius in the summer

- The expected precipitation increase in the winter is between 20 - 60 % but is expected to remain unchanged in the summer, similar to the scenario seen in the reference period 1961-1990
- As a consequence of the expected temperature increase, the vegetation period is going to increase with up to one hundred days up to 2100
- The covering of snow is expected to have decreased with 60 days in 2100
- The augmented water levels in the Baltic Sea is expected to be up to 1 m but are going to be countered by the land rise with up to half a meter

The consequences of the climate change are going to affect a number of different fields. The analysis main focus was to concentrate on the consequences concerning communications, technical support systems, habitations and buildings, industry in agriculture, forestry and fishing, tourism, the nature milieu and health. The most common problems that are going to be noticeable in these different fields are:

- Flooding will be a problem of increased importance, mainly in day water systems, sewage disposal systems, roads and railroads and in buildings near the shoreline. The latter will be a consequence of heavy precipitation and a rise in sea level.
- Building damages as a result of landslide and erosion
- Increased risk of vector diseases among animals as a consequence of temperature rise

- Increased risk of infection diseases among humans as a consequence of rise in temperature and a deteriorated water quality
- Increased risk of the floodwater mosquitoes

County directions for flooding prevention

From 2010 to 2012 Uppsala County, as part of a national initiative, mapped areas in the county with the highest risk of flooding. The investigation showed that the municipality of Uppsala has a high risk of flooding and, if a flooding would occur, would suffer severe consequences.

In Uppsala many buildings are located near water, especially the river Fyrisån that run through the city core. A flooding would therefore have severe effects on a large part of the city's population both direct, if the flooding would result in life- threatening situations or cause increased risk of diseases, and indirect as a flooding would effect the city's commercial area substantially. Many of the buildings that lie close to water in the municipality have high culture value and store objects with culture value in basements that run high risk of being flooded.

The investigation has resulted in a higher awareness within both the municipality and the county organization about the risk of a flooding in Uppsala. In 2012 the areas identified to have a high risk and vulnerability is going to be scaled. Action plans for the areas will then be created according to the scaling. Possible actions covers both practical solutions as flood proofing as well as strategic matters as taking the risk in account in both the 2010 master plan as well as routinely in physical planning.