

**Excercise 2: Climatic stressor mapping**

	Significance for TA Central Finland (not sig 1...5 very sig)	Likely direction of the change?	How much/how often/how long/where the stresses can occur?
No of cold days (<0°C)	3	Decreases	Influence to living costs (heating etc.), infrastructure, especially roads
No of cold nights (<0°C)	3		See above
Heat waves	2	May increase	A need for cooling, high mortality rate during the event.
Total precipitation	4	Increases, more in the winter than in the summer	Can cause problems in harvesting the crops, logging will be difficult. damages to the infrastructure
Periods with heavy rains	4	Increases	Possible problems to sewage systems, wastewaters, runoff-waters. Damages to the roads. Floods.
Storms (summer/winter)	2	Higher risk in the coastal zone.	Though may cause damages to the infrastructure – energy distribution.
Cloudiness	2		No effects
Duration of the snow cover	3	Snow cover decreases	Effects to the winter sports. Also effects to nature, if snow cover will be diminished - more severe frost can damage the vegetation. Also, in northern Europe snow and winter is an important part of the culture.
Spring floods - peaks	2		If more freeze-thaw cycles, the floods are more frequent and simultaneously with less water.
Existence of the ice cover on lakes	2	Period decreases	Lakes are a significant part of the winter time leisure. Also, can cause positive effects:



			anaerobic conditions in the lakes in winter decreases
Warming of the water in lakes and rivers	3	Increases	Problems with algae and algae blooming can effect to various sectors of the society. New species?
Earlier timing of the spring events	3	increases	More unpredictable. New behaviour of plants and animals in the spring.
Droughts	3	Increases	Irrigation may be needed.
Flooding	3	increases	Winter floods will be new phenomena. can cause problems to built environment
Changes in allergic pollen, mould	3	increases	Especially problems in buildings due to more moist conditions.
Pole ward sifting of animal/plant/pes t species	3	Increases	Mosquitoes and other insects will be a bigger problem. Also affects to the yield.
Forest fires	1	no significant change	Surveillance is in sufficient level in Finland
Vectors of infectious diseases	2	increases	new diseases can occur (e.g. malaria)
Changes in the crop productivity	4	increases productivity	Problems with rye (can decrease the yield), can increase the yield of the other corps.
Ground instability (landslides)	2	May increase	If not taken into account in planning – can have some local effects
Duration of the vegetation period	4	Increases	Crop yield may increase – 2 harvests
Costal erosion	0		not significant in Central Finland
Costal flooding	0		not significant in Central Finland
Loss of costal wetlands	0		not significant in Central Finland
Sea level rise	0		not significant in Central Finland

TOP 5 (3) lists

**HOUSING**

*Chances*

**Nro of cold days/nights**

will decrease the heating costs

**Pole ward shifting of plant species**

More species in the gardens, cozy

*Challenges*

**Periods with heavy rains**

mould, urban floods etc.

**Heat waves**

need of air condition-> costs of living, energy use

**Storms**

Safety in the society, electric cuts etc.

**TRAFFIC**

*Chances*

**Duration of the snow cover**

Less costs in infra, more secure schedules, more safe, less salt to the roads (leading less corrosion of the cars and better quality ground water.

*Challenges*

**More fluctuation in temperatures**

more temperatures near 0°C -> more accidents on the roads

**Flooding**

effects to infra, logging

**Heavy rains**

increases accidents, erosion on the roads

**Earlier timing of the spring events**

period of rasputitsa longer, effects on safety