Supplementary file S1

Table S1 Pairwise comparisons (linear regression analysis) of annual temperature sum and precipitation between the studied locations in Northern Baltic Sea Area. Period is 1950-1999. Coefficient of variation (R^2) is the highest between the two closest locations in all cases.

Temp DD   Linear regression, R^2 values

	EE Tartu	EE Valga	FI Anjala	FI Hyvinkää	SE Norrköping	SE Västerås
EE Tartu		**0.953 *****	0.853***	0.850***	0.502***	0.550***
EE Valga	**0.953 *****		0.799***	0.787***	0.534***	0.583***
FI Anjala	0.853***	0.799***		**0.942*****	0.522***	0.604***
FI Hyvinkää	0.850***	0.787***	**0.942*****		0.586***	0.686***
SE Norrköping	0.502***	0.534***	0.522***	0.586***		**0.801*****
SE Västerås	0.550***	0.583***	0.604***	0.686***	**0.801*****	

Precip mm   Linear regression, R^2 values

	EE Tartu	EE Valga	FI Anjala	FI Hyvinkää	SE Norrköping	SE Västerås
EE Tartu		**0.553*****	0.247***	0.207***	0.254***	0.001
EE Valga	**0.553*****		0.103*	0.127*	0.081	0.141**
FI Anjala	0.247***	0.103*		**0.629*****	0.167**	0.155**
FI Hyvinkää	0.207***	0.127*	**0.629*****		0.124**	0.151**
SE Norrköping	0.254***	0.081	0.167**	0.124**		**0.280*****
SE Västerås	0.001	0.141**	0.155**	0.151**	**0.280*****	

* P <0.05, **P<0.01, *** P<0.001

Fig S1 Temperature sums calculated from April-September historic weather data. Dots show annual values and undulating lines are 3-year moving averages.
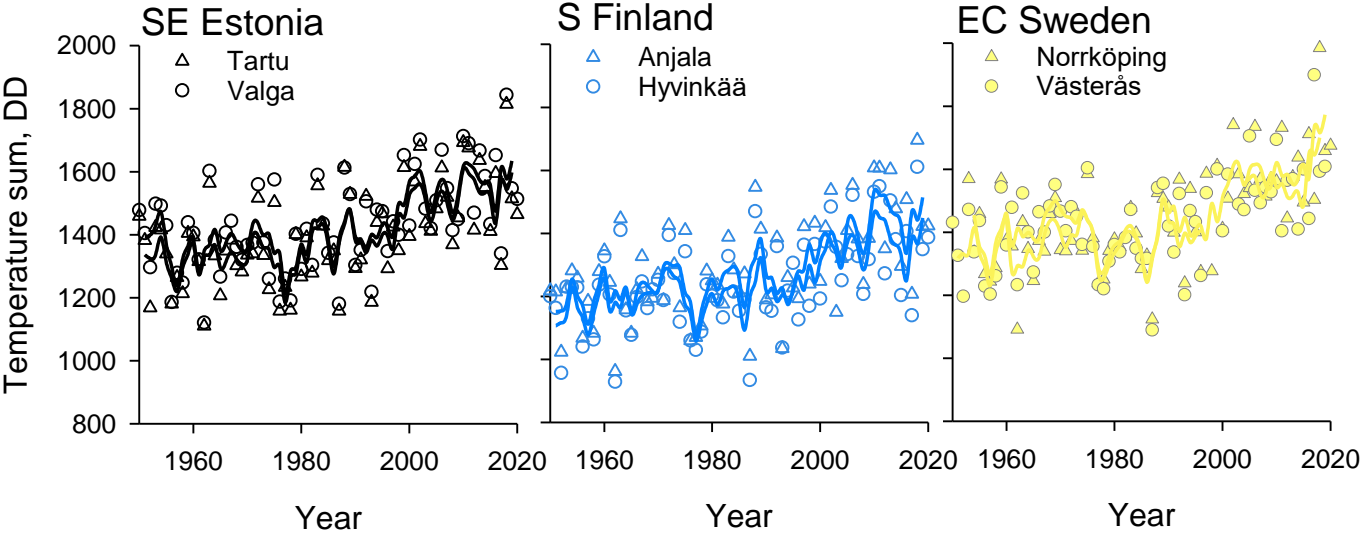
Fig S2 Hydrothermic index values calculated from historic weather data. Dots show annual values and undulating lines 3-year moving averages. Annual values of <2.0 indicate droughts potentially favourable for spruce bark beetle epidemic (see Methods of original article). Values <1.5 indicate extremely dry years. Lows in moving average line reaching these reference lines indicate occurrence of multiannual drought periods.
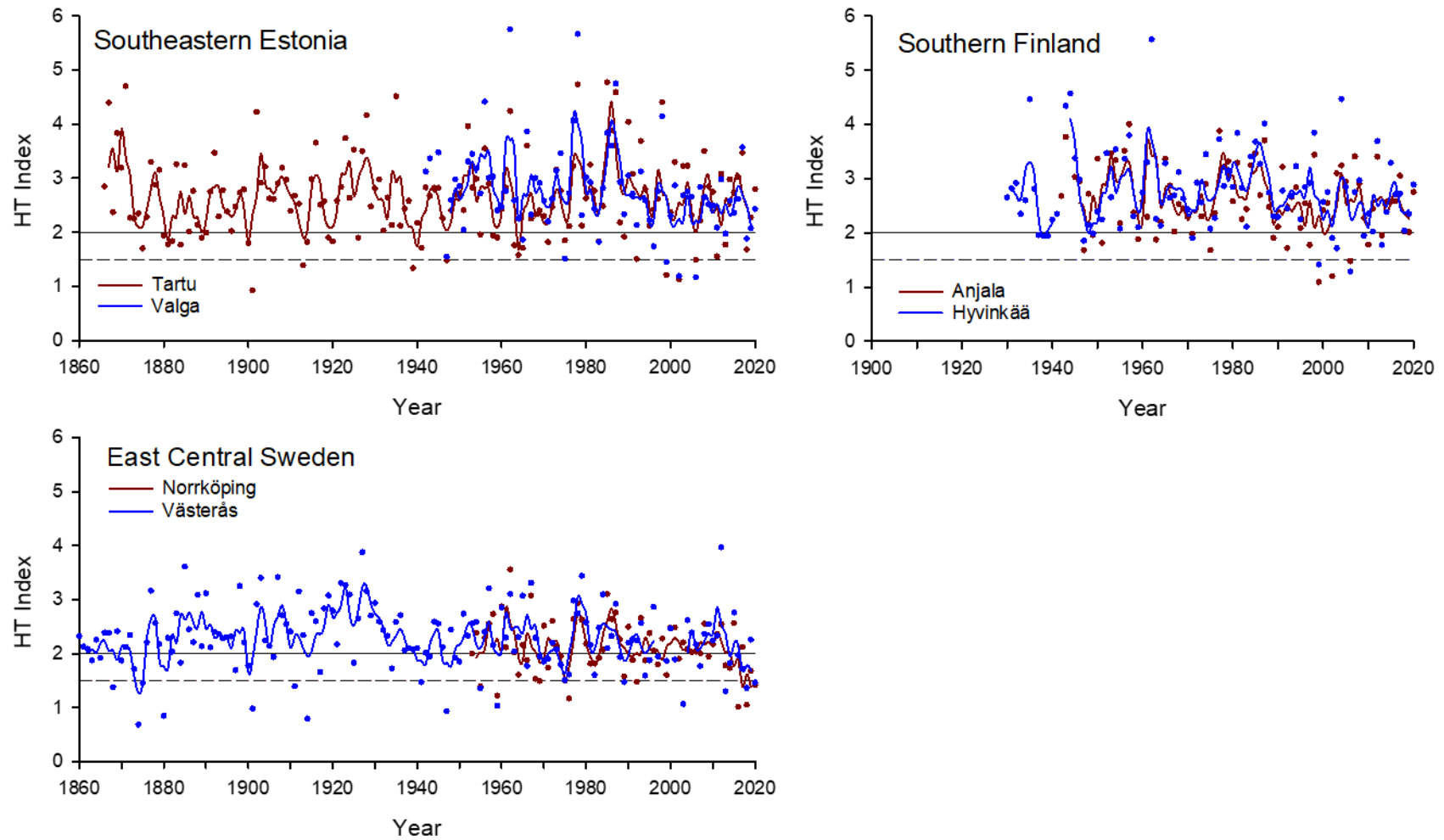
Fig S3 Precipitation (mm, April-September) of period 1900-2100 in Northern Baltic Sea area in A) RCP2.6, B) RCP4.5, and C) RCP8.5 climate change scenarios. Graph lines show 11-year moving averages calculated from the annual averages of 17 models in RCP 2.6 scenario, 23 models in RCP 4.5 scenario and 22 models in RCP 8.5 scenario. Locations of weather stations are shown in Fig 1 (see main article)