



Results of the AVEC scenarios questionnaire on Europe in the 2050s

The AVEC Summer School Participants



Scenarios questionnaire

Your task:

- To consider the current state of the society, economy and environment in Europe
- To think about plausible developments of these by the 2050s
- To assign subjective probabilities to different outcomes

more familiar with

AVEC 2050 Scenarios questionnaire. Are you based north or south of latitude 47.5°N?

Please enter your estimate of the percentage likelihood of each outcome listed occurring by 2050 for the factors described (integer values between 0 and 100%). Check that the sum of the likelihoods in each row is 100%.

Population of Europe (505 million in 1995)										
Population (million)	< 405	405-430	430-455	455-480	480-505	505-530	530-555	555-580	580-605	> 605
Like likelihood of occurrence (%)										
Gross Domestic Product (GDP) per capita (OECD Europe = 23600; Eastern Europe = 2800 in 1995)										
OECD Europe (thousand US\$)	< 23.6	23.6-28.6	28.6-33.6	33.6-38.6	38.6-43.6	43.6-48.6	48.6-53.6	53.6-58.6	58.6-63.6	> 63.6
Like likelihood of occurrence (%)										
Eastern Europe (thousand US\$)	< 2.8	2.8-7.8	7.8-12.8	12.8-17.8	17.8-22.8	22.8-27.8	27.8-32.8	32.8-37.8	37.8-42.8	> 42.8
Like likelihood of occurrence (%)										
Change in emissions of acidifying and eutrophying compounds (relative to 2000)										
Change in SO ₂ e emissions (%)	< -80	-80 - -60	-60 - -40	-40 - -20	-20 - 0	0 - 20	20 - 40	40 - 60	60 - 80	> 80
Like likelihood of occurrence (%)										
Change in NO _x emissions (%)	< -80	-80 - -60	-60 - -40	-40 - -20	-20 - 0	0 - 20	20 - 40	40 - 60	60 - 80	> 80
Like likelihood of occurrence (%)										
Change in European land use (relative to 1995)										
Change in agricultural area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20
Like likelihood of occurrence (%)										
Change in urban area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20
Like likelihood of occurrence (%)										
Change in forest area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20
Like likelihood of occurrence (%)										
Relative sea-level change (relative to 2000)										
Helsinki, Finland (cm)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40
Like likelihood of occurrence (%)										
Hamburg, Germany (cm)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40
Like likelihood of occurrence (%)										
Venice, Italy (cm)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40
Like likelihood of occurrence (%)										

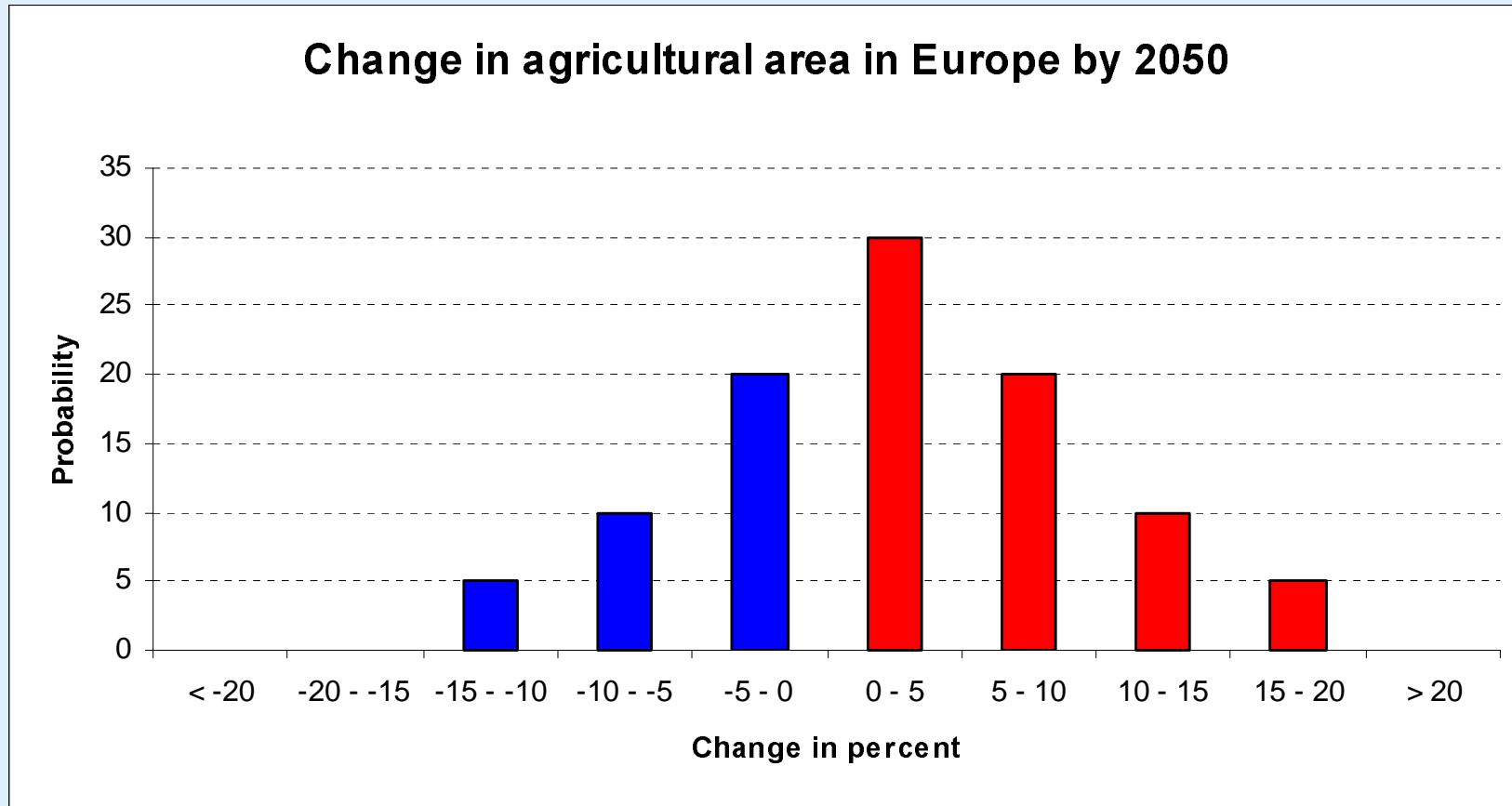


Please enter your estimate of the percentage likelihood of each outcome listed occurring by 2050 for the factors described (integer values between 0 and 100%). Check that the sum of the likelihoods in each row is 100%.

Global mean annual CO₂ concentration (e.g. at Mauna Loa, Hawaii)										
CO ₂ concentration (ppm)	< 270	270-370	370-470	470-570	570-670	670-770	770-870	870-970	970-1070	>1070
Like lihood of occurrence (%)										
Climate in northern Europe (north of 47.5°N) relative to 1961-1990										
Mean winter (DJF) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8
Like lihood of occurrence (%)										
Mean winter (DJF) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40
Like lihood of occurrence (%)										
Mean summer (JJA) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8
Like lihood of occurrence (%)										
Mean summer (JJA) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40
Like lihood of occurrence (%)										
Climate in southern Europe (south of 47.5°N) relative to 1961-1990										
Mean winter (DJF) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8
Like lihood of occurrence (%)										
Mean winter (DJF) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40
Like lihood of occurrence (%)										
Mean summer (JJA) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8
Like lihood of occurrence (%)										
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Like lihood of occurrence (%)										

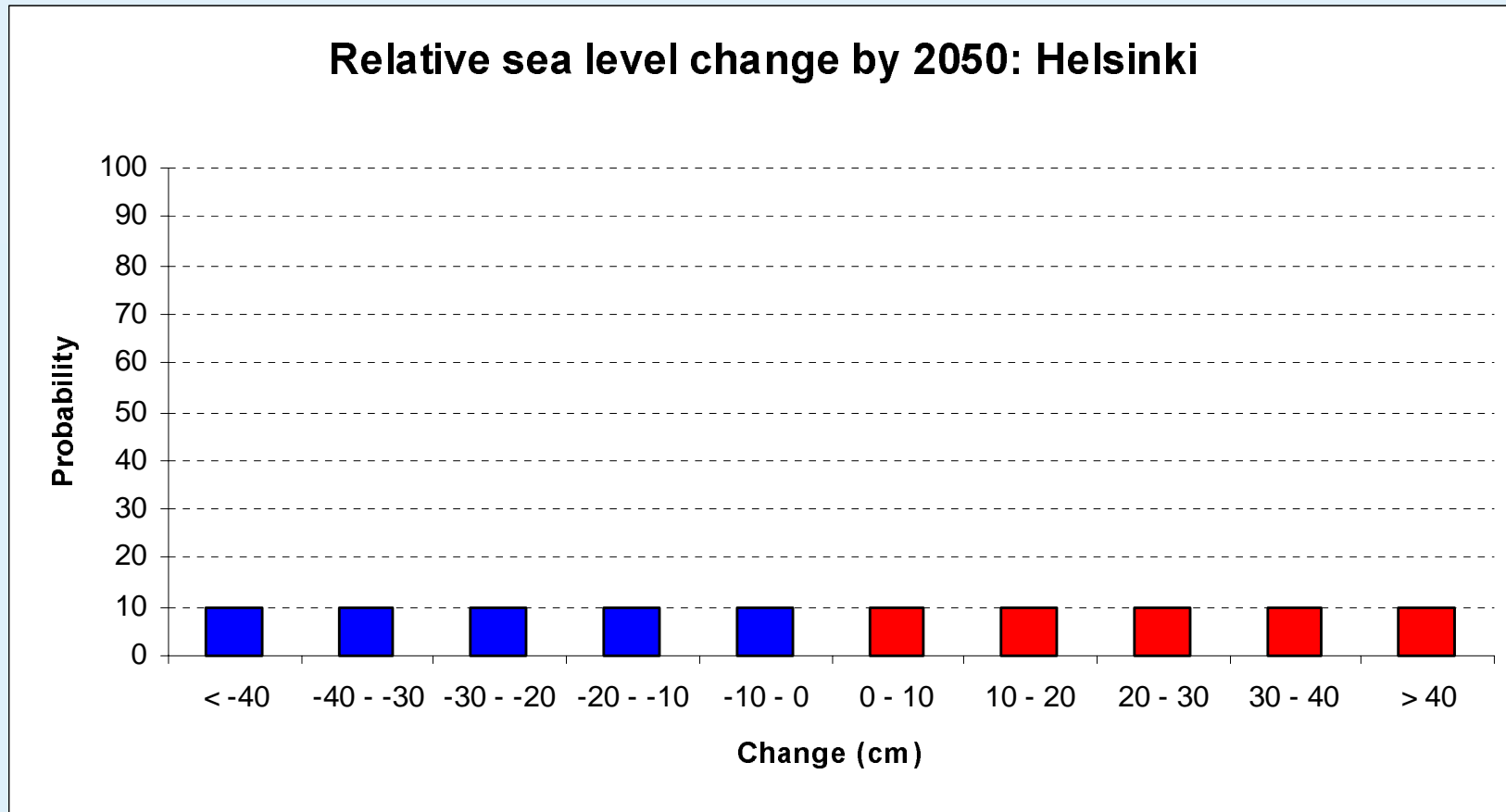
A perfectly normal specimen

Change in agricultural area in Europe by 2050



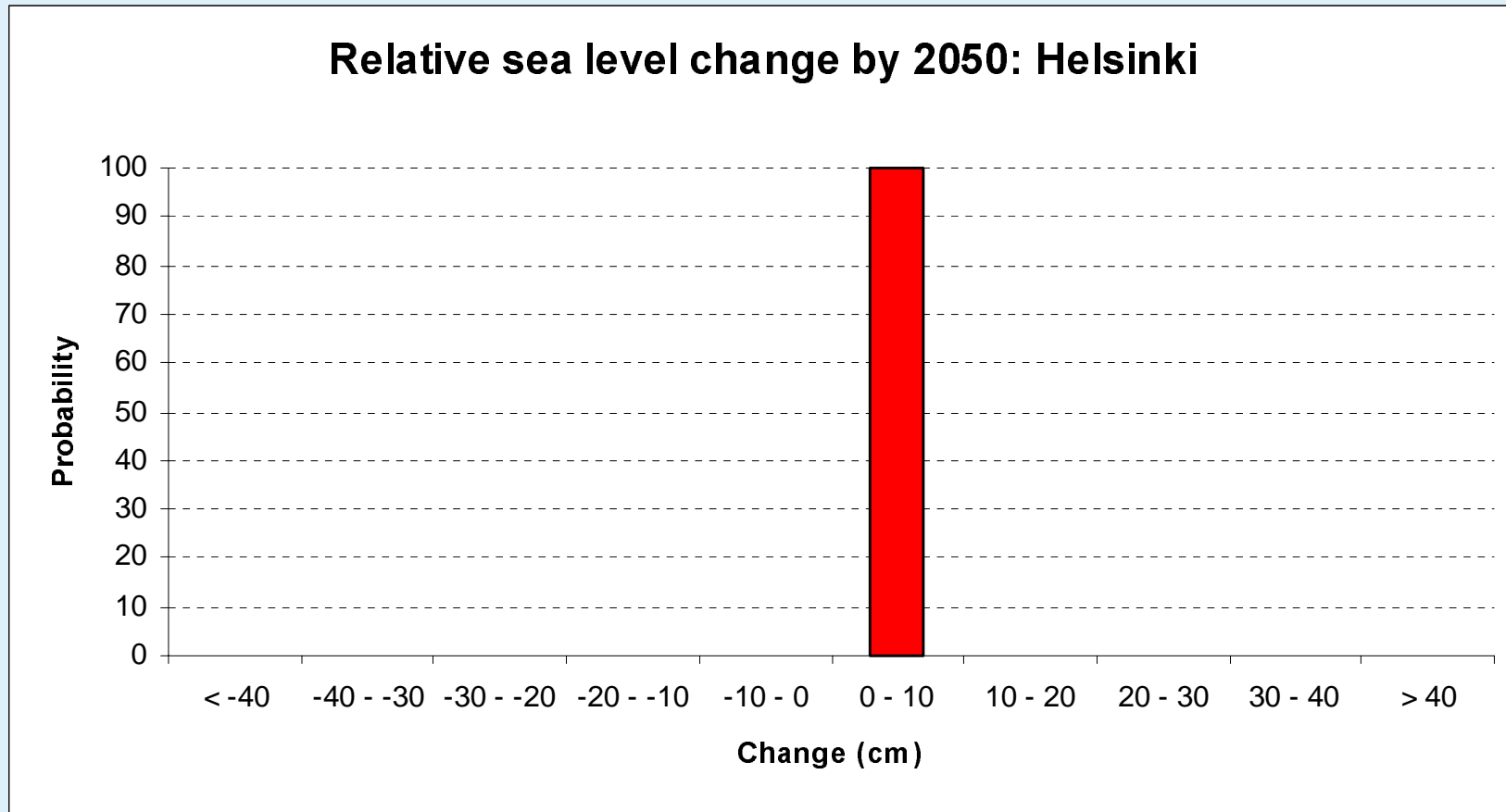
Hedger – anything is possible

Relative sea level change by 2050: Helsinki



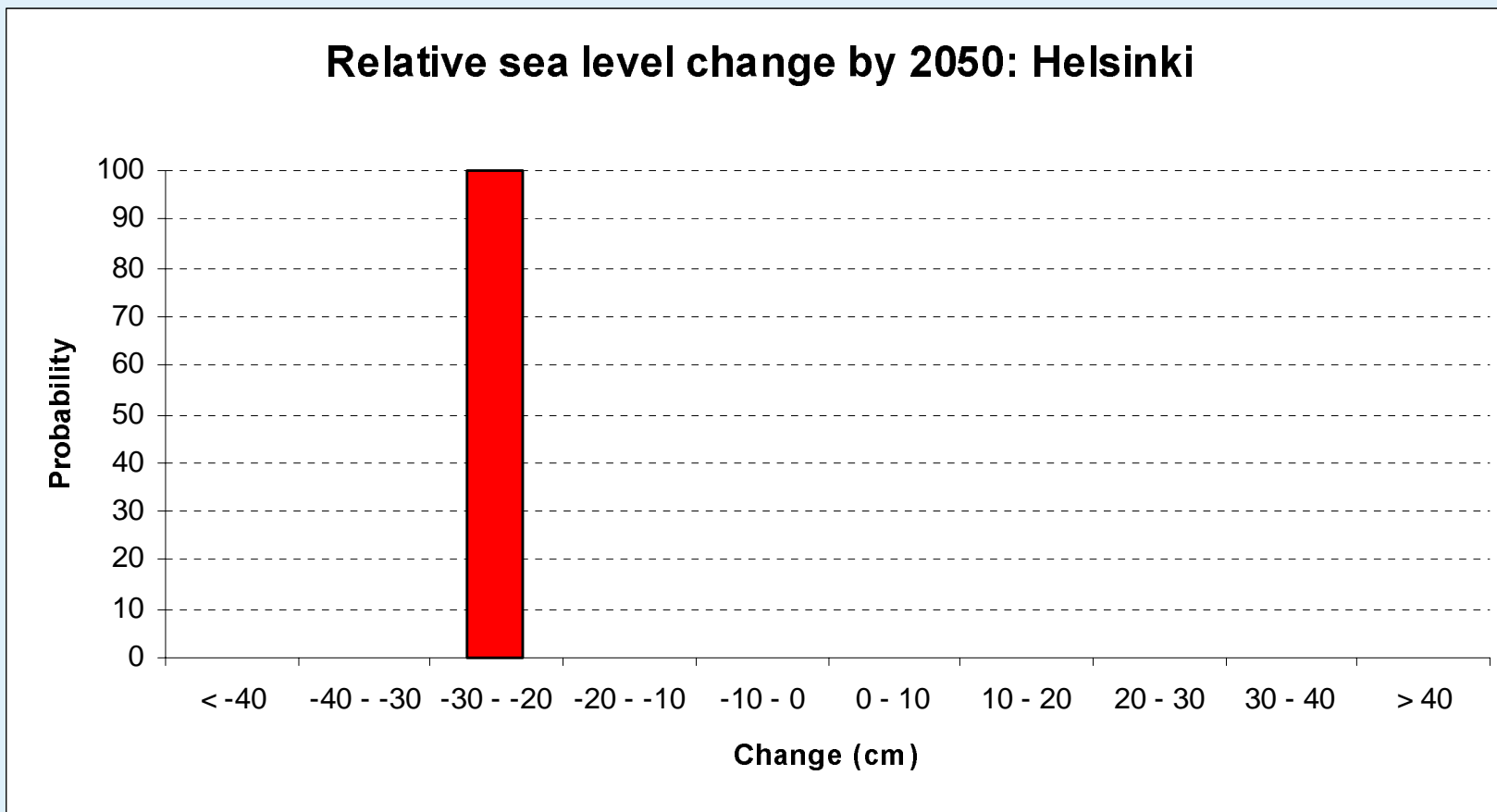
Margaret Thatcher model

Relative sea level change by 2050: Helsinki



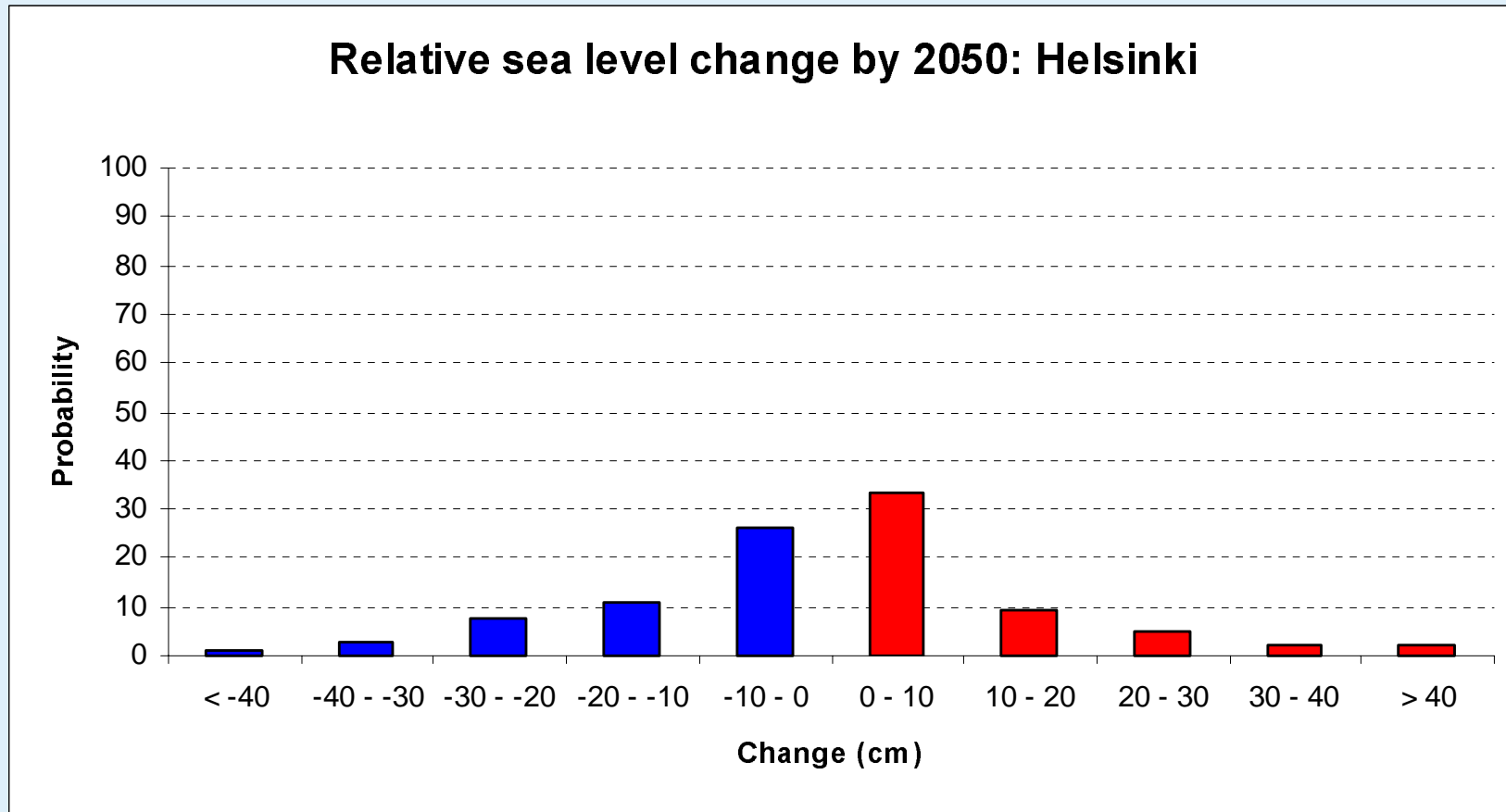
Sorry, but Thatcher is wrong!

Relative sea level change by 2050: Helsinki



The full group – almost normal

Relative sea level change by 2050: Helsinki





Now the full results – well almost

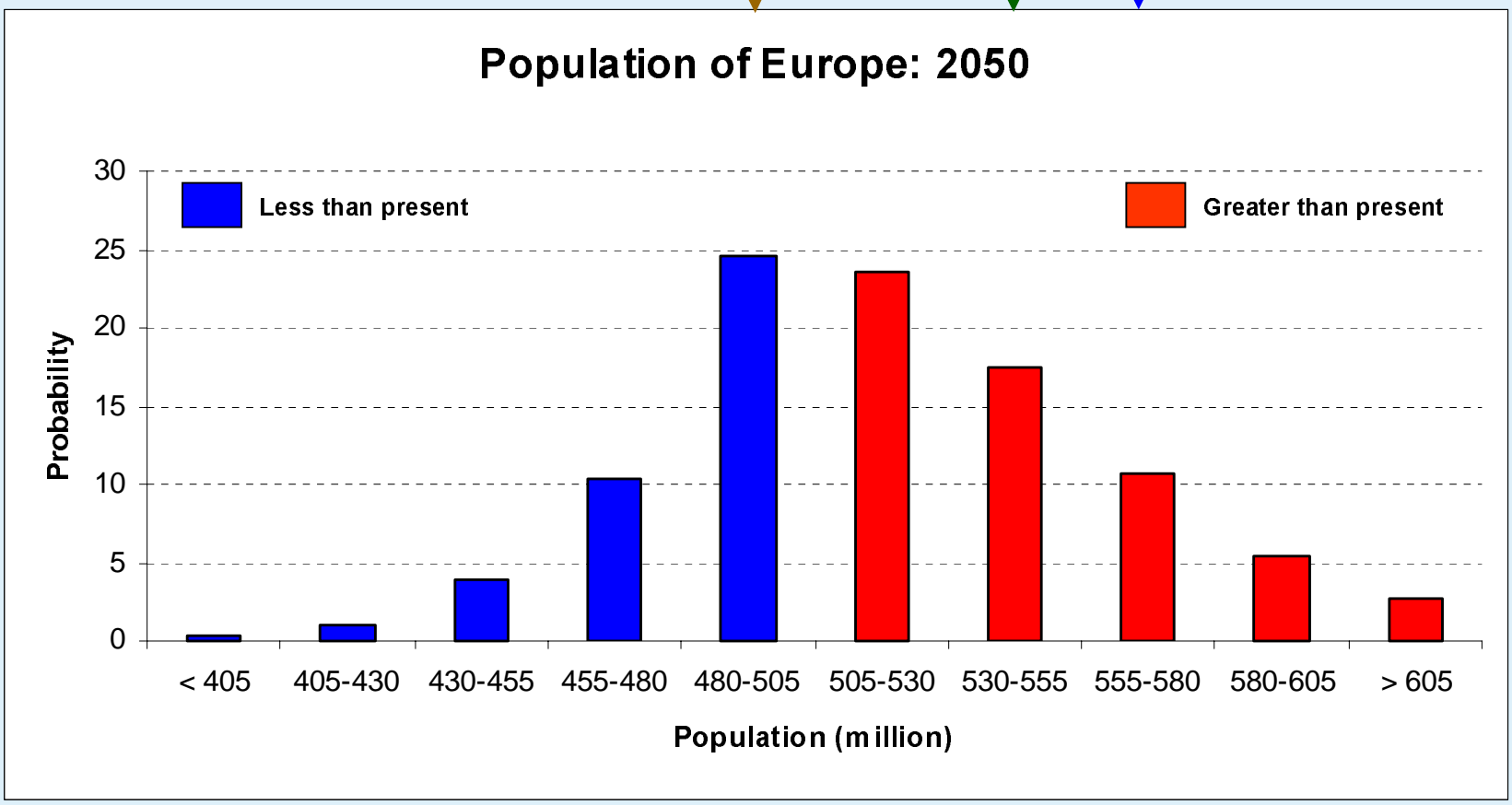


SRES

B2 **A1, B1** **A2**

↓ ↓ ↓

Population of Europe: 2050



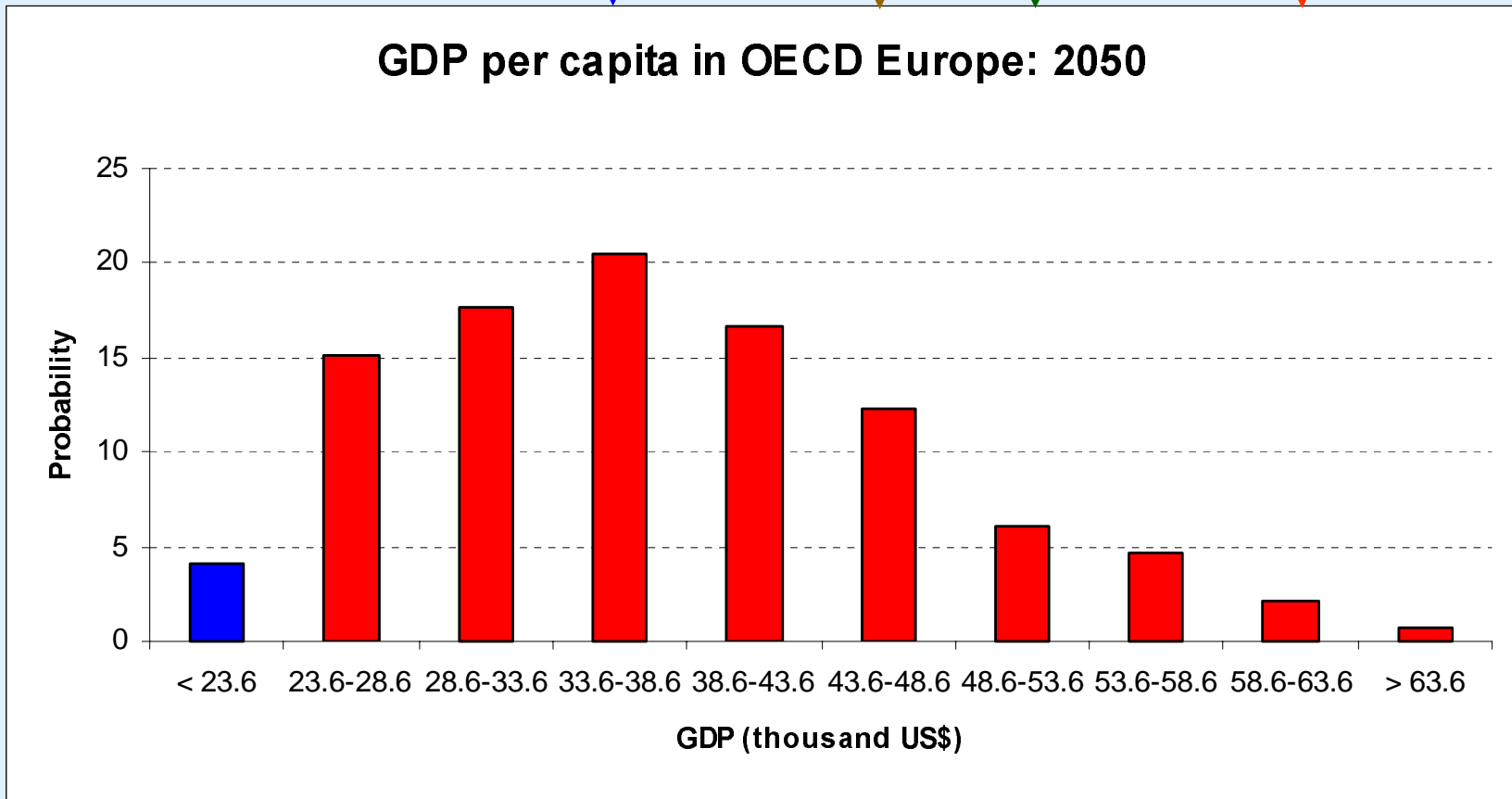
8.12.2003



SRES **A2** **B2** **B1** **A1**

↓ ↓ ↓ ↓

GDP per capita in OECD Europe: 2050



SRES

A2



B2



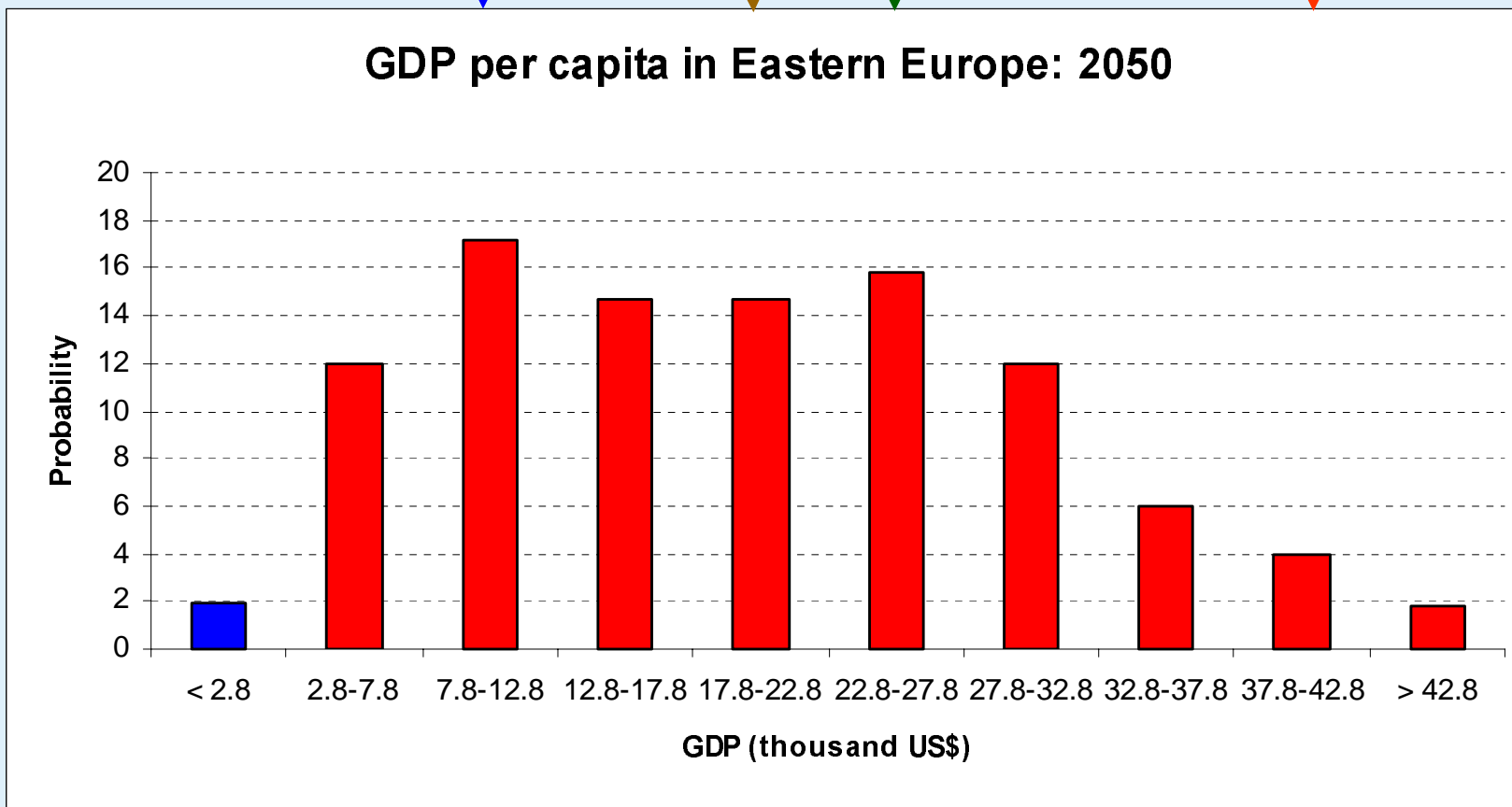
B1



A1

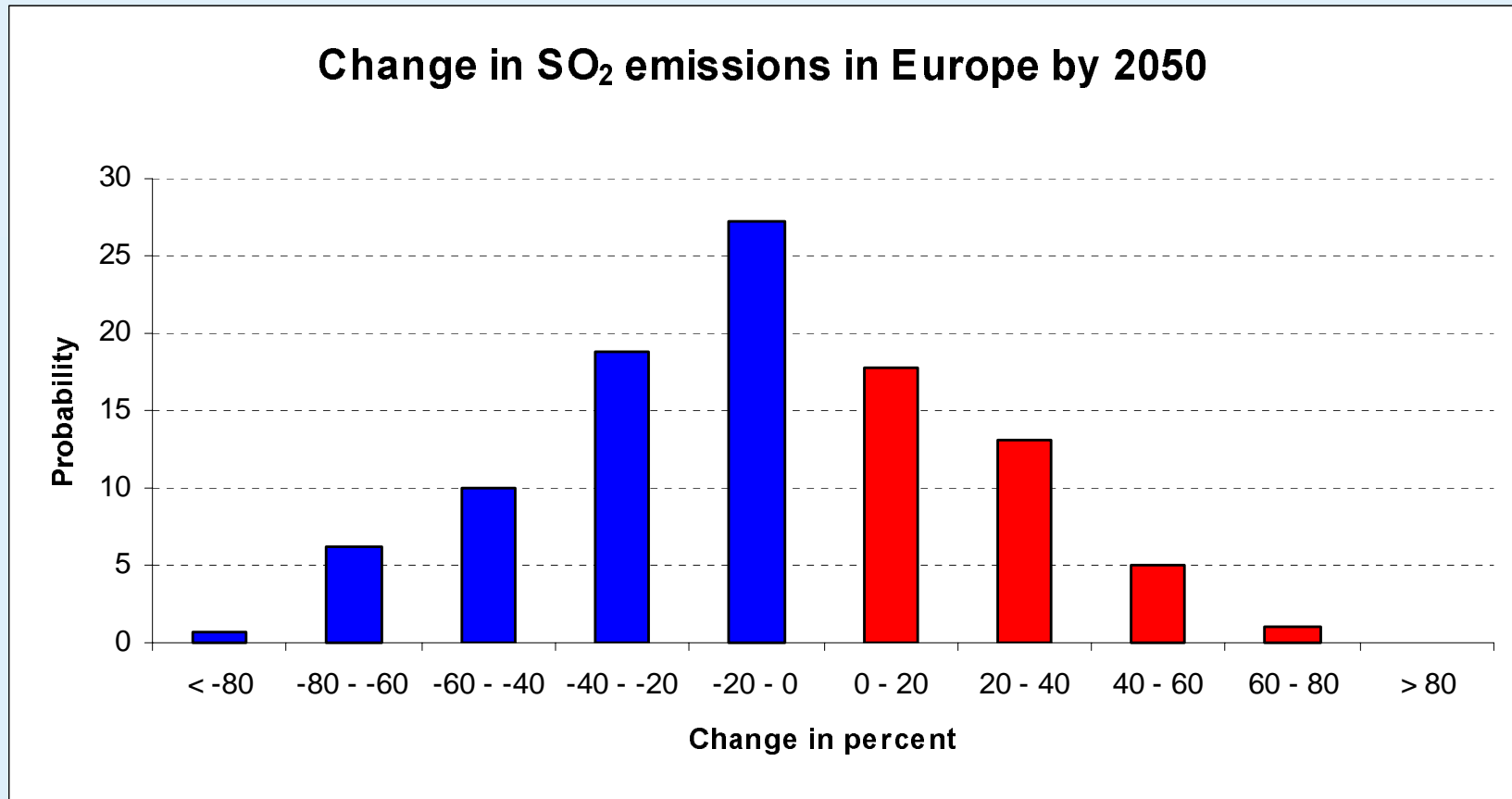


GDP per capita in Eastern Europe: 2050



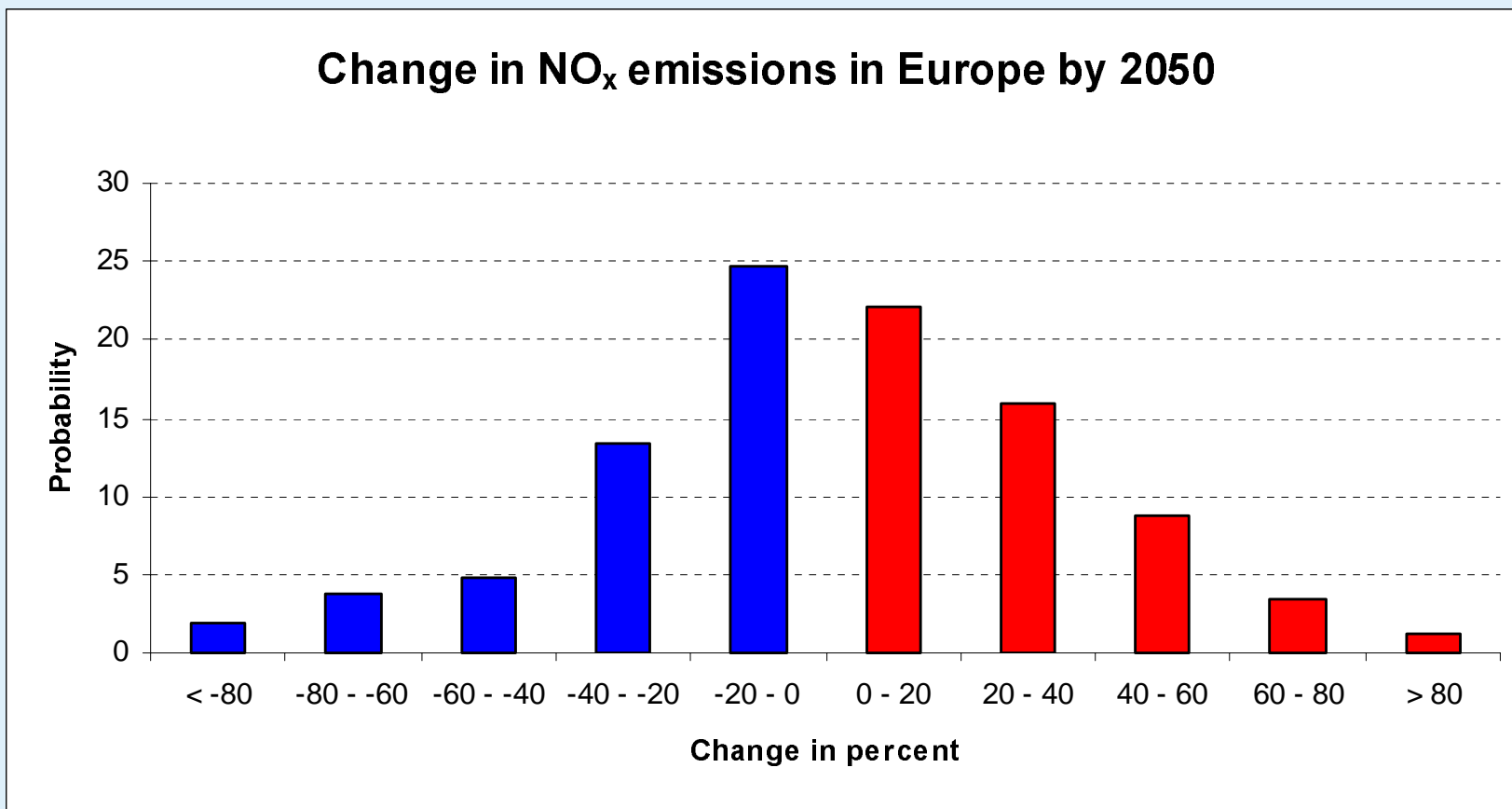


Change in SO₂ emissions in Europe by 2050





Change in NO_x emissions in Europe by 2050



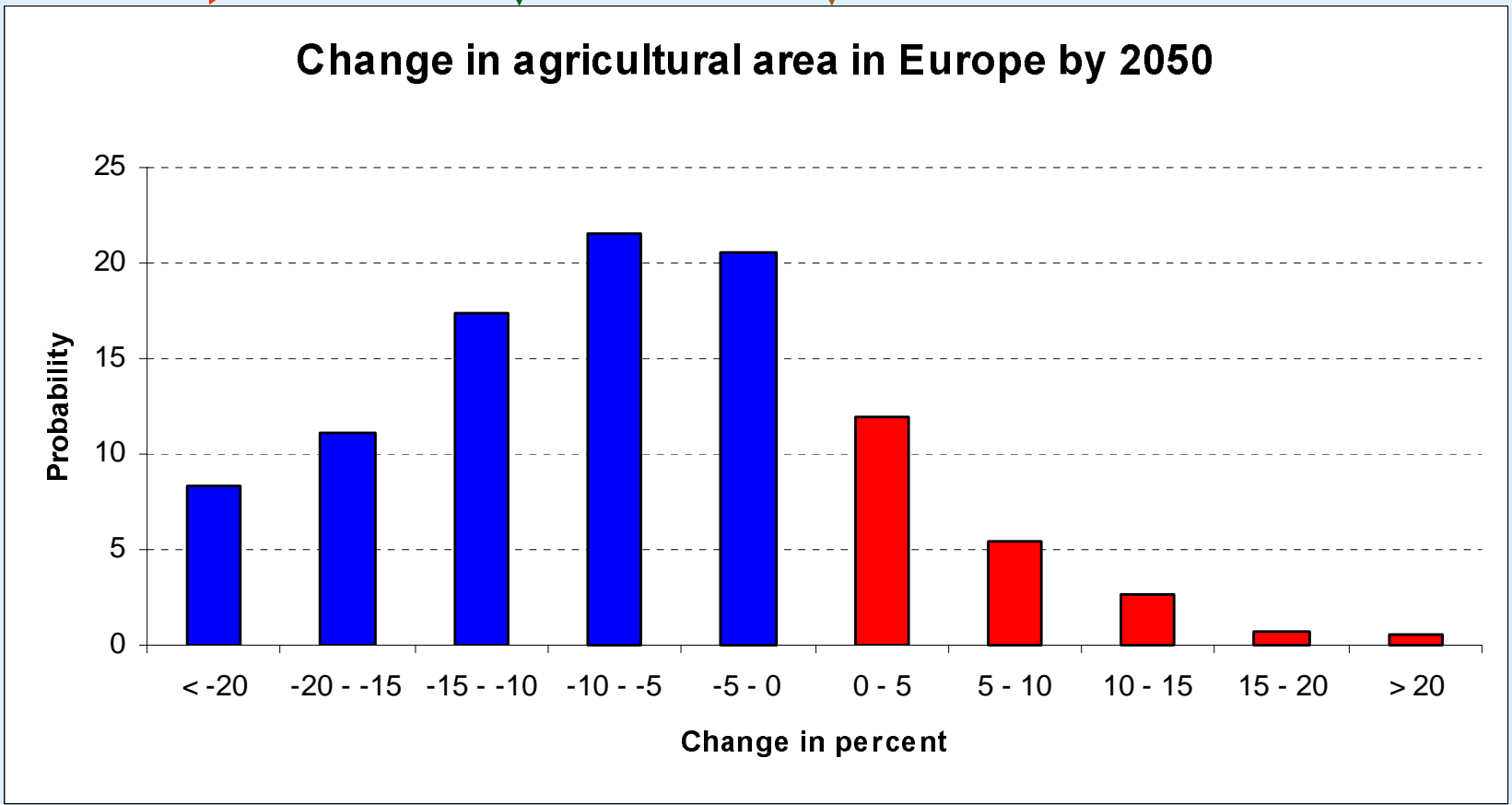
A1, A2
↓

B1
↓

B2
↓

ATEAM

Change in agricultural area in Europe by 2050



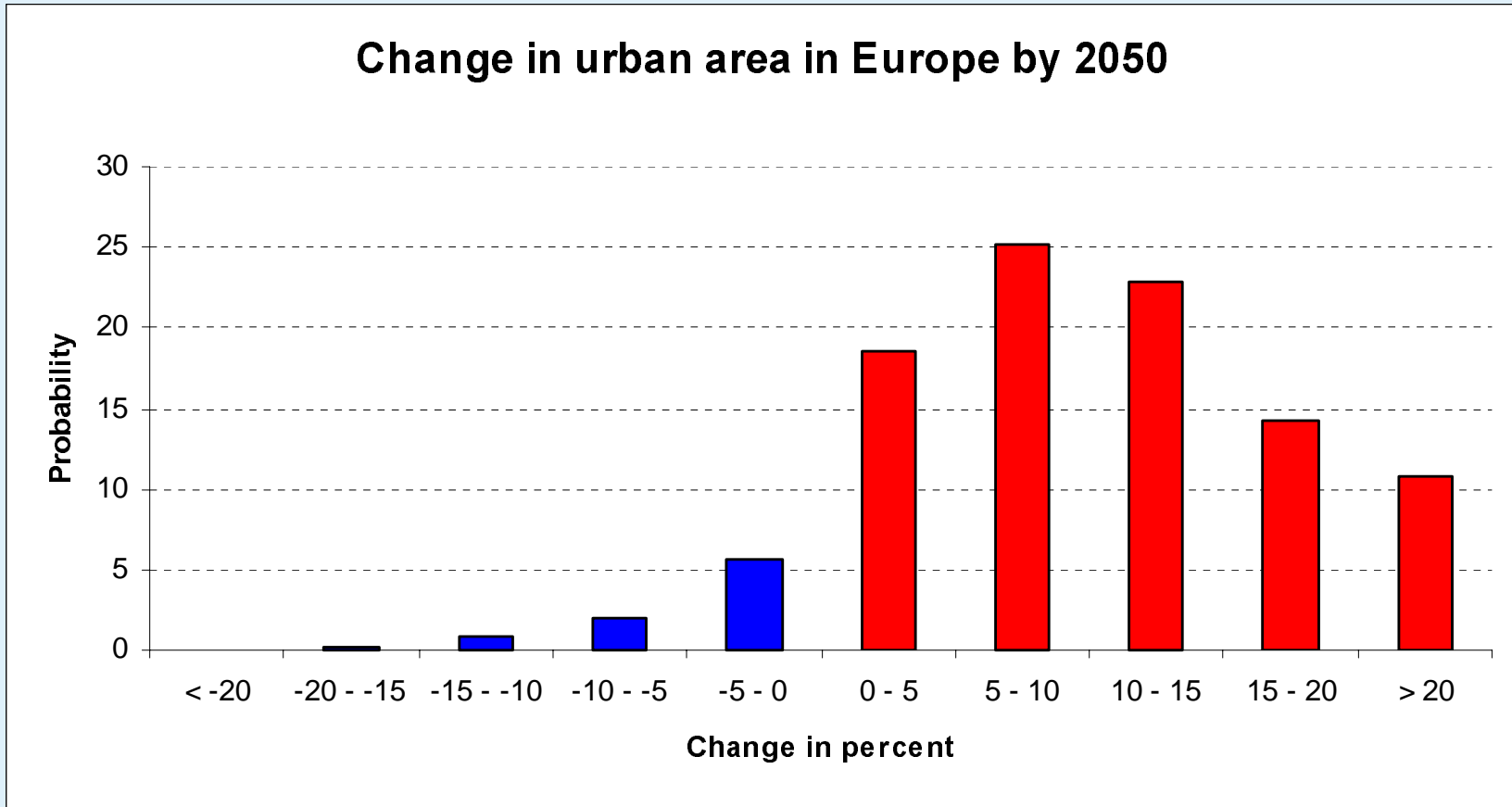
8.12.2003



SYKE



Change in urban area in Europe by 2050



ATEAM

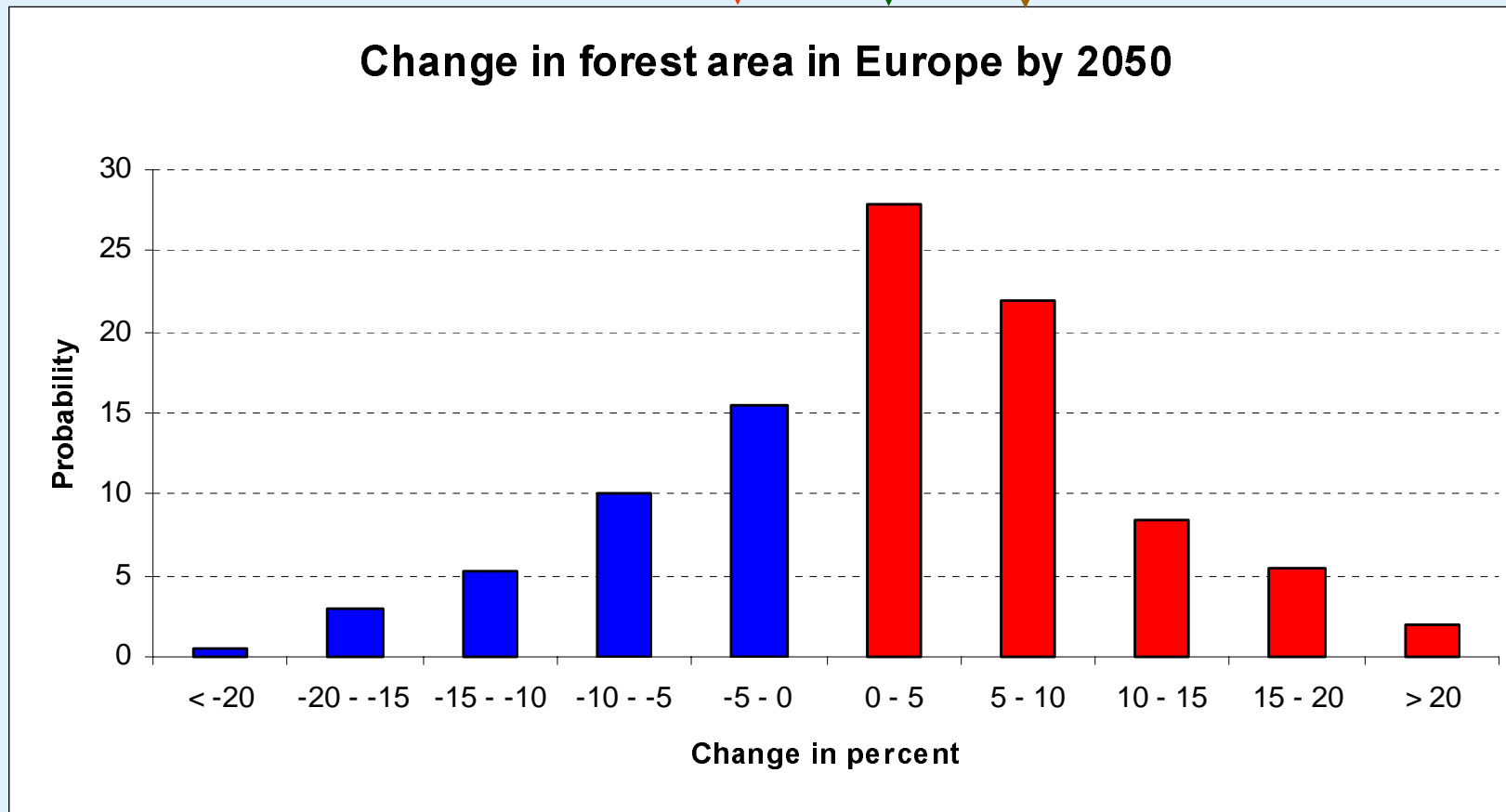
A1

A2, B1

B2



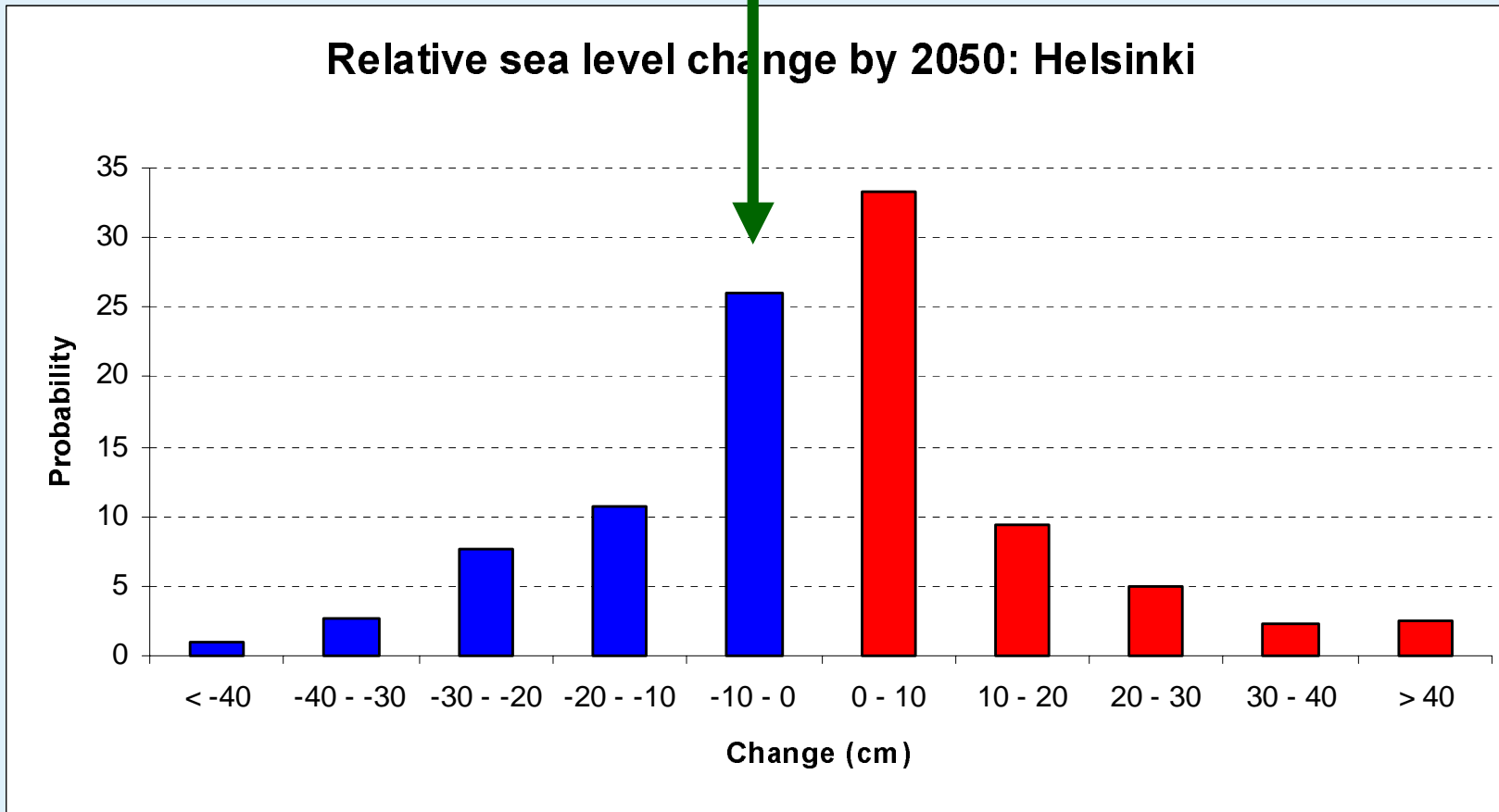
Change in forest area in Europe by 2050



A1, A2, B1, B2 (FINSKEN)

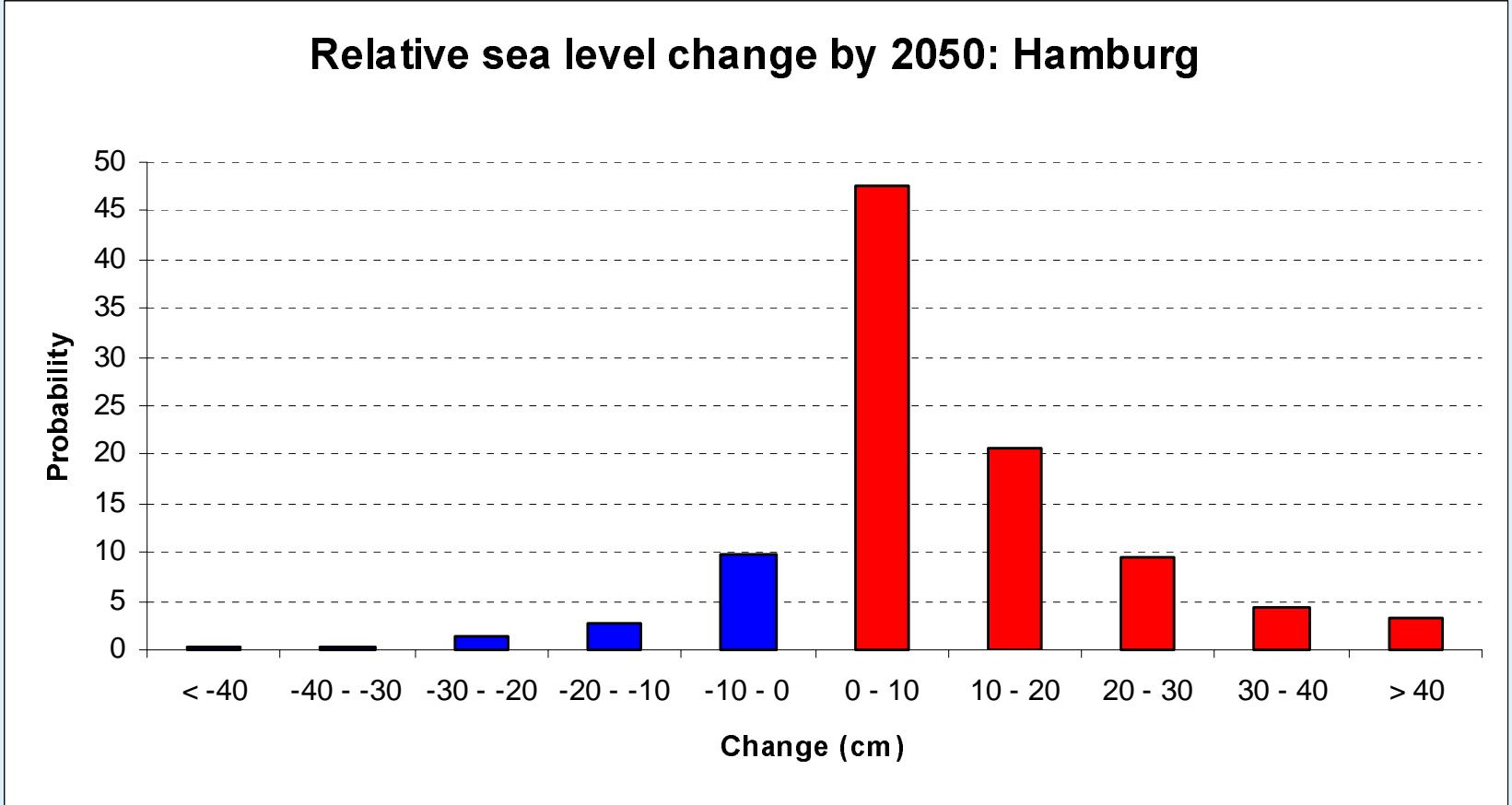


Relative sea level change by 2050: Helsinki





Relative sea level change by 2050: Hamburg

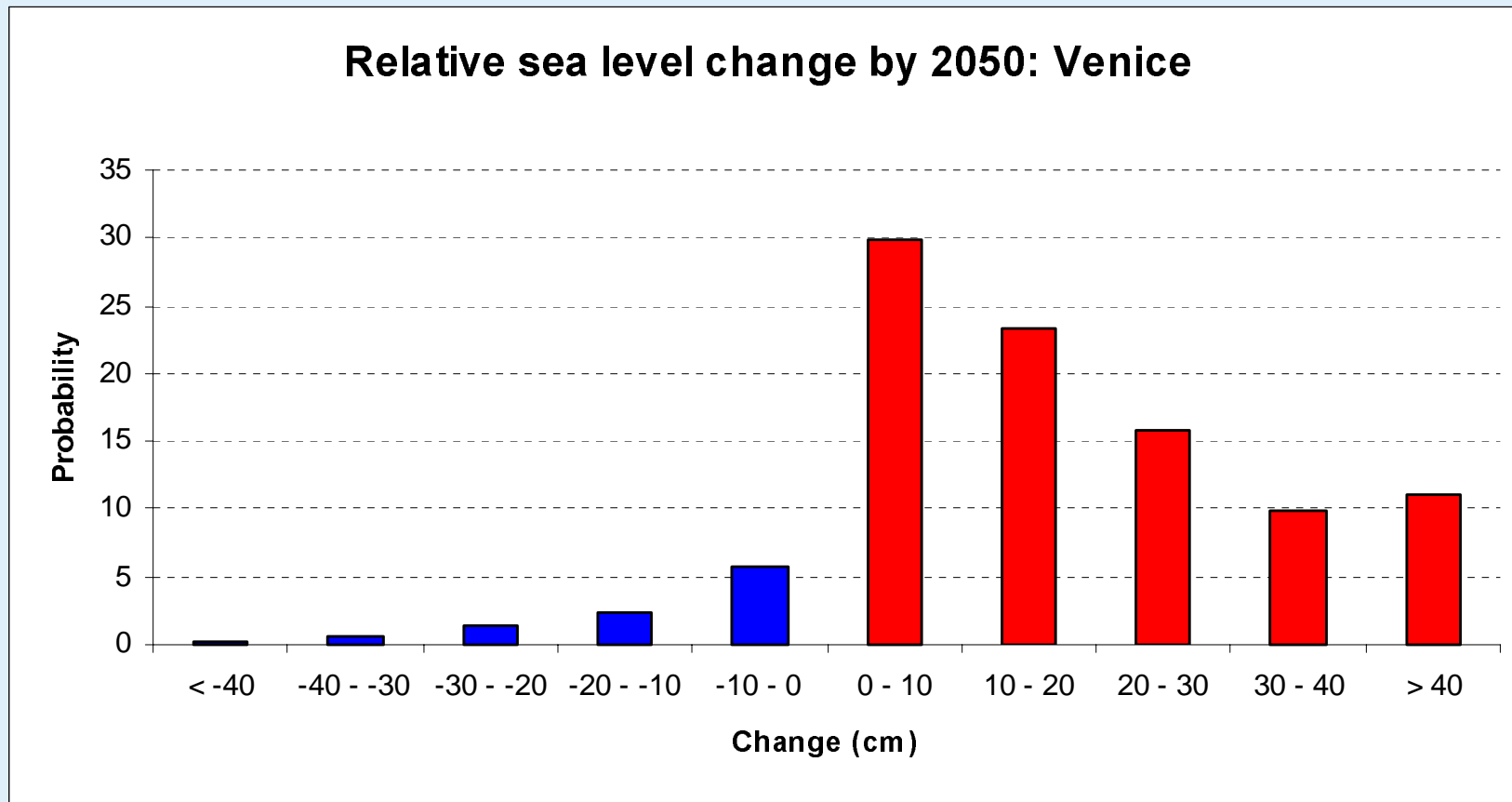


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S Y K E

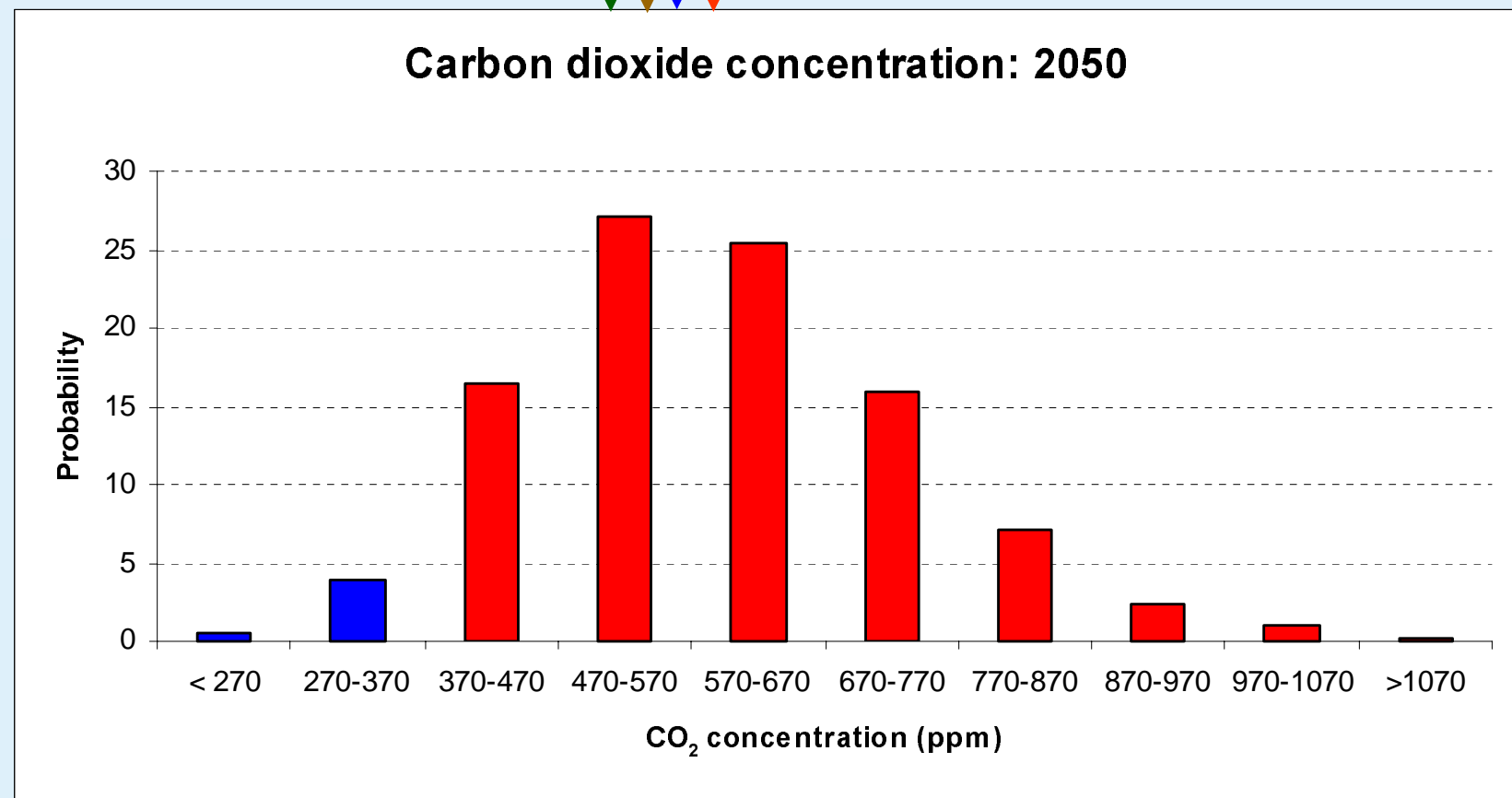
Relative sea level change by 2050: Venice



ATEAM

B1 BAA1

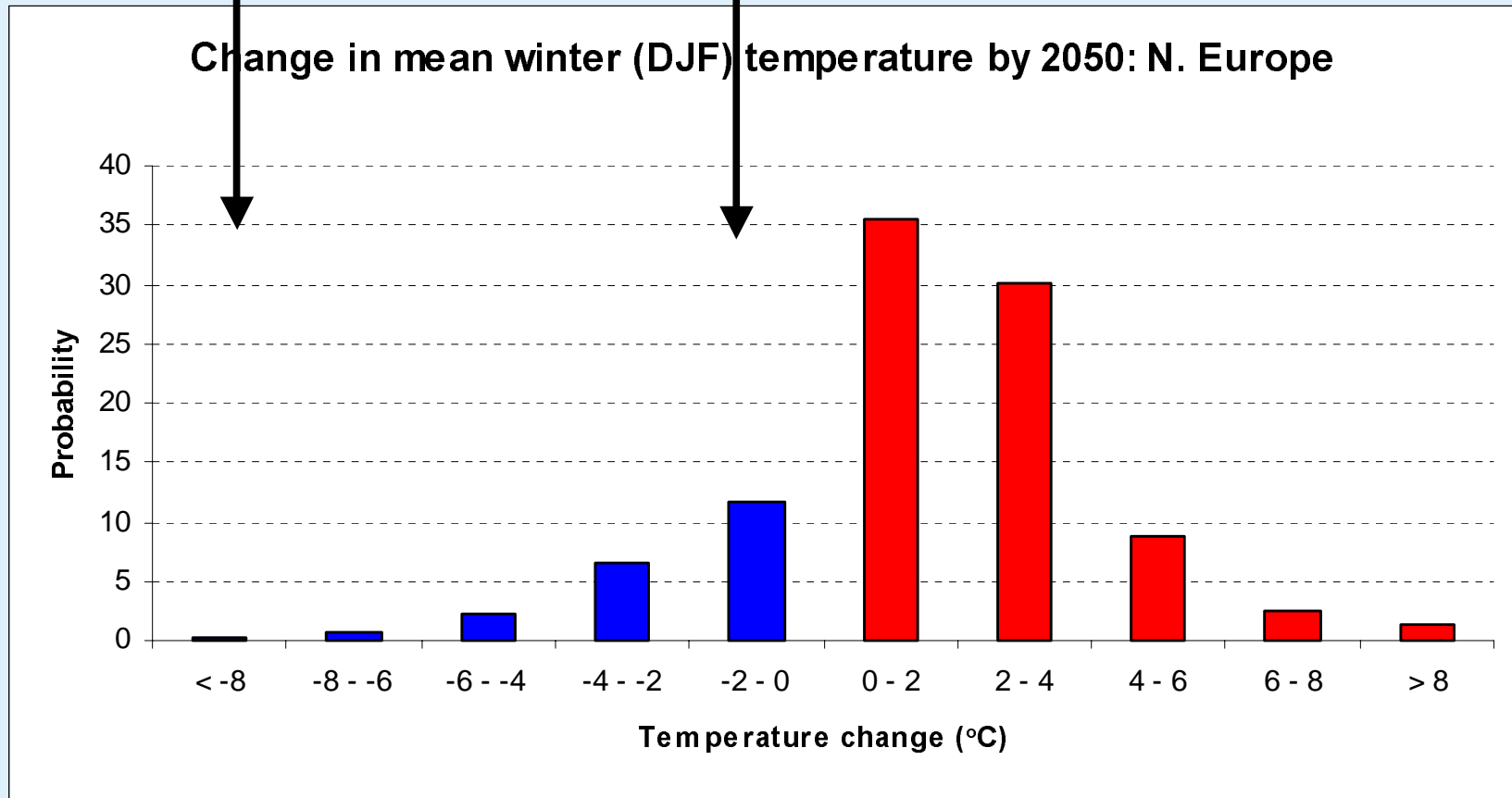
Carbon dioxide concentration: 2050



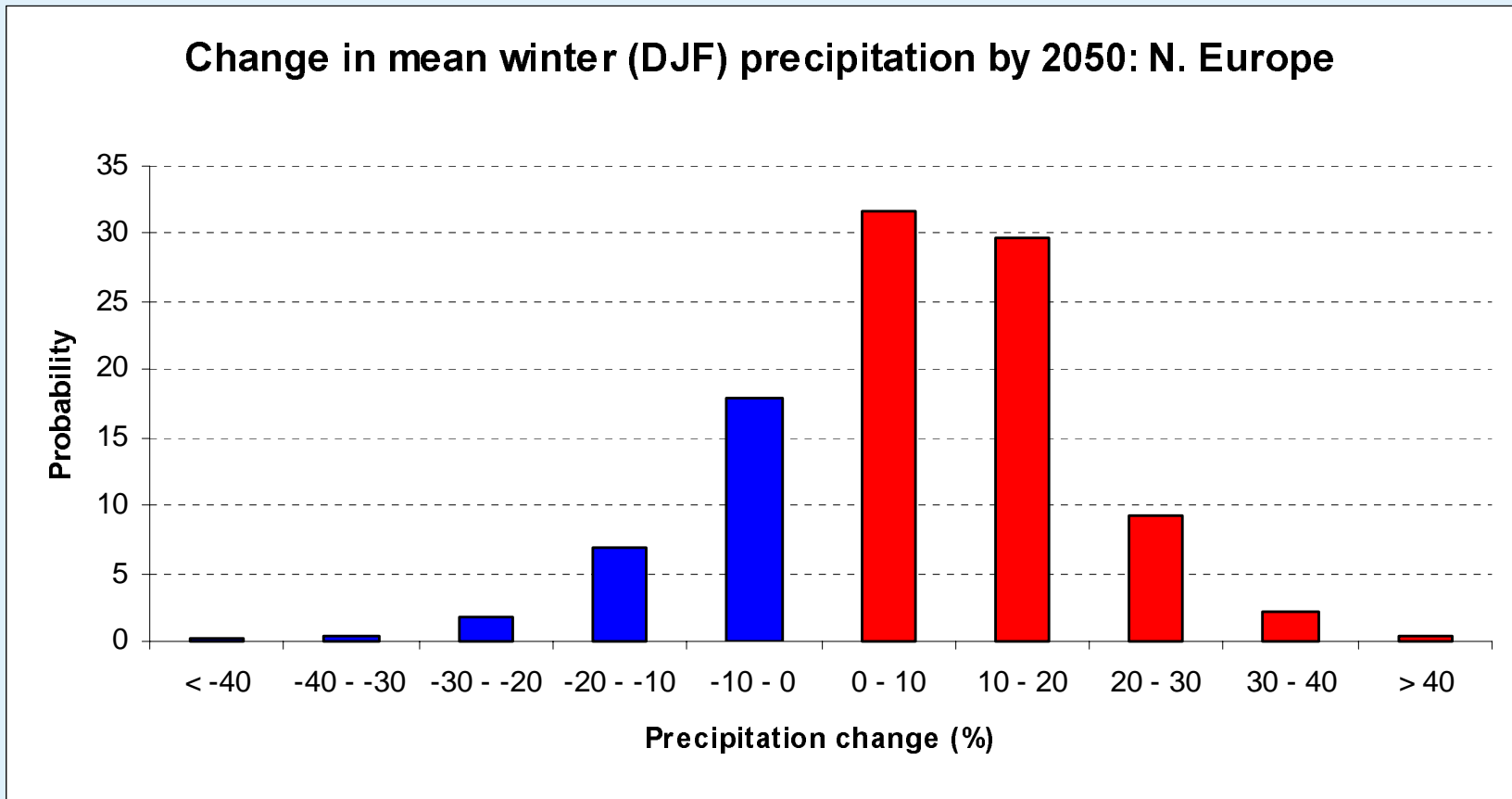
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Little Ice Age

Change in mean winter (DJF) temperature by 2050: N. Europe

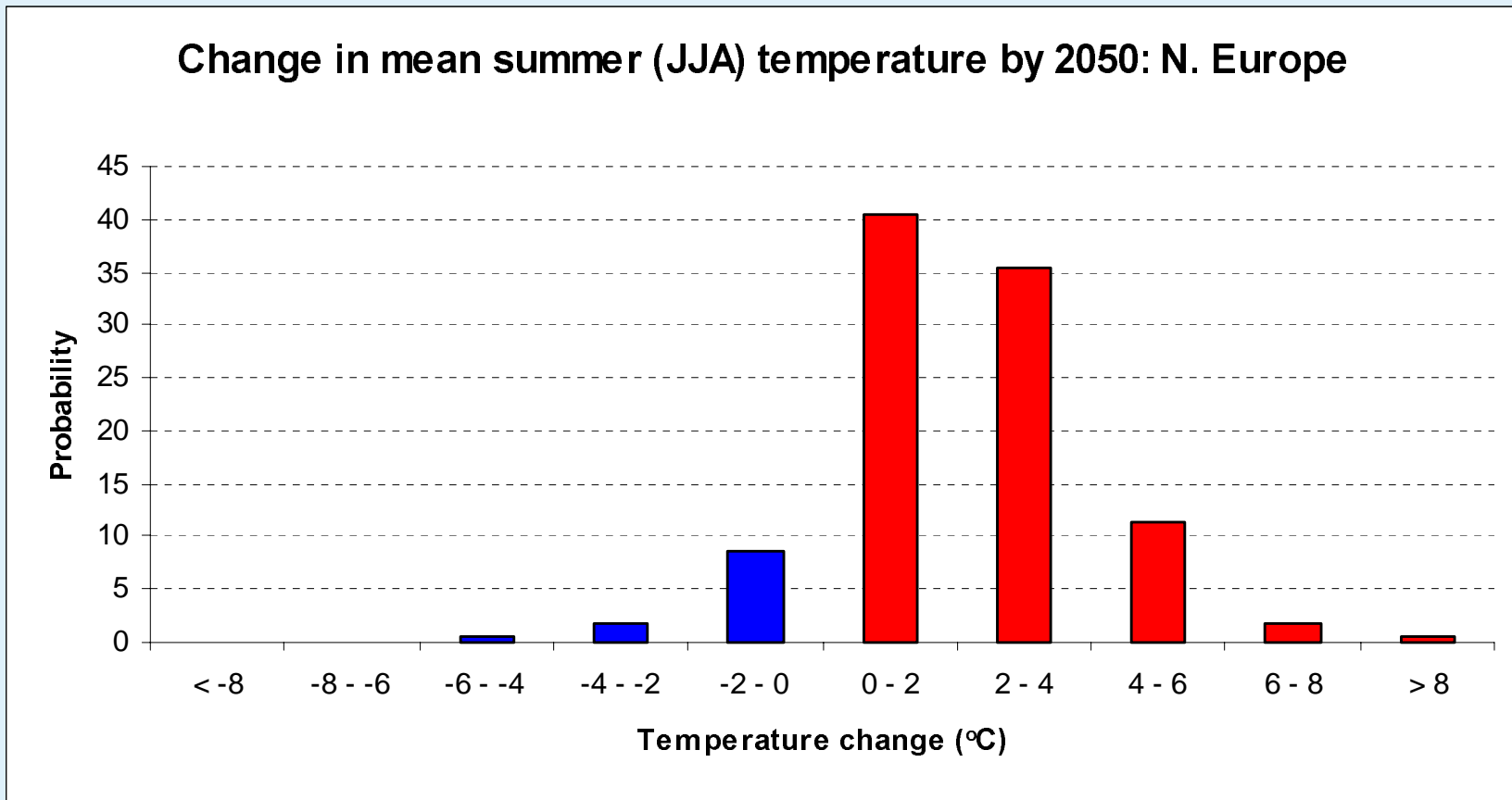


Change in mean winter (DJF) precipitation by 2050: N. Europe



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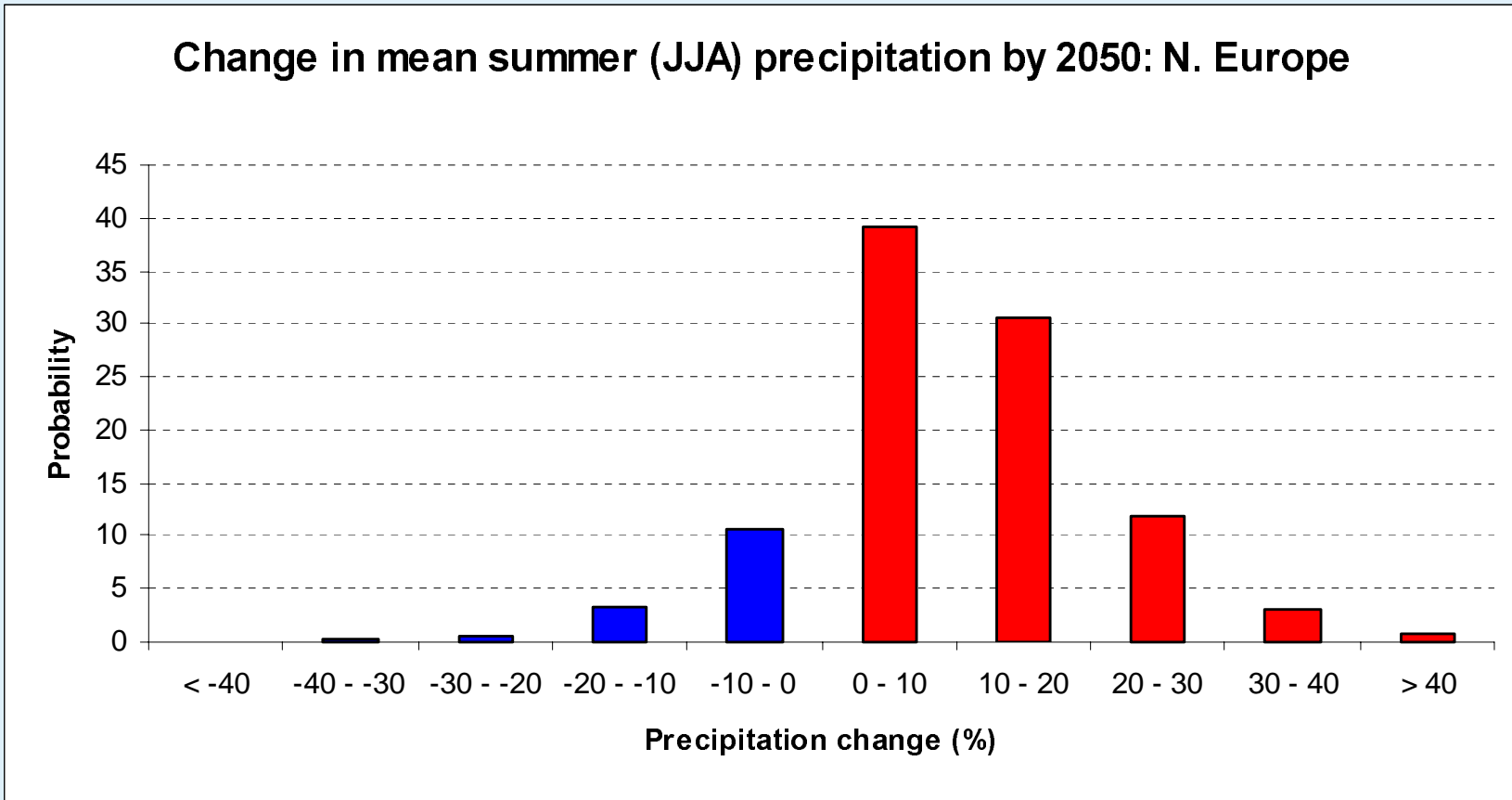
Change in mean summer (JJA) temperature by 2050: N. Europe



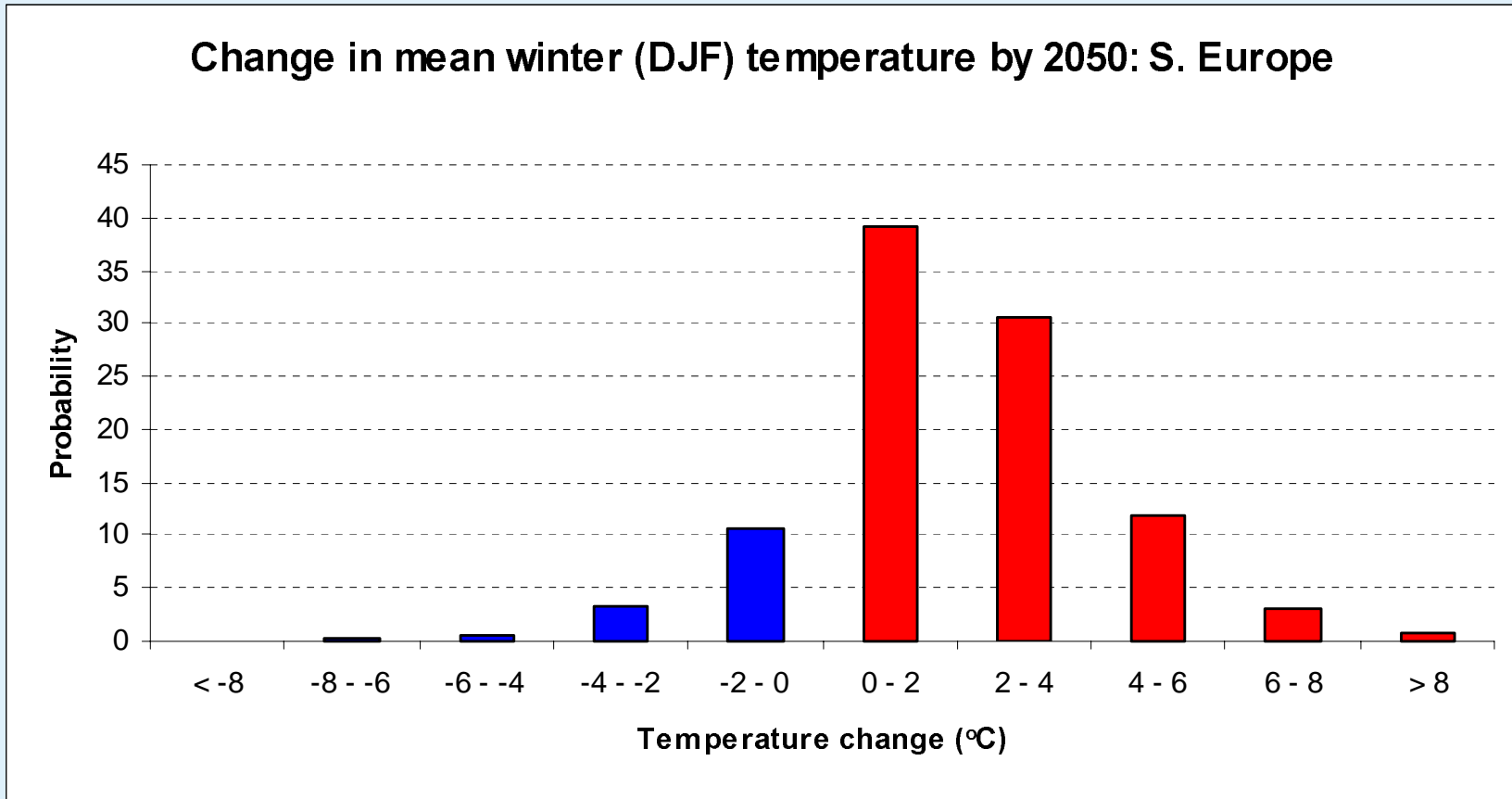
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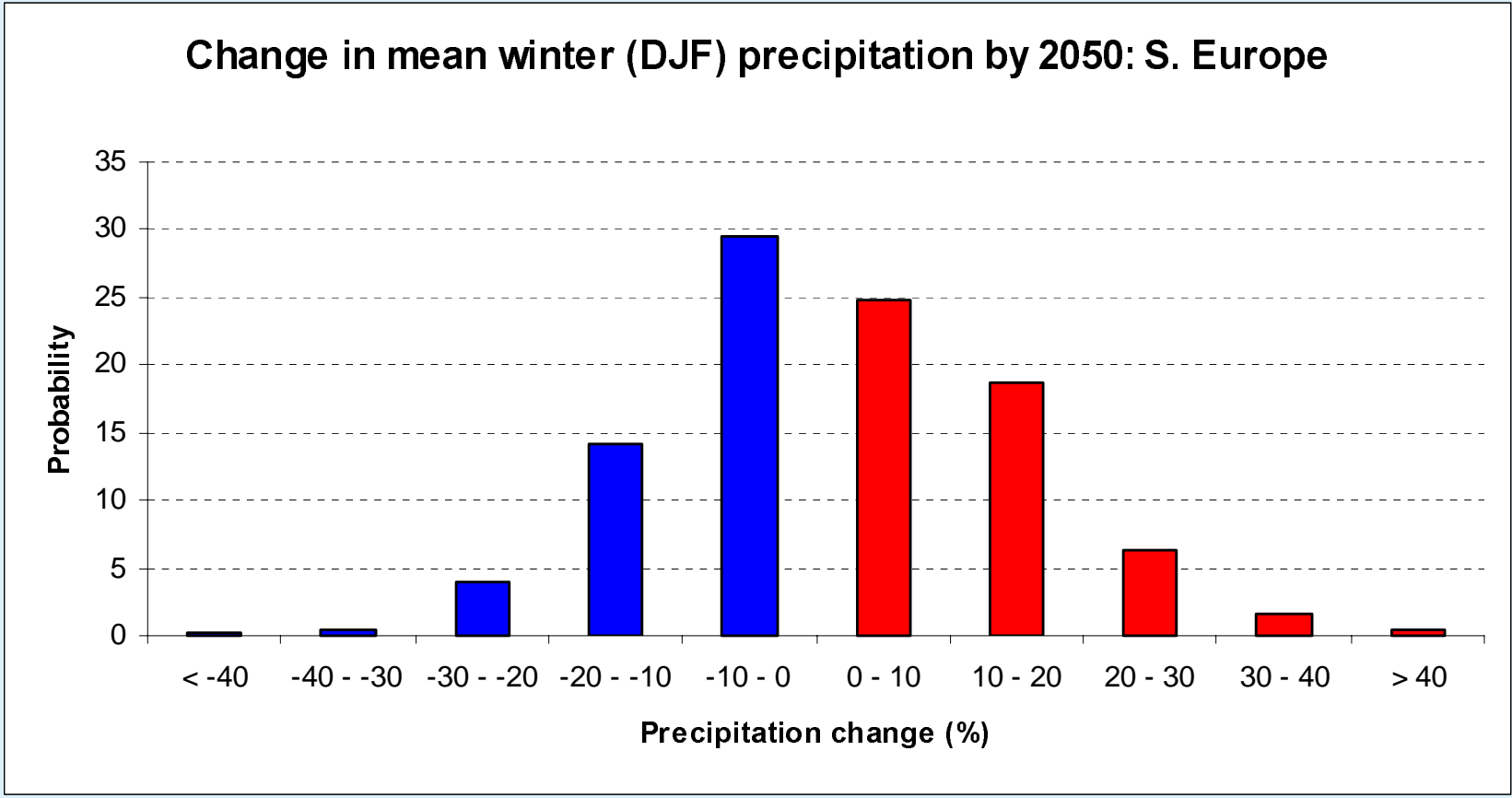
Change in mean summer (JJA) precipitation by 2050: N. Europe



Change in mean winter (DJF) temperature by 2050: S. Europe



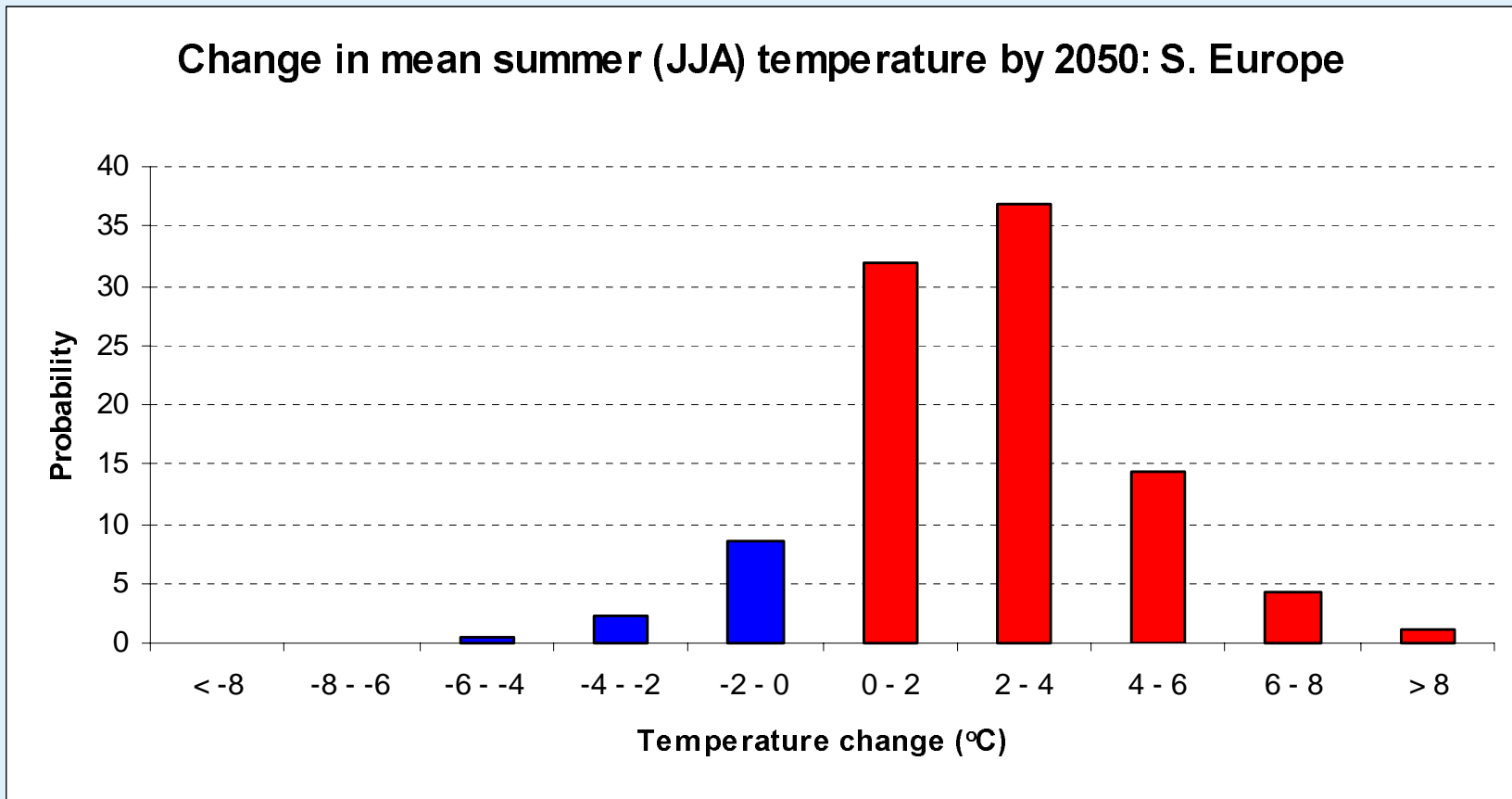
Change in mean winter (DJF) precipitation by 2050: S. Europe



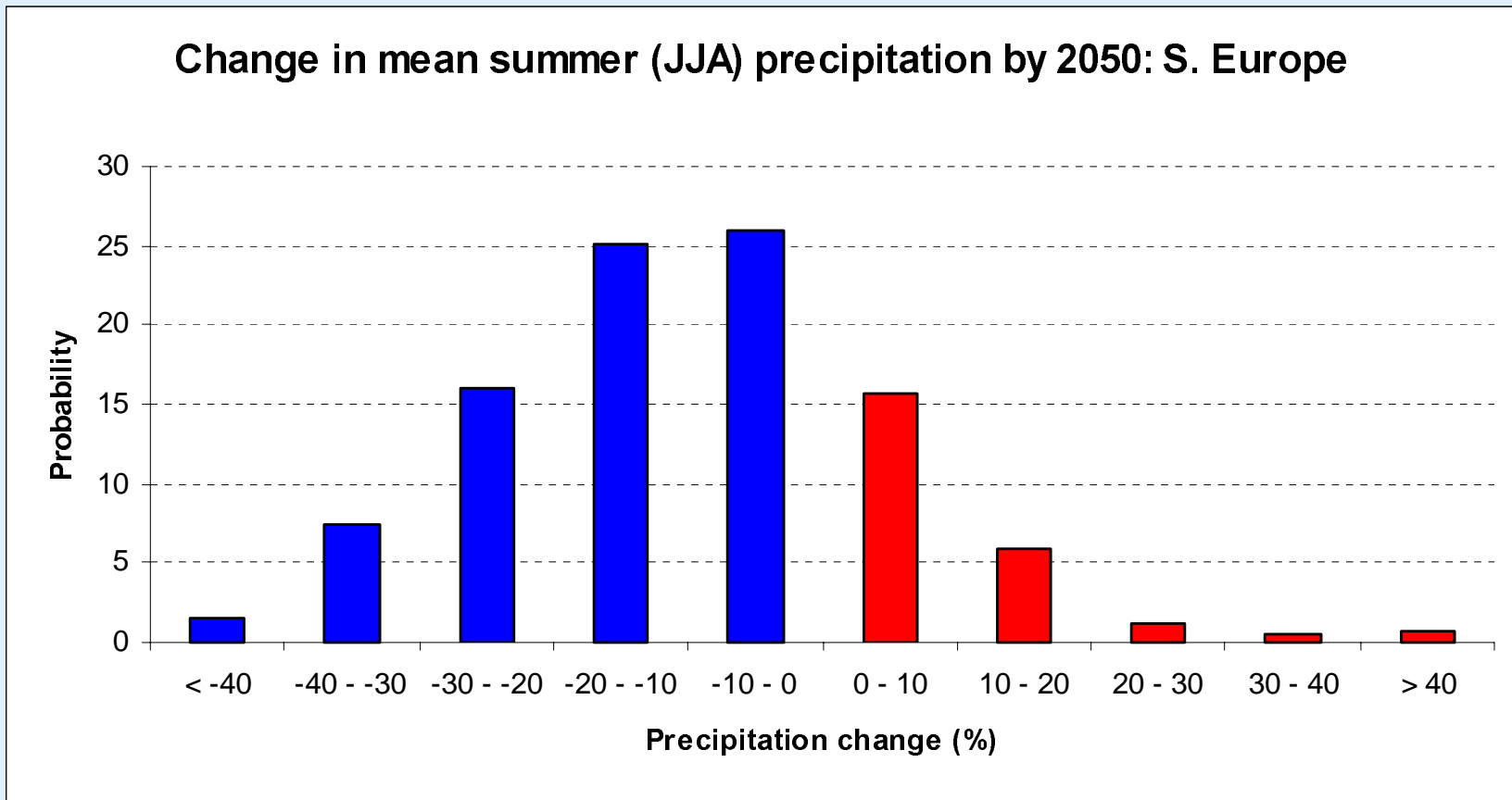
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Change in mean summer (JJA) temperature by 2050: S. Europe



Change in mean summer (JJA) precipitation by 2050: S. Europe





The End

Data providers: AVEC Summer School participants

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Direction: Tim

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