



A Long-Term
Biodiversity,
Ecosystem
And
Awareness
Research
Network



EU's 6th Framework Programme:
EU Network of Excellence No. 505298: ALTER-Net

ALTER-Net Summer School
Biodiversity and ecosystem services: ecological and socio-economic aspects
27 August - 8 September 2006, Peyresq, France

A questionnaire on Europe in the 2050s

Tim Carter

Finnish Environment Institute, SYKE

6.10.2006



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

Scenarios questionnaire

Some rules:

- Anonymous
- Please respond to all questions even if you think you know nothing about the measures listed
- Please complete this tonight
- No conferring with your neighbour
- You can complete it directly into an Excel sheet on your laptop or by hand and transfer to computer later
- Please return your completed file to me or to Rik

ALTER-Net 2050 Scenarios questionnaire

Please enter your estimate of the percentage likelihood of each outcome listed occurring by 2050

Population of Europe (505 million in 1995)											Totals
Population (million)	< 405	405-430	430-455	455-480	480-505	505-530	530-555	555-580	580-605	> 605	
Likelihood of occurrence (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
Gross Domestic Product (GDP) per capita (OECD Europe = 2800; Eastern Europe = 2800 in 1995)											
OECD Europe (thousand US\$)	< 2800	2800-3360	3360-3860	3860-4360	4360-4860	4860-5360	5360-5860	5860-6360	> 6360		
Likelihood of occurrence (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
Eastern Europe (thousand US\$)	< 280	280-780	780-1280	1280-1780	1780-2280	2280-2780	2780-3280	3280-3780	3780-4280	> 4280	
Likelihood of occurrence (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
Change in emissions of acidifying and eutrophying compounds (relative to 2000)											
Change in SO ₂ emissions (%)	< -80	-80 - -60	-60 - -40	-40 - -20	-20 - 0	0 - 20	20 - 40	40 - 60	60 - 80	> 80	
Likelihood of occurrence (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
Change in NO _x emissions (%)	< -80	-80 - -60	-60 - -40	-40 - -20	-20 - 0	0 - 20	20 - 40	40 - 60	60 - 80	> 80	
Likelihood of occurrence (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
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	
Likelihood of occurrence (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
Change in urban area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20	
Likelihood of occurrence (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
Change in forest area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20	
Likelihood of occurrence (%)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	0

Entries in percent

Check that total = 100

ALTER-Net 2050 Scenarios questionnaire

Please enter your estimate of the percentage likelihood of each outcome listed occurring by 2050

Population of Europe (505 million in 1995)											Totals	
Population (million)	< 405	405-430	430-455	455-480	480-505	505-530	530-555	555-580	580-605	> 605		
Likelihood of occurrence (%)	0	0	5	10	20	40	20	5			100	
Gross Domestic Product (GDP) per capita (OECD Europe = 23600; Eastern Europe = 2800 in 1995)											Enter value Integer between 0 and 100 (row sum should be 100)	
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-			0
Likelihood of occurrence (%)											0	
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		
Likelihood of occurrence (%)											0	
Change in emissions of acidifying and eutrophying compounds (relative to 2000)												
Change in SO ₂ emissions (%)	< -80	-80 - -60	-60 - -40	-40 - -20	-20 - 0	0 - 20	20 - 40	40 - 60	60 - 80	> 80		
Likelihood of occurrence (%)											0	
Change in NO _x emissions (%)	< -80	-80 - -60	-60 - -40	-40 - -20	-20 - 0	0 - 20	20 - 40	40 - 60	60 - 80	> 80		
Likelihood of occurrence (%)											0	
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		
Likelihood of occurrence (%)											0	
Change in urban area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20		
Likelihood of occurrence (%)											0	
Change in forest area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20		
Likelihood of occurrence (%)											0	

ALTER-Net 2050 Scenarios questionnaire

Please enter your estimate of the percentage likelihood of each outcome listed occurring by 2050

Population of Europe (505 million in 1995)											Totals	
Population (million)	< 405	405-430	430-455	455-480	480-505	505-530	530-555	555-580	580-605	> 605		
Likelihood of occurrence (%)												0
Gross Domestic Product (GDP) per capita (OECD Europe = 2800 in 1995; Eastern Europe = 2800 in 1995)												
OECD Europe (thousand US\$)	< 20	20-33.6	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			
Likelihood of occurrence (%)												0
Eastern Europe (thousand US\$)	< 20	20-22.8	22.8-17.8	17.8-22.8	22.8-27.8	27.8-32.8	32.8-37.8	37.8-42.8	> 42.8			
Likelihood of occurrence (%)												0
Change in emissions of acidifying and eutrophying compounds (relative to 2000)												
Change in SO ₂ emissions (%)	< -80	-80 - -60	-60 - -40	-40 - -20	-20 - 0	0 - 20	20 - 40	40 - 60	60 - 80	> 80		
Likelihood of occurrence (%)												0
Change in NO _x emissions (%)	< -80	-80 - -60	-60 - -40	-40 - -20	-20 - 0	0 - 20	20 - 40	40 - 60	60 - 80	> 80		
Likelihood of occurrence (%)												0
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		
Likelihood of occurrence (%)												0
Change in urban area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20		
Likelihood of occurrence (%)												0
Change in forest area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20		
Likelihood of occurrence (%)												0
Relative sea-level change (cm)												
Helsinki, Finland	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40		
Likelihood of occurrence (%)												0
Hamburg, Germany	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40		
Likelihood of occurrence (%)												0
Venice, Italy	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40		
Likelihood of occurrence (%)												0

Global mean annual CO ₂ concentration (~381 ppm at Mauna Loa, Hawaii in March 2006)											
CO2 concentration (ppm)	< 270	270-370	370-470	470-570	570-670	670-770	770-870	870-970	970-1070	>1070	
Likelihood of occurrence (%)											0
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	
Likelihood of occurrence (%)											0
Mean winter (DJF) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)											0
Mean summer (JJA) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8	
Likelihood of occurrence (%)											0
Mean summer (JJA) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)											0
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	
Likelihood of occurrence (%)											0
Mean winter (DJF) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)											0
Mean summer (JJA) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8	
Likelihood of occurrence (%)											0
Mean summer (JJA) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)											0

Are you more familiar with regions north or south of latitude 47.5°N?

You have been allocated the following random number:

Enter value
Integer between
0 and 100 (row
sum should be
100)

Error: row totals

EXIT

Global mean annual CO ₂ concentration (~381 ppm at Mauna Loa, Hawaii in March 2006)											
CO ₂ concentration (ppm)	< 270	270-370	370-470	470-570	570-670	670-770	770-870	870-970	970-1070	>1070	
Likelihood of occurrence (%)					20	20	30	20	10		100
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	
Likelihood of occurrence (%)				50	50						100
Mean winter (DJF) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)				40	60						100
Mean summer (JJA) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8	
Likelihood of occurrence (%)			20	30	50						100
Mean summer (JJA) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)					40	60					100
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	
Likelihood of occurrence (%)						70	20	10			100
Mean winter (DJF) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)				10	20	40	20	10			100
Mean summer (JJA) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8	
Likelihood of occurrence (%)					30	50	20				100
Mean summer (JJA) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)					20	80					100

Are you more familiar with regions north or south of latitude 47.5°N?

You have been allocated the following random number: **Region**
Enter N or S

Ready to exit



Vienna = 48.2°N

47.5°N

Global mean annual CO₂ concentration (~381 ppm at Mauna Loa, Hawaii in March 2006)

CO2 concentration (ppm)	< 270	270-370	370-470	470-570	570-670	670-770	770-870	870-970	970-1070	>1070	
Likelihood of occurrence (%)					20	20	30	20	10		100

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	
Likelihood of occurrence (%)				50	50						100
Mean winter (DJF) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)				40	60						100
Mean summer (JJA) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8	
Likelihood of occurrence (%)			20	30	50						100
Mean summer (JJA) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)					40	60					100

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	
Likelihood of occurrence (%)						70	20	10			100
Mean winter (DJF) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)				10	20	40	20	10			100
Mean summer (JJA) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8	
Likelihood of occurrence (%)					30	50	20				100
Mean summer (JJA) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)					20	80					100

Are you more familiar with regions north or south of latitude 47.5°N?

You have been allocated the following random number: **Region**
Enter N or S

Ready to exit

EXIT

Global mean annual CO₂ concentration (~381 ppm at Mauna Loa, Hawaii in March 2006)

CO2 concentration (ppm)	< 270	270-370	370-470	470-570	570-670	670-770	770-870	870-970	970-1070	>1070	
Likelihood of occurrence (%)					20	20	30	20	10		100

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	
Likelihood of occurrence (%)				50	50						100
Mean winter (DJF) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)				40	60						100
Mean summer (JJA) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8	
Likelihood of occurrence (%)			20	30	50						100
Mean summer (JJA) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)					40	60					100

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	
Likelihood of occurrence (%)						70	20	10			100
Mean winter (DJF) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)				10	20	40	20	10			100
Mean summer (JJA) temperature change (°C)	< -8	-8 - -6	-6 - -4	-4 - -2	-2 - 0	0 - 2	2 - 4	4 - 6	6 - 8	> 8	
Likelihood of occurrence (%)					30	50	20				100
Mean summer (JJA) precipitation change (%)	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)					20	80					100

Are you more familiar with regions north or south of latitude 47.5°N?

Press to exit

You have been allocated the following random number: Region Enter N or S

Ready to exit

EXIT

ALTER-Net 2050 Scenarios questionnaire

Please enter your estimate of the percentage likelihood of each outcome listed occurring by 2050

ALTER-Net Questionnaire

Welcome.

You are a new respondent.
Please supply entries to the
empty boxes under each
category. You should provide
responses to all 20 categories.
Have fun!

Likelihood of occurrence (%)											Totals
Change in population in 1995	< 405	405-430	430-455	455-480	480-505	505-530	530-555	555-580	580-605	> 605	
											0
Population per capita (OECD Europe = 23600; Eastern Europe = 2800 in 1995)											
Population per capita	< 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	
Likelihood of occurrence (%)											0
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	
Likelihood of occurrence (%)											0
Change in emissions of acidifying and eutrophying compounds (relative to 2000)											
Change in SO ₂ emissions (%)	< -80	-80 - -60	-60 - -40	-40 - -20	-20 - 0	0 - 20	20 - 40	40 - 60	60 - 80	> 80	
Likelihood of occurrence (%)											0
Change in NO _x emissions (%)	< -80	-80 - -60	-60 - -40	-40 - -20	-20 - 0	0 - 20	20 - 40	40 - 60	60 - 80	> 80	
Likelihood of occurrence (%)											0
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	
Likelihood of occurrence (%)											0
Change in urban area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20	
Likelihood of occurrence (%)											0
Change in forest area (%)	< -20	-20 - -15	-15 - -10	-10 - -5	-5 - 0	0 - 5	5 - 10	10 - 15	15 - 20	> 20	
Likelihood of occurrence (%)											0
Relative sea-level change (cm)											
Helsinki, Finland	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)											0
Hamburg, Germany	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)											0
Venice, Italy	< -40	-40 - -30	-30 - -20	-20 - -10	-10 - 0	0 - 10	10 - 20	20 - 30	30 - 40	> 40	
Likelihood of occurrence (%)											0



A Long-Term
Biodiversity,
Ecosystem
And
Awareness
Research
Network



EU's 6th Framework Programme:
EU Network of Excellence No. 505298: ALTER-Net

ALTER-Net Summer School
Biodiversity and ecosystem services: ecological and socio-economic aspects
27 August - 8 September 2006, Peyresq, France

Scenarios questionnaire

Good luck!

6.10.2006

