

Climate Change Adaptation



Background report to the IA Part II

Stakeholder Involvement

ENVIRONMENT
AGENCY AUSTRIA **umwelt**bundesamt^U

 **Fresh Thoughts
Consulting**
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RICARDO-AEA

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1 EXECUTIVE SUMMARY

For complex and socially relevant issues - such as climate change adaptation - a broad discourse with stakeholders is important for the policy-making process to enhance its quality of the content and the implementation success. Thus, stakeholder involvement with the aim to raise awareness, provide relevant information and gather expectations and needs are important elements in the development process of the EU Adaptation Strategy.

From January 2012 to the end of October 2012, stakeholder involvement activities to support the development of the EU Adaptation Strategy were carried out on two levels: (i) stakeholder involvement with different Commission Services, Member States, private sector and stakeholders for specific themes and (ii) public consultation via the online consultation on 'Your Voice in Europe'.

For the specific themes, the identification of relevant stakeholders was carried out in close agreement with the Commission. Questions were used to guide the selection of stakeholders, such as "*Who will be affected by climate change*"; "*Who can contribute to the quality of the EU strategy*"; "*Who will need to take adaptation actions?*". The stakeholder involvement events provided an arena for exchanging knowledge on the issue of climate change adaptation and on practical experiences.

To involve the broader public, a public consultation was carried out by DG CLIMA with the objective to collect opinions from stakeholders and experts in the field of adaptation to climate change. The "Consultation on the preparation of the EU Adaptation Strategy" was open from 21.05.2012 – 20.08.2012 on the website "Your Voice in Europe".

Every single activity was documented to secure the transparency of the stakeholder involvement processes and enhance the usability of key results to be included in the EU Adaptation Strategy (and accompanying documents) by using a common structure. Meetings and formats used for stakeholder involvement as well as results gained from the public consultation are described in detail in chapters 3 and 4.

Stakeholder groups involved and methods used

For stakeholder involvement within the **Commission**, lunchtime seminars (1.5h workshops, lecture setting with 30-60 people) were held with DG MARE, DG SANCO, DG MOVE, DG REGIO and DG's dealing with social issues. The specific aims of these seminars were to increase the general awareness on climate change, to provide information on the approach towards an EU Adaptation Strategy and to obtain information on the issue and the current state of adaptation from the DGs.

The stakeholder process with **Member State representatives** identified the need and opportunity to engage with different regions in Europe. Two meetings were carried out in specific regions – central/eastern Europe (with approx. 30 persons attending) and southern Europe (with approx. 20 persons attending). Furthermore, a scheduled conference (Second



Nordic International Conference on Climate Change Adaptation in Helsinki) was used to gain input from the Nordic countries. The meetings (1-2 days; interactive workshop setting; change between plenary and working groups) were structured in a similar way to gain comparable results and to provide good coverage for feedback on the needs and expectations from central/eastern, southern and northern Europe. The focus was on the needs and expectations of European guidance to support the elaboration of national adaptation policies (i.e. strategies and action plans).

In addition, five other scheduled meetings were used to involve stakeholders from the Member States in the development process of the EU Adaptation Strategy (EIONET, organised and hosted by EEA; 2 EPA Interest Group on Climate Change Adaptation, meetings chaired by PBL Netherlands; 2 Adaptation steering group meetings, organised and hosted by DG CLIMA). In general, these workshop sessions (2-3 hours; interactive workshops setting; change between plenary and working groups) aimed to provide information on the development of the EU Adaptation Strategy and offered an arena for sharing knowledge and experience on adaptation policy and practice. With the exception of the ASG meetings, all events mentioned were used to discuss the desired support/content of a European guidance on national adaptation policies.

Stakeholders dealing with marine spatial planning and integrated coastal zone management were involved through a specific session in their first common meeting.

Stakeholders from the **private sector** were approached through two types of engagement: (i) a questionnaire and (ii) meetings for specific issues. The questionnaire with 12 closed questions was distributed to 43 private sector stakeholders in agriculture, construction, energy, transport, finance, insurance and organisations representing the interests of SMEs. Seven responses to the questionnaire were received, which provided relevant insights on adaptation issues for the private sector.

In addition, the private sector was engaged by establishing a two-way dialogue and a productive working relationship. Dialogues with the following stakeholders were carried out: CEN/CENELER (1.5h meeting); CEN/CENELER together with stakeholders from European transport sector (half day-workshop); experts on climate scenarios and (the costs of) natural disasters (1-day workshop); forest experts (1-day workshop) and insurance experts (three 1-day workshops). All events aimed at collecting inputs from practitioners and mobilising the experiences of the private sector about climate change adaptation.

For the broad involvement of the **public**, the information on the public consultation for the strategy was circulated via various networks such as the Adaptation Steering Group, CIRCLE-2-network, etc. The public consultation received a total of 164 responses.

Selected results from stakeholder involvement

The stakeholder meetings with representatives from the Member States and the private sector were used to discuss the various approaches taken towards adaptation, existing knowledge gaps (e.g. in regional vulnerability assessments) and other barriers (e.g. insufficient financial resources) that might hinder the process. Most stakeholders contributed substantially to the discussions and some highlighted adaptation as a new dimension and thus the events were also appreciated for both awareness raising and capacity building; this applies in particular to feedback from central/eastern European countries.

In general, the stakeholders involved in the development process of the strategy were supportive towards a European approach on adaptation to climate change. The stakeholders highlighted that the strategy will be especially useful for Member States and actors (e.g. from the private sector) that are less advanced on the issue of climate change adaptation.

Within the public consultation the overall focus was on the role of the EU in encouraging and supporting adaptation efforts at more regional/local governmental level and within the private sector. With respect to facilitating research, participants viewed a strong involvement by national and regional governments as highly important, but that the EU should be most involved in research focussing on improving monitoring and evaluations systems.

More specifically, representatives from Member States made clear that a focus on **mainstreaming of adaptation into existing EU policies** and on the specific challenge of trans-national adaptation efforts would be an added value to the EU Adaptation Strategy. This too was confirmed by the public consultation results: just under ½ of participants selected reviewing EU legislation to facilitate mainstreaming as having added value. In addition, the stakeholders mentioned that the strategy should enhance the sharing of experiences and good practice on climate change adaptation, which can be provided by strengthened the European platform on climate change adaptation, Climate-ADAPT.

Representatives from Member States also widely agreed that the **development of guidelines for national adaptation policy making** would be of added value. They suggested that the guidance should be generic to cover differences among Member States (e.g. different governance structures) but also specific in providing tools and recommendations. The guidelines should also provide support to the process of setting up national adaptation policies but also on key issues to be considered when implementing and monitoring/evaluating. The presentation of good practice examples across Europe was also broadly welcomed. In the public consultation, over half of participants indicated that they welcome such guidance; the consultation also emphasized the need to include in the guidance documents methods for risk assessment and how to develop the strategies themselves.

Private sector involvement showed clearly that the issue of climate change adaptation is a new topic on their agenda and the process is mainly in an initial phase. Respondents to the public consultation highlighted the barrier “short-term vs. long-term horizons” as most significant. “Policy and regulatory weaknesses and change” was also often labelled as a very significant barrier for the private sector in adaptation. When writing in their own barriers, “Contradictory requirements from different EU policies” and their corresponding “Harmful

subsidies” came up a few times as well. Interestingly, the cost of adaptation was ranked as the lowest barrier, in part due the low scoring by the environmental NGO representatives (1.87 average). However, in the free form section a number of participants in the public consultation nevertheless highlighted “budgetary constraints” and “cost sharing issues” as barriers to making the economy more resilient.

To overcome these barriers, the EU could help the private sector strengthen its adaptive capacity through a number of actions. “Improving the climate resilience of infrastructure investments” including “Green infrastructure” were actions considered most relevant by respondents of the public consultation, receiving average scores of 4.2 and 3.9 (out of 5) respectively. “Addressing financial issues” and “emphasizing market-based instruments” were also considered medium to highly relevant, scoring an average 3.6 and 3.4 (out of 5), respectively. When asked to personally name additional actions the EU should take, respondents focussed on enhanced collaboration through networks and guidance covering a range of topics, such as economic valuation of environmental goods, interdependencies between sectors and on the regulatory framework.

On the issue of **standards** (with focus on transport), the stakeholders supported an EU approach on adaptation to integrate adaptation into existing key standards concerning long life cycles.

Stakeholders from the **forestry** sector saw themselves in a unique situation as on the one hand they play an important role in mitigating climate change, but on the other hand the sector also needs to adapt to the impacts from climate change. Additionally, the sector also serves as the basis for adaptation in other sectors (e.g. protection function of the forest sector against increased avalanches and landslides). Stakeholders argued that the overall discussions on adaptation at EU level hardly reach the ground (single forest owner) due to the diversity and fragmentation of the sector (few large companies versus several small forest owners). Thus, they considered awareness raising/communication and the provision of tools/methods for assessing impacts and supporting adaptation of crucial importance.

Overall, **barriers to adaptation policy making** was an issue for discussion at all stakeholder meetings and also addressed in the public consultation’s results. Representatives from Member States mentioned that the ‘lack of human and financial resources’ as well as ‘the lack of political commitment/will’ are key barriers for adaptation. Respondents to the public consultation also felt that the EU should be more involved in funding adaptation projects. Increasing direct funding for research was viewed as a highly potential action with the highest average ranking of 4.2. Furthermore, stakeholders at all meetings raised the issue of uncertainty and reported that the lack of dedicated research hinders the adaptation process. This is also supported by the feedback to the public consultation, where training and awareness was well received as well as strengthening policy-making overall and the science-policy interface specifically. In addition, communicating relevant information to decision makers was named as a challenging task. Participants to the public consultation also viewed communication and awareness-raising as topics that should especially be addressed by the EU. Decision-making under uncertainty, however, should be addressed at all governmental levels. In terms of support for trans-boundary issues, respondents felt the EU should focus on facilitating cooperation among counties and



providing funding for adverse effects of climate change and for increasing resilience and reducing vulnerability of affected countries.

The results of the stakeholder involvement will facilitate the Impact Assessment of the strategy (e.g. to develop main arguments for adaptation actions at EU level, to define adaptation baseline) and in particular feed into the potential policy options to be taken forward under the EU Adaptation Strategy.



2 INTRODUCTION: AIMS AND OBJECTIVES OF THE BACKGROUND REPORT PART II

Adaptation is a dynamic process and requires multiple iterations, either in response to new or improved information (e.g. better climate modelling, improved decision-making frameworks) or as the result of learning from other regions or partners elsewhere in Europe and beyond. The European Commission is currently in the process of developing an EU Adaptation Strategy with the general aim to enhance the preparedness and capacity to respond to the impacts of climate change of the EU, its Member States and regions, down to the local level.

Developing, negotiating and implementing an EU wide Adaptation Strategy requires, inter alia, adequate stakeholder involvement. Thus, stakeholder involvement with the aim to provide information and raise awareness in the context of the EU Adaptation Strategy (i.e. capacity building for adaptation) and gather expectations and needs are seen as important elements in the development process of the EU Adaptation Strategy. From January 2012 to the end of October 2012, activities have been carried out on two levels:

- Stakeholder involvement (within this support project)
 - Lunch time seminars with line DGs
 - Workshops with Member States
 - Engagement with the private sector
 - Stakeholder dialogues for specific-themes
- Public consultation (carried out by DG CLIMA)
 - Online consultation on 'Your Voice in Europe' open for all citizens and organisations (from 21st of May to 20th of August 2012)

This background report to the Impact Assessment (Part II) presents an overview of the stakeholder involvement activities and a summary of the main outcomes (cf. chapter 3) as well as the analysis of the public consultation (cf. chapter 4).

3 STAKEHOLDER INVOLVEMENT

3.1 Approaches and methods used

Within this support project, stakeholder involvement was carried out in various forms:

- Organise and convene capacity building activities - Lunch time seminars with line DGs
- Workshops with Member States
- Engagement with the private sector
- Stakeholder dialogues for specific themes

The identification of relevant stakeholders was conducted in close agreement with DG CLIMA (discussions on stakeholder involvement have been taken place at the Kick-Off meeting in December 2011, the Inception meeting in January 2012 and the Interim meeting in February 2012 and further throughout the duration of project).

In order to secure the transparency of the stakeholder involvement processes and enhance the usability of key results to be included in the EU Adaptation Strategy (and accompanying documents), every single activity has been documented by using a common structure. Meetings and formats used for stakeholder involvement as well as results gained are described in the following chapters.

3.2 Results

3.2.1 Lunch-time seminars with line DGs

The following lunchtime seminars were held:

- DG MARE (16th of March 2012)
- DG SANCO (29th May 2012)
- DG MOVE (26th of June 2012)
- DG REGIO (3rd of October 2012)
- Lunch-time seminar on social issues (24th of October 2012)

Lunch-time seminars have been organised and convened in close collaboration with DG CLIMA and the respective line DGs. Materials for the lunch-time seminars (e.g. State of play sheets, power point presentations) were provided by the project consortium in due time. Minutes of all seminars are provided in the following sub-chapters.

3.2.1.1 Minutes of past meetings

Meeting title, date and location:	Lunch time seminar DG Maritime Affairs and Fisheries, 16 th March 2012 in Brussels
Responsible contact person (s)	Thomas Dworak (FT)
Target group	Staff of DG Maritime Affairs and Fisheries.
Participants (<i>Name, Institution, Country</i>)	Staff of DG Maritime Affairs and Fisheries, DG Research & Development, DG Environment and DG Climate Action. In total about 50 persons
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	i. Medium ii. Medium
Involvement format	12:30-14:00 lecture setting
General objectives	To increase the awareness on climate change within DG MARE and to obtain additional information on climate change and its potential impacts on marine issue and coastal zones.
Event specific aims	Cf. above
Agenda	12.30- 13.00 Current status of the planned EU adaptation strategy and current state of knowledge on how climate change could impact coastal zones and marine areas 13.00-13.30 Knowledge gaps: What are they, what lacking information can be provided by DG MARE?

Meeting title, date and location:	Lunch time seminar DG Maritime Affairs and Fisheries, 16th March 2012 in Brussels
	13.30-14.00 Questions and answers
Input documents	None
Expected outputs	Feedback, additional data gathering and information to further develop the State of Play on marine and coastal zones.
Summary report/minutes (outputs)	<p>After a short presentation on the status quo of the preparations of the adaptation strategy, on the current state of knowledge on how climate change could impact coastal zones and marine areas as well as of the main knowledge gaps some questions of understanding have been answered.</p> <p>Feedback was provided by DG MARE on the following issues:</p> <ul style="list-style-type: none"> ■ Changes in marine circulation and impacts on shipping routes should be addressed ■ Acidification and impacts from ice melts in the arctic should be addressed ■ FP7 projects outside the environmental branch of DG R&D should be screened as some of them also address the issue of climate change ■ Impacts on fish stocks should be further investigated

Meeting title, date and location:	Lunch time seminar DG SANCO on 29 th May 2012 in Brussels
Responsible contact person (s)	Markus Leitner (EAA)
Target group	Staff of DG SANCO in Brussels, Luxembourg and Grange
Participants (<i>Name, Institution, Country</i>)	Staff of DG SANCO (including two web streams, one to Luxembourg and one to Grange) and DG Climate Action. In total about 40 persons
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	i. Medium ii. Medium
Involvement format	11:00-12:30 lecture setting
General objectives	To increase the awareness on climate change within DG SANCO and to obtain additional information on climate change and its potential impacts on human, animal and plant health
Event specific aims	Cf. above
Agenda	11.00- 11.30 Current status of the planned EU adaptation strategy and current state of knowledge on how climate change could impact human, animal and plant health 11.30-12.00 Knowledge gaps: What are they, what lacking information can be provided by DG SANCO? 12.00-12.30 Questions and answers
Input documents	None
Expected outputs	Feedback, additional data gathering and information to further develop the State of Play on human, animal and plant health.
Summary report/minutes (outputs)	After a presentation on the status quo of the preparations of the adaptation strategy, on the current state of knowledge on how climate change impacts and will impact human, animal and plant health. The main knowledge gaps were briefly addressed and a few questions of understanding have been answered. Feedback was provided by DG SANCO on the following issues: <ul style="list-style-type: none"> ■ DG SANCO is well aware and well prepared (divers activities are on-going, which will increase the resilience) for current and upcoming climate change related challenges and supports DG CLIMA efforts ■ Temperature increase related to heat waves and



Meeting title, date and location:	Lunch time seminar DG SANCO on 29th May 2012 in Brussels
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heat related deaths is not seen as the big challenge and can be handled with soft measures

- A few projects as well as key players have been mentioned, which have been contacted and contributed to the State of Play on human, animal and plant health

Meeting title, date and location:	Lunch time seminar DG MOVE on 26 th of June 2012 in Brussels
Responsible contact person (s)	Andrea Prutsch (EAA)
Target group	Staff working for DG MOVE
Participants (<i>Name, Institution, Country</i>)	Staff from DG MOVE and DG CLIMA. In total about 30 persons
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	i. Medium ii. Low
Involvement format	12h45 – 14h15, lecture setting
General objectives	To increase the awareness on climate change within DG MOVE and to obtain additional information on climate change and its potential impacts on transport
Event specific aims	<ul style="list-style-type: none"> inform and discuss DG CLIMA's activities towards the European Adaptation Strategy; share information on current state of knowledge in climate change and transport infrastructure; discuss possible entry points for adaptation into existing EU policies; gather knowledge and experiences within DG MOVE with regard to climate change adaptation and transport (e.g. identify relevant projects and activities to be taken into account).
Agenda	<p>12:45 Welcome from Stephane Ouaki (Head of Unit B.4, DG MOVE)</p> <p>12. 50 - 13.30</p> <p>Presentation from Rosario Bento Pais: Current status of the planned EU adaptation strategy and current state of knowledge on how cc and transport</p> <p>13:30 – 13.45</p> <p>Activities carried out by DG MOVE, Stephane Ouaki</p> <p>13.45-14.15</p> <p>Questions and answers</p>
Input documents	None
Expected outputs	Feedback, additional data gathering and information to further develop the State of Play on transport
Summary report/minutes (outputs)	<p>After a presentation on the status quo of the preparations of the adaptation strategy, on the current state of knowledge on how climate change impacts and transport, DG MOVE presented their activities in relation to climate change adaptation and transport. The main outcomes are:</p> <ul style="list-style-type: none"> DG MOVE sees importance of climate change for

Meeting title, date and location:	Lunch time seminar DG MOVE on 26 th of June 2012 in Brussels
	<p>transport infrastructure</p> <ul style="list-style-type: none"> ■ DG MOVE states that EU relevance is given due to the fact that infrastructure cuts across national borders ■ DG MOVE would be grateful and keen to work with DG CLIMA in order to improve the resilience of transport infrastructure ■ Adaptation as a new dimension in climate policy has been recently integrated, e.g. in the proposal of the TEN-T guideline (which is currently under discussion in the Parliament and Council) <ul style="list-style-type: none"> ○ TEN-T guideline makes clear reference to CC mitigation and adaptation ○ TEN-T proposal suggests a financial incentive to MS when integrating measures to increase climate change resilience (COM will provide 10 % add on) ○ DG MOVE would be happy if DG CLIMA could prepare standards which can be taken into account in TEN-T ○ TEN-T network does not receive any funding if standards are not applied ○ DG MOVE asked DG CLIMA for support in order to find an approach which ensures that Member States take climate change adaptation into account (more precisely: help to identify, what adaptation is and find a way for implementation; help to calculate what the additional costs for adaptation were) ■ SESAR program has an objective which touches upon climate change but it is not defined very clearly; Member states have a binding target on various fields such as environmental efficiency ■ Developing standards for aviation is a very long process; done by EUROCONTROL (assessing the COM) or EUROSKY (?) – these two should be involved in the EU adaptation strategy process

Meeting title, date and location:	Lunch time seminar DG REGIO, 3 rd of October 2012 in Brussels
Responsible contact person (s)	Joan Canton (DG CLIMA), Sabine McCallum (EAA)
Target group	Commission Staff DG REGIO
Participants (<i>Name, Institution, Country</i>)	Commission Staff from DG REGIO, in total about 15 participants
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	i. Medium ii. Low
Involvement format	2.30 to 4.30 p.m., lecture setting
General objectives	To increase the awareness on climate change within DG REGIO and to obtain additional information on climate change and its potential impacts on transport
Event specific aims	<ul style="list-style-type: none"> ■ emphasis on cross-cutting nature of the issue, as well as one its relative novelty from a climate change adaptation perspective
Agenda	<p>Welcome words</p> <p>Presentation from Joan Canton (DG CLIMA) and Mathieu Fichter (DG REGIO): Promoting adaptation to climate change</p> <p>Presentation from Peter Hjerp (IEEP) and Jennifer McGuinn (Milieu): Climate mainstreaming and proofing Cohesion Policy</p> <p>Presentation from Alexander Ferstl (DG CLIMA): Guidelines for project managers – making vulnerable investments climate resilient</p> <p>Questions and answers</p>
Input documents	None
Expected outputs	Feedback to current plans on regional development and climate change adaptation
Summary report/minutes (outputs)	<ul style="list-style-type: none"> ■ Discussion focused on the potential benefits of integrating adaptation considerations across thematic objectives. ■ The meeting concluded on the need to make such guidance and guidelines available soon, so as to timely contribute to current discussions with Member States and regional authorities. ■ Guidance documents will be made available in November 2012.

Meeting title, date and location:	Social aspects of adaptation to climate change, 24th October 2012 in Brussels
Responsible contact person (s)	Sami Zeidan (DG CLIMA), Thomas Dworak (FT)
Target group	Commission Staff
Participants (<i>Name, Institution, Country</i>)	Commission Staff from DG JUSTICE, DG SANCO, DG HOME, DG EMPL,
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	i) Medium ii) Low
Involvement format	12:45-14:00 round table
General objectives	The overall objective of this workshop was to mobilise the knowledge and experience of different DG's dealing with social issues related to climate change impacts.
Event specific aims	<ul style="list-style-type: none"> ■ Get feedback on the view of how DG CLIMA sees mainstreaming adaptation into social policies. ■ to inform you about the state of affairs regarding the preparation of the Adaptation Strategy to face climate change impacts and related social issues
Agenda	Presentation by DG CLIMA followed by a general discussion
Input documents	None
Expected outputs	<ul style="list-style-type: none"> ■ Share information on on-going developments and research in adaptation to climate change in transport sector; ■ Collect expert/stakeholder insights and views on whether and how standards can be seen as useful instruments for adaptation in transport sector on local, national and EU levels; ■ Identify concrete examples of standards being applied for adaptation purposes. ■ Identify the impacts of adapting (identified) standards to address the consequences of future climate change on infrastructure.
Summary report/minutes (outputs)	<p>The discussion was centred around the following questions:</p> <ul style="list-style-type: none"> ■ What will be addresses in the EU adaptation strategy and which concrete actions will be proposed? <ul style="list-style-type: none"> ○ The focus will be on DRR and mainstreaming into EU policies ■ Which area in social policies should be mainstreamed first? <ul style="list-style-type: none"> ○ Those which have a high potential to protect



Meeting title, date and location:	Social aspects of adaptation to climate change, 24th October 2012 in Brussels
	<p>people to from the impacts from climate change. However further investigations are needed as the knowledge gaps are high.</p> <ul style="list-style-type: none">○ There is also a need to focus on the most vulnerable groups (e.g. elder women, migrating groups)

3.2.2 Stakeholder process with Member States

The following workshops have been carried out:

- **EPA Interest Group** Climate Change Adaptation (5th and 6th of March 2012 in Dessau/Germany and on 27th and 28th of August 2012 in Helsinki)
- **ASG-Meetings** in Brussels (8 and 9th of March 2012; 7th and 8th of June 2012)
- **EIONET** Meeting in Brussels (22 and 23th of May 2012)
- **Member State Meeting** for Southern Europe to support the development of the EU strategy (29th of May 2012 in Rome)
- **CIRCLE 2 SHARE Workshop** Supporting the development of the EU strategy for adaptation to climate change – Views and Challenges in Eastern Europe (27 and 28th of June 2012 in Vienna)
- Second **Nordic International Conference** on Climate Change Adaptation from 29-31th of August in Finland
- Joint **EIONET and Member State Expert groups** on Maritime Spatial Planning and Integrated Coastal Zone Management from 11-12 September 2012 in Copenhagen

In general, these workshops aimed to inform the development of the EU Adaptation Strategy and offered an arena for sharing knowledge and experience on adaptation policy and practice. Except the ASG meetings (hosted and organised by DG CLIMA), all other events were used or particularly organised to also discuss needs and expectations of guidelines on developing adaptation strategies (Please note the title changed from “EU guidance for national adaptation strategies” to “Guidelines on developing adaptation strategies”. For the minutes of each event the title as presented at the meeting is kept).

In the following, the results of all workshops will be presented in chronological order.

3.2.2.1 Minutes of meetings with EPA-IG, ASG and EIONET

Meeting title, date and location:	EPA Meeting, 5 and 6 th of March 2012 at Environment Agency Germany, Dessau
Responsible contact person(s)	Andrea Prutsch (EAA)
Target group	Environment Agencies across Europe working in Climate Change and Adaptation
Participants (<i>Name, Institution, Country</i>)	<p>Martin Füssel, Will Fawcett (EEA)</p> <p>Inke Schausser, Petra van Rùth, Thomas Voigt. Petra Mahrenholz (DE)</p> <p>Marleen Van Steertegem (BE)</p> <p>Julian Wright, Rebecca Walker (UK)</p> <p>Louise Grøndahl (DK)</p> <p>Mikael Hilden (FI)</p> <p>Francesca Giordano (IT)</p> <p>Willem Ligthoet, Jelle van Minnen (NL)</p> <p>Else Loberli (NO)</p> <p>Maciej Sadowski, Ewelina Gajo (PL)</p> <p>Pavel Stastny (SK)</p> <p>Ainhize Butron (ES, Basque)</p> <p>Roland Hohman (CH)</p> <p>Plamen Despotov (BG)</p>
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	<p>i) High</p> <p>ii) Low</p>
Involvement format	1,5 h slot in a workshop setting
Event specific aims	<ul style="list-style-type: none"> ■ to inform on the current scope and discussions in developing the development of the strategy (<i>links to agenda point 1 and 2</i>), ■ to get the general feeling about the direction of the work on the EU Adaptation strategy (<i>links to agenda point 1, 2 and 3</i>), ■ to identify the expectations and needs of Member states with regard to support their adaptation activities (<i>links to agenda point 4</i>), ■ to ensure that national experiences with setting up and in some cases already implementing NAS will be taken into account in EU policy making (<i>links to agenda point 4</i>) , and ■ to enhance overall acceptance of the EU Adaptation strategy(<i>cuts across all agenda points</i>).
Agenda	<u>Input-presentation</u> (cf. minutes) touching upon following points:



Meeting title, date and location:	EPA Meeting, 5 and 6th of March 2012 at Environment Agency Germany, Dessau
	<ol style="list-style-type: none"> 1. Background and history of EU Adaptation Policy 2. Current scope and discussions in developing the EU Adaptation Strategy 3. Support of EUAdaptStrat project 4. Moderated questions along following: <ul style="list-style-type: none"> ■ What is your general feeling about the direction the EC is currently following? <ul style="list-style-type: none"> □ What do you miss? □ Where do you see possible conflicts? ■ More specific – what would support your work on adaptation at national/regional/local level? ■ What existing initiatives, that you are aware of, need to be considered and linked to during the development of the strategy? ■ Would you like to contribute to the development of the strategy? If so - how?
Input documents	No input document will be sent out before the meeting; Presentation as hand out after the meeting as part of the minutes
Expected outputs	<ul style="list-style-type: none"> ■ Feedback to overall approach of the EU strategy ■ Needs and requirements of Member States ■ General acceptance of EU strategy ■ References to interesting activities, projects, studies, etc. to take into account ■ Level of willingness to provide contribution in development of strategy
Summary report/minutes (outputs)	<ol style="list-style-type: none"> 1. What is your general feeling about the direction the EC is currently following? <ul style="list-style-type: none"> □ very ambitious and narrow time schedule □ some MS (more advanced) feel that it does not affect them unless a Directive is foreseen □ strategy will be useful for MS that are less advanced □ need to make clear what the added value of the strategy will be □ challenge to have EU strategy that allows for local differences in adaptation □ interferences with national activities are seen and should be avoided □ needs to integrate with existing guidelines and Directives and more importantly, communicate the issue of adaptation □ missing aspect is EU in global context (pillar IV in White Paper) □ missing is the policy field of tourism

Meeting title, date and location: EPA Meeting, 5 and 6th of March 2012 at
Environment Agency Germany, Dessau

- ☐ not clear what the next steps are (after the strategy is adopted)

2. More specific – what would **support your work** on adaptation at national/regional/local level?

- ☐ put clear focus on trans-boundary issues
- ☐ focus on EU level policies (coherence, mainstreaming, advantage for national strategies)
- ☐ guidelines on developing NAS
- ☐ guidelines on consequences of impacts across Europe
- ☐ guidelines on how to handle ecosystems in adaptation
- ☐ guidelines for local level
- ☐ case studies results
- ☐ sector specific guidelines on delivery – need to be regional!

3. What **existing initiatives**, that you are aware of, need to be considered and linked to during the development of the strategy?

- ☐ all MS activities; need to recognize advanced stage of national adaptation strategies and action programmes
- ☐ UNFCCC
- ☐ Provia
- ☐ GEF+
- ☐ note sector-based engagement taken place in UK (CCRA, NAP)

4. Would you **like to contribute** to the development of the strategy? If so - how?

- ☐ contribution at next EPA meeting
- ☐ contribution in working group on knowledge base (as set up for supporting the implementation of the White Paper)
- ☐ draft version of the strategy should be available for MS for review



Meeting title, date and location: ASG-Meeting, 8 and 9 th of March 2012 in Brussels	
Responsible contact person(s)	Organised by DG CLIMA Attended by Sabine McCallum (EAA), Thomas Dworak (FT), Linda Romanovska (FT)
Target group	Decision makers from public authorities and interest groups across Europe
Participants (<i>Name, Institution, Country</i>)	ASG members
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	i) high ii) low
Involvement format	1,5 day workshop with sub-groups
Event specific aims	<ul style="list-style-type: none"> Exchange views on the preparation of the EU Adaptation Strategy
Agenda	<p><u>ASG Plenary on the 8th of March 2012</u> 9:00 Welcome – adoption of the agenda</p> <p>9:15 Overview about the current state of preparations for the EU Strategy for Adaptation to Climate change and discussion</p> <p>11:00 Coffee break</p> <p>11:15 Presentation of the work (planned) under the DG CLIMA project to support the development of the adaptation strategy and discussion</p> <p>13:15 Lunch</p> <p>14:30 Sub-Group Meeting on insurance</p> <p>17:15 Closing remarks</p> <p><u>ASG Sub-group meeting on standards and guidelines on the 9th of March 2012</u> 8:30 – 13:00</p>
Input documents	Three background notes on i) Adaptation Strategy; ii) Insurance; iii) guidelines and standards

Meeting title, date and location: ASG-Meeting, 8 and 9th of March 2012 in Brussels

Expected outputs

- Collect ideas and feedback on EC considerations regarding the EU Adaptation Strategy

Summary report/minutes (outputs)

Main outcomes of the general discussion on the EU Adaptation Strategy:

- Mainstreaming of climate adaptation into the different EU policies as the favoured approach at all levels (as opposed to centralising adaptation duties in some entity).
- Share of experience and good practices needs to be strengthened and Climate-ADAPT is a good vehicle to facilitate it. Regularly updated guidance also seen as useful.
- Need to take account of local characteristics and priorities when framing the content and context of adaptation strategies.
- If there is to be legislative action, it needs to be light and flexible, and taking into account existing legal means and pre-existing national strategies (and their revision cycles).
- On reporting requirements, a light and flexible approach was favoured by many. Guidance was also expected to clarify what is expected from Member States on the current legislative proposal on the Monitoring Mechanism Regulation.
- Need to think about the feasibility of adaptation and to consider its co-benefits, on renewable energy or water management, for instance.
- Knowledge on trans-boundary issues should be reinforced, including for cities, and by promoting risk assessments. The need to identify local adaptation options in relation to the use of EU funds was also highlighted.
- Important to identify the risks related to most vulnerable groups and other humanitarian issues, as well as the international/trans-boundary dimension and the impact of climate change on global supply chains (e.g. energy, food, insurance) and on migration.



Meeting title, date and location: EIONET, 22 and 23 th of May 2012 in Brussels	
Responsible contact person(s)	Organised by EEA Attended by Sabine McCallum (EAA), Andrea Prutsch (EAA), Thomas Dworak (FT), Linda Romanovska (FT)
Target group	Decision makers from public authorities and interest groups across Europe
Participants (<i>Name, Institution, Country</i>)	Cf. List below
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	iii) high iv) medium
Involvement format	1,5 hour session with 3 break-out groups on the 22 nd of May 2012
Event specific aims	<ul style="list-style-type: none"> Discuss needs and expectations of potential European guidance to support the elaboration of national adaptation strategies and their action plans (with the focus on implementation issues) accompanying the EU Adaptation Strategy
Agenda	<p>22 May 2012</p> <p>14.00 – 16.30: <i>Framing overviews</i></p> <ul style="list-style-type: none"> Objectives of the workshop, EEA activities in 2012 (<i>EEA, André Jo</i>) Development of the 2013 EU strategy on climate change adaptation (<i>EC-DG CLIMA, Joan Canton</i>) Update on water activities (<i>EC-DG ENV, Jacques Delsalle</i>) Update on biodiversity activities (<i>EC-DG ENV, Karin Zaunberger</i>) European research projects update (<i>EC-DG RTD, overview slides</i>) JRC research update (PESETA II) (<i>EC JRC-IES, Frank Raes</i>) GMES Climate change developments (<i>EC-DG ENTR, Bernard Pinty</i>) <p>15.30 – 15.45 <i>Coffee break</i></p> <ul style="list-style-type: none"> European Topic Centre activities in 2012 (<i>ETC/CCA,</i>

Meeting title, date and location: EIONET, 22 and 23 th of May 2012 in Brussels	
	<p>CMCC, Sergio Castellari)</p> <ul style="list-style-type: none"> ■ ECDC recent activities (<i>ECDC, Jan Semenza</i>) ■ WHO/Europe recent activities (<i>WHO Europe, James Creswick</i>) <p>16.30 – 18.00: Support to the development of the 2013 EU strategy on climate change adaptation</p> <ul style="list-style-type: none"> ■ Potential guidance on national adaptation strategies (<i>Environment Agency Austria, Sabine McCallum, Andrea Prutsch</i>) ■ Discussion
Input documents	No input documents have been provided
Expected outputs	<ul style="list-style-type: none"> ■ Useful feedback to be used for improvement of guidance document
Summary report/minutes (outputs)	<ul style="list-style-type: none"> ■ Remarks and comments from plenary discussion <ul style="list-style-type: none"> ○ the Guidance is intended to support MS in developing their NAS after the publication of the EU strategy for adaptation to climate change; ○ to date there's no EU position on obligation or deadline for MS to develop their NAS; ○ the level of the Guidance is that of a framework for developing a NAS; ○ importance of linking with Climate-ADAPT to provide knowledge support; ○ the Guidance should be generic to cover differences among MS but also specific in providing tools and recommendations for MS; ○ the Guidance also aims at highlighting the links to EU initiatives supporting MS in the NAS process; ○ the Guidance should also consider cross-sectoral issues ; ○ importance of considering the trans-boundary issues; ○ the EC will also review the Guidance. ■ Feedback from (3) break out groups¹ <p><i>Question 1: Feedback on the general structure of the guidance document</i></p> <ul style="list-style-type: none"> ○ The guidance document should provide support to

¹ Feedback from the break out groups was driven by the questions included in the document titled "Feedback on Draft Outline Guidance for the development of a NAS" annexed to this report.

Meeting title, date and location: EIONET, 22 and 23th of May 2012 in Brussels

the process of setting up a strategy but also on key issues to be considered in the strategy;

- the Guidance should also give advice on how to deal with trans-boundary problems; a checklist of trans-boundary issues (e.g. water, health, forest fires, energy, air-pollution, transport) could help users to ensure that main issues are covered;
- however it was also mentioned by some participants that a different focus on sectoral approaches (instead of cross-sectoral) might be more useful compared to the rather generic approach provided in the current draft;
- the Guidance should support sharing knowledge and experience among countries (e.g. approaches for stakeholder involvement);
- the 2009 Guidelines for developing RAS are an example of the requested level of details.

Question 2: What are the general issues included in the 5 steps and what are the challenges expected?

- For the step “preparing the ground” there should be a section on how to prepare public opinion or how to avoid negative influences by certain stakeholders/sectors; this step should also cover the aspect of agreeing on mutual use of key terms;
- there should also be a tool that allows dealing with unexpected circumstances such as the economic crisis;
- the 5 steps should cover the long and short term perspective;
- guidance should be given on how to deal with sectors which are considered less important;
- the definition of key priorities of concern should be supported by a vulnerability assessment;
- how to deal with uncertainties needs to be addressed;
- the selection of adaptation options should be based on a list of sustainability criteria, not only on financial ones;
- the section on monitoring should include practical examples.

Question 3: What should support your work on adaptation?

- Approaches on how to set up an NAS with different levels of resources should be given;
- the chapter on stakeholder involvement was very much appreciated (it was also suggested to deal with “which” stakeholder and specific “motivation” and how to keep stakeholder processes “alive” beyond

Meeting title, date and location: EIONET, 22 and 23th of May 2012 in Brussels

the adoption of an adaptation policy);

- the chapter on monitoring is seen as crucial and deserving specific attention; suggestions on indicators and their use are seen as very useful; evaluation of success shall be addressed;
- Web links to practical examples using Climate-ADAPT are seen as extremely useful;
- access to the metadata that is behind certain reports and model runs the guidance is referencing to should be made available;
- guidance on how to set up an inter-ministerial working committee/platform is seen as a key issue;
- it is important to reflect the different governance structures (e.g. centralised, decentralised) in MS when providing guidance;
- also the interplay of the different governance levels (local to national) need to be considered;
- glossary of terms (to support mutual understanding).

Question 4: Could you please think a practical example to be included in the guidance document?

- ECDC is willing to provide a link to its health tool.
- MS will be further contacted by e-mail to provide examples.

The following participants attended the EIONET meeting:

Country / Institution	Last name	First name
Catalan Office for Climate Change	AMBATLLE	Josepa
EC (DG MARE)	AMIL-LOPEZ	Cristina
ETC/BD	AMOR-TORRE	Marin
Belgium	BOGAERT	Johan
EUROSTAT	CABEÇA	Julio
EC (DG CLIMA)	CANTON	Joan
ETC/CCA	CASTELLARI	Sergio
Slovenia	CEGNAR	Tanja
Alpine Convention	CHATRE	Baptiste
Norway	CHRISTOPHERSEN	Øyvind
WHO	CRESWICK	James
Poland	CYBULSKA-WITKIEWICZ	Renata
EC (DG ENV)	DELSALLE	Jacques

Country / Institution	Last name	First name
Bulgaria	DESPOTOV	Plamen
Fresh Thoughts	DWORAK	Thomas
Italy (ISPRA)	GIORDANO	Francesca
The former Yugoslav Republic of Macedonia	GJORGJEV	Dragan
Portugal	GOMES	Ana
Switzerland	HOHMANN	Roland
Belgium	HOYAUX	Julien
Cyprus	IOANNOU	Kyriaki
Poland	KAMINSKA	Anna
Poland	LIMANOWKA	Danuta
Sweden	LÖWENDAHL	Elin
France	MAGNIER	Céline
Austria	MCCALLUM	Sabine
ETC	MEDRI	Silvia
Greece	NTEMIRI	Spyridoula
Portugal	PAULINO	José
Spain	PEREZ	Francisco P.
EC (DG ENTR)	PINTY	Bernard
Czech Republic	PRETEL	Jan
Austria	PRUTSCH	Andrea
JRC	RAES	Frank
Kosovo under UNSCR 1244/99	RESTELICA	Sabit
Fresh Thoughts	ROMANOVSKA	Linda
ECDC	SEMENZA	Jan
Turkey	SÖNMEZ ERBAŞ	Sezin
Romania	STANICA	Cristina
Slovak Republic	ŠŤASTNÝ	Pavel
The Netherlands	VANMINNEN	Jelle
Germany	VOIGT	Thomas
Montenegro	VULIKIC	Djordjije
EC (DG ENV)	ZAUNBERGER	Karin

Meeting title, date and location: ASG-Meeting, 7 th and 8 th of June 2012 in Brussels	
Responsible contact person(s)	Organised by DG CLIMA Attended by Sabine McCallum (EAA), Thomas Dworak (FT)
Target group	Decision makers from public authorities and interest groups across Europe
Participants (<i>Name, Institution, Country</i>)	ASG members
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	v) high vi) high
Involvement format	1,5 day workshop with sub-groups
Event specific aims	<ul style="list-style-type: none"> Exchange views on the preparation of the EU Adaptation Strategy
Agenda	<p><u>ASG Plenary on the 7th of June 2012</u> 14:30 Welcome – adoption of the agenda</p> <p>14:45 Update on the EU Strategy for Adaptation to Climate Change</p> <p>16:00 Coffee break</p> <p>16:15 Cont.</p> <p>17:15 Closing remarks</p> <p><u>ASG Plenary on 8th of June 2012</u> 8:30 Current evidence on the adverse effects of climate change and approach to assess options</p> <p>10:15 Coffee break</p> <p>10:30 Development of guidelines</p> <p>12:30 Closing remarks</p> <p>12:45 Lunch</p> <p>14:00 Overview about further developments to address remaining knowledge gaps</p>

Meeting title, date and location: ASG-Meeting, 7 th and 8 th of June 2012 in Brussels	
	<p>15:45 Closing remarks</p> <p>16:00 End of the meetings</p> <p>There was a rearrangement of the agenda for the second day to include break-out sessions on strategic questions, with the ASG splitting into 5 groups. Most participants felt such group discussion is useful, and would welcome it in future ASG meetings.</p>
Input documents	<p>Four background notes have been distributed in advance of the meeting: i) Option paper on promoting effective adaptation action at national level; ii) EU Adaptation Strategy package; iii) Preparation of guidelines and iv) Knowledge and knowledge gaps</p>
Expected outputs	<ul style="list-style-type: none"> ■ Collect ideas and feedback on EC considerations regarding the EU Adaptation Strategy
Summary report/minutes (outputs)	<ul style="list-style-type: none"> ■ In preparing the Adaptation Strategy, it is essential to emphasise and discuss the added value of action at EU level. ■ Mainstreaming of climate adaptation into the different EU policies is seen as one of the key priorities. Some called for a detailed calendar or roadmap for mainstreaming into the main EU financial instruments. ■ Importance of mainstreaming adaptation into the SEA Directive or into its guidance. ■ Important to highlight the trans-boundary dimension (both within the EU and with neighbouring countries), as well as global issues, such as EU vulnerability and the impact of climate change on global supply chains (e.g. energy, food, insurance), on migration and water. Need to look, in due course, at the impact of EU adaptation measures on the world beyond it. ■ Important to identify social issues, including the risks related to most vulnerable groups and regions, solidarity concerns. ■ Important to highlight the role played by cities and keep it high on the agenda as a cross-cutting element. Soil sealing as a major problem in cities. ■ The Strategy should be addressed not only at the public sector, but also at the private sector, including awareness-raising activities. ■ The Strategy should not only refer to the negative consequences of climate change, but also to the potential benefits. ■ The Strategy should contain recommendations, expressed through concrete actions. ■ The nature of the various sets of guidelines under



Meeting title, date and location: ASG-Meeting, 7th and 8th of June 2012 in Brussels

preparation was addressed. The Commission clarified that they are voluntary.

- Some participants stated that the Strategy should not include a legal instrument.
- On reporting requirements, a light and flexible approach is favoured by many.
- Need to address EU, public and private financing mechanisms.
- Desirability of conducting policy consistency checks taking advantage of the mainstreaming exercise to avoid contradictory demands, for example on the electricity sector.

Meeting title, date and location: EPA Meeting, 27 and 28 th of August 2012 in Helsinki	
Responsible contact person(s)	Andrea Prutsch (EAA)
Target group	Environment Agencies across Europe working in Climate Change and Adaptation
Participants (<i>Name, Institution, Country</i>)	Stéphane Isoard, Will Fawcett (EEA) Petra van R��th (DE) Marleen Van Steertegem (BE) Julian Wright, Joseph Hagg (UK) Louise Gr��ndahl (DK) Mikael Hilden (FI) Willem Ligtvoet, Jelle van Minnen (NL) Else Loberli (NO) Anna Romanczak (PL) Ainhize Butron (ES, Basque) Roland Hohman (CH)
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	iii) High iv) Medium
Involvement format	1,5 h slot in a workshop setting
Event specific aims	<ul style="list-style-type: none"> to inform on the current scope and discussions in developing the development of the strategy to get feedback on guidance for NAS to collect good practice examples to be included in guidance on NAS to enhance overall acceptance of the EU Adaptation strategy(cuts across all agenda points).
Agenda	<u>Input-presentation</u> touching upon following points: <ul style="list-style-type: none"> 1. Background and history of EU Adaptation Policy 2. Current scope and discussions in developing the EU Adaptation Strategy 3. Draft Guidance for NAS
Input documents	No input document will be sent out before the meeting
Expected outputs	<ul style="list-style-type: none"> Useful feedback for guidance on NAS
Summary report/minutes (outputs)	The participants were interested to hear about the current development of the EU Adaptation Strategy. The main part of the discussion focused on the guidance document. The structure and approach were welcomed. Further good practice examples to be included will be sent to EAA.

Meeting title, date and location:	Joint EIONET and Member State Expert groups on Maritime Spatial Planning and Integrated Coastal Zone Management, 11 and 12 th of September 2012 in Copenhagen
Responsible contact person (s)	Thomas Dworak (FT)
Target group	Representatives from the expert group on Maritime Spatial Planning (MSP), the expert group on Integrated Coastal Zone Management (ICZM) and the experts from the Environmental Information and Observation Network (EIONET)
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	iii) Medium to high iv) Low
Involvement format	plenary
General objectives	To discuss Marine Spatial Planning and Integrated Coastal Zone Management.
Event specific aims	Beside others, to raise awareness on the issue of climate change adaptation.
Agenda	<p>13.00h: Opening and Introduction</p> <ul style="list-style-type: none"> ■ Aim of a joint meeting on MSP/ICZM <p>13.15 – 15.00h: MSP/ ICZM: connected tools</p> <ul style="list-style-type: none"> ■ Commission initiative on MSP/ICZM: State of Play ■ Linking MSP/ICZM <ul style="list-style-type: none"> ○ Land- sea interactions of marine and coastal activities ○ Potential synergies by linking MSP/ICZM process tools ○ Data sharing and management needs ○ Other ■ Green paper on Marine Knowledge: links with MSP/ICZM <p>15.00-15.15h: coffee</p> <p>15.15 – 17.00h: Developments at Member State level/Projects</p> <ul style="list-style-type: none"> ■ Sustainability indicators for ICZM: Results of the Interreg IVC project SUSTAIN ■ Protocol on ICZM in the Mediterranean: Progress and timelines ■ EU FP 7 project MESMA ■ ICES

Meeting title, date and location:	Joint EIONET and Member State Expert groups on Maritime Spatial Planning and Integrated Coastal Zone Management, 11 and 12th of September 2012 in Copenhagen
	<ul style="list-style-type: none"> ■ Presentations on MSP/ICZM issues by MS wishing to do so ■ Discussion
Input documents	Short note on Marine/coastal issues and climate change including a questionnaire.
Expected outputs	Better understanding of the adaptation needs
Summary report/minutes (outputs)	<p>Stéphane Isoard (EEA) presented the Climate-ADAPT platform (http://climate-adapt.eea.europa.eu). In the discussion the EUCC pointed out that there is the INCORE project which could be included/linked. It became clear from the discussion that the platform does identify knowledge gaps but that no prioritization is made.</p> <p>Mr. Isoard also briefly presented two EEA reports on climate change, impacts and vulnerability. The reports will be published in November 2012 and early in 2013.</p> <ul style="list-style-type: none"> ■ The 2012 report is presenting 40 indicators. The EIONET review is just concluded with 500 comments received. Focus on physical impacts and societal vulnerability. ■ The 2013 report is EEA' Adaptation in Europe', focusing on the policy response. EIONET review will be in mid-October. Publication in January. <p>Cornelia Jäger of DG CLIMA, Adaptation unit, presented the European Climate Adaptation Strategy. In 2009 the Commission adopted the White paper on adaptation. The aim of the strategy is to make Europe more resilient to climate change at lowest costs. There will be a communication on the EU Strategy for Adaptation to Climate Change including a set of guidelines and standards. The Strategy will be framed around four objectives: (i) information gathering, (ii) facilitation and cooperation, (iii) mainstreaming, and (iv) public and private action and focus amongst other sectors on coastal zones, urban areas and mountains.</p> <p>Thomas Dworak, consultant for DG CLIMA, presented on the feedback from participants to a questionnaire of adaptation in the coastal zone, for example a general request to include cross border issues or good practice coastal adaptation strategies in an EU guidance</p>

Meeting title, date and location:	Joint EIONET and Member State Expert groups on Maritime Spatial Planning and Integrated Coastal Zone Management, 11 and 12th of September 2012 in Copenhagen
	document as well as to receive financial support to carry out coastal erosion monitoring, research and share gathered knowledge. The project has received twelve replies so far and there is still a chance to answer.

3.2.2.2 Stakeholder process with Member States in specific regions – Eastern Europe, Southern Europe and Northern Europe

The stakeholder process with Member States (MS) has identified the need and opportunity to engage with the different regions of Europe. In order to achieve this objective, two meetings were carried out in specific regions – Central/Eastern Europe and Southern Europe and a scheduled conference (Second Nordic International Conference on Climate Change Adaptation in Helsinki) was used to gain input from the Nordic countries. The meetings were structured in a similar way to gain comparable results and provide good coverage for feedback on the needs and expectations from Central/Eastern, Southern and Northern Europe.

A. Synthesis of Southern Europe meeting

ISPRA, the Italian Environment Agency, has offered to host this meeting and was providing facilities in Rome as well as helping with contacts and logistics. The design of the meeting is outlined below. Invites were sent in country/organisation groups at the end of April 2012. The list of participants and the final outcome of the meeting are presented in the following as well.

Meeting title, date and location:	Southern Europe Meeting, 29th of May in Rome
Responsible contact person (s)	Nikki Kent (AEA) Sarah Winne (AEA) Sabine McCallum (EAA) Andrea Prutsch (EAA) Thomas Dworak (FT) Michaela Matauschek (FT)
Target group	EPAs and Ministries of Southern European Countries of: Portugal, Spain, Italy, Greece, Cyprus, Malta and France.
Participants (<i>Name, Institution, Country</i>)	Southern European CIRCLE 2 network members Relevant Southern EU representatives of Blue Plan / Plan Bleu (http://www.planbleu.org/indexUK.html)

Meeting title, date and location: Southern Europe Meeting, 29 th of May in Rome	
(see table below for full list)	
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	v) High vi) Moderate
Involvement format	10:00-16:00 workshop setting
General objectives	Regional coverage of Southern European Countries to gather feedback on their needs and expectations of the European Adaptation Strategy.
Event specific aims	<ul style="list-style-type: none"> ■ Share the current state of work on adaptation strategies and projects in Southern European Countries; ■ Discuss needs and expectations of potential European guidance to support the elaboration of national adaptation strategies and their action plans (with the focus on implementation issues) accompanying the EU Adaptation Strategy; ■ Foster the exchange of experiences on various adaptation challenges (e.g. Impact assessments; Vulnerability studies, prioritizing adaptation options; Monitoring and evaluation); ■ Identify knowledge gaps and national needs in support of policy development on EU and national level; ■ Identify specificities and challenges for adaptation in Southern European countries.
Agenda	<p>Cut down version of CIRCLE 2 Eastern European workshop– draft agenda below:</p> <ol style="list-style-type: none"> 1. Introductory presentations <ul style="list-style-type: none"> ○ 10.00-10.05 Welcome (Domenico Gaudioso ISPRA and Guido Bonati on behalf of INEA) and format of the day (Chair, Sabine McCallum, EAA) ○ 10.05-10.25 State of developing the EU Adaptation Strategy – Brief overview by DG CLIMA (Juan Perez Lorenzo) ○ 10.25-10.35 Q&A (Chair, Sabine McCallum, EAA) ○ 10.35-10.55 Knowledge sharing through the new Climate-ADAPT platform (EEA, Andre Jol) ○ 10.55-11.05 Q&A (Chair, Sabine McCallum, EAA)

Meeting title, date and location:	Southern Europe Meeting, 29 th of May in Rome
	<ul style="list-style-type: none"> ○ 11.05-12.30 State of Action on Adaptation in Southern European Countries – activities and needs (10 mins ppt from each MS, max 7) 12.30-13.15 Lunch 2. 13.15-14.15 S Europe Member State's experiences and needs (break out groups facilitated by Nikki Kent, Andrea Prutsch, Sabine McCallum): <ul style="list-style-type: none"> ○ Which success factors for adaptation processes can be shared? ○ What are the current known barriers to adaptation? ○ Where are the main knowledge and resource (e.g. human, financial) gaps? ○ What kind of support is needed/desired from the EU level? 14.15-14.30 Coffee 3. 14:30-16.00 EU Guidance for national adaptation strategies <ul style="list-style-type: none"> ○ Presentation of the current work on elaborating EU guidance for national adaptation strategies (Andrea Prutsch EAA) ○ Needs and expectations (all participants) 16.00 Close (chair)
Input documents	Short briefing note.
Expected output	<ul style="list-style-type: none"> ■ MS feedback on experiences and needs ■ Needs and expectations of EU guidelines for national adaptation strategies.

The participant list was developed using relevant Southern European stakeholders that have been identified from national policy contacts for adaptation, CIRCLE-2 network and CIRCLE-MED/Plan Blue.

The following participants attended the workshop:

Country	Invitee name	Organisation
Portugal	CANAVEIRA Paulo	Portuguese Environment Agency
Spain	GUTIERREZ TEIRA Alfonso	Spanish Climate Change Office
Italy	GIORDANO Francesca	ISPRA, Italian Environmental Agency
	GAUDIOSO Domenico	ISPRA, Italian Environmental Agency
	LUISE Anna	ISPRA, Italian Environmental Agency
	SINISI Luciana	ISPRA, Italian Environmental Agency
	TUSCANO Jessica	ISPRA, Italian Environmental Agency
	BIANCHI Alessandra	Italian Ministry for the Environment, Land and Sea
	BURALI Alessandra	Italian Ministry for the Environment, Land and Sea
	CASTELLARI Sergio	Italian Ministry for the Environment, Land and Sea
	BONATI Guido	INEA
	CODERONI Silvia	INEA
Malta	PACE Lara	Ministry of Resources and Rural Affairs (MRRA)
France	MONDON Sylvain	ONERC
Europe	PÉREZ LORENZO Juan	European Commission – DG CLIMA
	JOL André	European Environment Agency
	PRODI Vittorio	European Parliament

Summary of workshop outcomes

- The state of action on adaptation in Southern European MS varies:
 - **Italy** is in the process of drafting a first phase of its National Adaptation Strategy (NAS) aiming to have a draft strategy by the end of 2012 (probably a partial strategy, in geographical and thematic terms);
 - **France** has a legal requirement for a NAS which was published in 2006, followed by a National Adaptation Plan (NAP) in 2011, is about to start a mid-term review of its NAP and has regional schemes and local energy and climate change plans which include adaptation;
 - **Spain** adopted its NAS in 2006 and is on its 2nd work programme involving the development of an indicator system and an information clearing house;
 - **Portugal** is in implementation phase and preparing its first set of sectoral reports (due end of 2012) and is preparing and implementing a €3.5M financing programme using European Economic Area grants for adaptation projects of which €1M will go on training municipalities;
 - **Malta** has recently adopted its NAS (May 2012).
- Member States highlighted the following issues for EU action:
 - Continuous share of adaptation practice at all levels – saving time and money (using the Climate-ADAPT platform), consider MS twinning;
 - Mainstreaming adaptation into existing EU policies without creating extra administrative burden on MS – to address more medium to long term adaptation planning;
 - Analysis of trans-boundary vulnerability;
 - Need of clear criteria for mal-adaptation with examples that take account of problems faced in Southern Europe (e.g. increasing irrigation and desalination are not necessarily mal-adaptation depending on the technology used).
- Success stories when developing a NAS:
 - Spain - Face to face stakeholder interaction creating sense of responsibility and a “critical mass” to foster adaptation;
 - Malta - Climate Change Committee chaired by the Prime Minister;
 - Italy – series of regional workshops feeding into national conference;
 - France – addressing mitigation and adaptation together at the regional and local level.
- Barriers:
 - Insufficient human and financial resources;
 - Partially lack of dedicated research;
 - Lack of simple indicators, compared with those available for mitigation;
 - Commonly used terminology to interact with stakeholders (including distinction between NAS and NAP);
 - Mitigation is more straight-forward to communicate (e.g. through quantitative analysis), often mix up between what is mitigation and what is adaptation.
 - Difficulty in generating adaptation knowledge when limited baseline information is available;



- The complexity of decentralised governments, such as Italy and Spain, which requires a greater coordination effort.
- Summary of comments on the presentation of the EU guidance for national adaptation policies:
 - Include advice on how to make local administrations aware they might already be doing work on adaptation without calling it adaptation;
 - Include EU recognised terminology of key terms;
 - Steps 4 and 5 in the guidance might be more on developing a NAP, re-name guidance to adaptation policy planning;
 - MS offered that countries could help translate the guidance (perhaps through the ASG);
 - Include advice on how to address trans-boundary issues;
 - Consider different governance structures and the applicability of the guidance to all MS.

Presentations are available at on the event webpage²

² <http://www.fresh-thoughts.eu/events.php?eventid=48&site=material>.

B. Synthesis of Central/Eastern Europe meeting

ZAMG, the Austrian Met Service, has offered to host this meeting and was providing facilities in Vienna as well as helping with logistics. The relevant information about the meetings as well as the list of participants and the main outcomes are presented in the following.

Meeting title, date and location:	Central/Eastern Europe Meeting, 27 and 28 th of June, 2012 in Vienna
Responsible contact person (s)	Markus Leitner (EAA) Sabine McCallum (EAA) Andrea Prutsch (EAA) David Avelar (FFCUL)
Target group	EPAs and Ministries of Eastern European Countries of: Slovenia, Poland, Romania, Hungary, Bulgaria, Czech Republic, Slovakia, Estonia, Latvia and Lithuania.
Participants (<i>Name, Institution, Country</i>)	Eastern European CIRCLE 2 network members Relevant Eastern EU representatives of Adaptation Steering Group, EPA-Network, EIONET (see table below for full list)
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	vii) High viii) Moderate
Involvement format	2 day workshop setting
General objectives	Regional coverage of Eastern European Countries to gather feedback on their needs and expectations of the European Adaptation Strategy and feedback for the European guidance to support the elaboration of national adaptation strategies and action plans.
Event specific aims	<ul style="list-style-type: none"> ■ Share the current state of work on adaptation strategies and projects in Eastern European Countries; ■ Discuss needs and expectations of potential European guidelines to support the elaboration of national adaptation strategies and their action plans (with the focus on implementation issues) accompanying the EU Adaptation Strategy; ■ Foster the exchange of experiences on various adaptation challenges (e.g. Impact assessments; Vulnerability studies, prioritizing adaptation options; Monitoring and evaluation); ■ Identify knowledge gaps and national needs in support of policy development on EU and national level; ■ Identify specificities and challenges for adaptation in CEE countries.
Agenda	<ol style="list-style-type: none"> 1. Introductory presentations <ul style="list-style-type: none"> ○ State of developing the EU Adaptation Strategy – Brief overview by DG CLIMA

Meeting title, date and location:	Central/Eastern Europe Meeting, 27 and 28 th of June, 2012 in Vienna
	<ul style="list-style-type: none"> ○ Q&A (Chair, Sabine McCallum, EAA) ○ Knowledge sharing through the new Climate-ADAPT platform (EEA – Stéphane Isoard) ○ Q&A (Chair, Sabine McCallum, EAA) ○ State of Action on Adaptation in Eastern European Countries – activities and needs (prepared questions for national representatives - 10 min from each MS) <p>2. Eastern Europe Member State's experiences and needs (working groups):</p> <ul style="list-style-type: none"> ○ Which success factors for adaptation processes can be shared? ○ What are the current known barriers to adaptation? ○ Where are the main knowledge and resource (e.g. human, financial) gaps? ○ What kind of support is needed/desired from the EU level? <p>3. EU Guidance for national adaptation strategies</p> <ul style="list-style-type: none"> ○ Presentation of the current work on elaborating EU guidance for national adaptation strategies (Andrea Prutsch EAA) ○ Needs and expectations (all participants) <p>4. Parallel Sessions in small working groups; (hands on by participants!) - chaired by renown experts</p>
Input documents	Background document and selected references.
Expected output	<ul style="list-style-type: none"> ■ MS feedback on experiences and needs ■ Needs and expectations of EU guidance for national adaptation strategies ■ Proceedings of the meeting, ■ A Policy Brief with a set of recommendations for EU adaptation activities

The participant list was developed using relevant Eastern European stakeholders that have been identified from national policy contacts for adaptation and the CIRCLE-2 network.

Country	Invitee name	Organisation
Bulgaria	NIKOLOVA Mariyana	National Institute of Geophysics, Geodesy and Geography
	TODOROVA Diana	National Institute of Geophysics, Geodesy and Geography
Czech Republic	HORECKY Jakub	Ministry of the Environment

Country	Invitee name	Organisation
Estonia	JAKOBI Reeli	Estonian Ministry of the Environment
Latvia	BRUNENIECE Ieva	University of Latvia, Faculty of Geography and Earth Science
Poland	ROMANCZAK Anna	Institute of Environmental Protection - National Research Institute
	SADOWSKI Maciej	
	CYBULSKA-WITKIEWICZ Renata KAMIŃSKA Anna	Ministry of the Environment-Department of Sustainable Development
Romania	BOJARIU Roxana	National Meteorological Administration
	STANICA Cristina	Ministry of Environment and Forests
Slovakia	STASTNY Pavel	Slovak Hydrometeorological Institute
Slovenia	SIMONIC Barbara	Ministry of Agriculture and Environment
Europe	PÉREZ LORENZO Juan	DG CLIMA
	ISOARD Stéphane	EEA
European experts	AUER Ingeborg	ZAMG
	BANICEVIC Katarina	Austrian Red Cross Headquarters
	SANDERSON Hans	DMU, Aarhus University
	GRAETZ Matthias	Baltic Environmental Forum Germany
	PELEIKIS Julia	Baltic Environmental Forum Germany
	HASSE Clemens	UBA Germany
Project team and Circle 2	DWORAK Thomas	Fresh Thoughts
	KÖNIG Martin	EAA
	LEITNER Markus	EAA
	MCCALLUM Sabine	EAA
	PRUTSCH Andrea	EAA
	VENTURINI Sara	Euro-Mediterranean Centre on Climate Change
	CAPELA LOURENÇO Tiago	(Foundation) Faculty of Sciences
	PRINGLE Patrick	AEA

Summary of workshop outcomes

■ Bulgaria

Bulgaria is now in the process of developing their National Adaptation Strategy (NAS). It has two phases. First phase preparation of an impact assessment and framework document is on-going. Several sectors (to be described) and a risk assessment exercise, including scenarios, will be developed. The main driver was the UNFCCC, the EU policies such as the White paper and in a practical view the increase of extreme weather events was experienced and the other driver for NAS development. The integration of regional perspectives has not started yet. The second phase is the preparation of a more detailed document, which will contain all the information in the framework document and also an analysis of the economic dimensions of adaptation and adaptation measures. The support by the EU in the form of guidance would be welcomed helping e.g. on the following questions:

- What scenarios will be used? Update the current ones!
- Are you working with neighbouring countries?
- There are some projects on water, but not in relation with the NAS.

■ Czech Republic

Current state of play is the strategic document approved in 2004 and updated in 2007, mainly related to mitigation. The Ministry of Environment (MoE) prepared a draft of a NAS driven by the EC White Paper. All Ministries were asked to analyse the potential climate change impacts on their operations and sectors. During preparatory work all stakeholders were involved and the strategy includes legislative and economic assessments. The text is under a Strategic Environmental Assessment (SEA) process in the MoE and is expected to be approved soon. Key driver was the EC White Paper, but several flood events also helped to raise awareness. Some regions started suffering droughts (not very intensive), but they have pushed the government to move towards a NAS. Biggest challenge has been the lack of political will. The MoE has changed a lot in the last years and this has been a barrier. The NAS is 'on the table' since 2009, but hasn't 'moved' that quickly. There are certainly challenges to involve regional/local stakeholders.

■ Estonia, Latvia, Lithuania

Estonia – No NAS. Exchange between projects and Estonian MoE not sufficient, difficulty to assess impacts. Adaptation is still a low priority in terms of organisational challenges since the focus has been placed on Mitigation. MoE is responsible for coordinating NAS.

Latvia – No NAS, but preparation are underway. Expected to have two Working Groups, one ministerial and one scientific. Knowledge: expected impacts on infrastructure, regional models are missing, previous project's data is not bundled and European Economic Area GRANTS (EEA GRANTS by Iceland, Liechtenstein and Norway) are expected.

Organisational challenges: Coordination lies in the MoE; no institution coordinates research and info on climate change (this role could be taken by a third party, not necessarily the ministry).

Lithuania – National Strategy for climate change Management Policy will cover 2013-50, subcontracted to COWI. Knowledge – MoE is aware of the projects, but mentions that data generated is very specific; knowledge on options and how to handle uncertainty is missing; Organisational: MoE is the coordinating body, the parliament is also involved; at the moment the issue enjoys a lower political priority.

General needs – broaden the knowledge base and stakeholder involvement, stronger coordination role of Ministries of Environment, regionalisation of climate change scenarios.

■ Hungary

Mr. Szalai presented geographical situation of Hungary (flat, surrounded by the Carpathians from all sides except South and similar to South European countries). He mentioned the Adaptation Strategies that is being in the Danube River Basin (DRB). Hungary has a National Climate Change Strategy (NCCS, 2008 under update), National Energy Strategy 2030, Renewable energy action plan for 2010-2020, National Drought Strategy (several of these Drought strategies have been ready but none has been ratified so far). Hungary does not have an official NAS, but often the NCCS (including a NCC Plan for every 3 years) is called that because it has a chapter on adaptation. Update of NCCS – increase drought tendencies, 35% of the territory is vulnerable (22% of the population), >50% endangered in water related effects. Presented climate data for observed and scenarios. Increases in precipitation and temperature in winter time are not significant. NCCS action1, 2, and 3: all are water related measures.

■ Poland

NAS is under development since October 2011. At present Inter-ministerial work and consultation process are underway. Work is organised in 3 stages (1) vulnerability and impact assessment (2) elaboration of NAS for two timelines: until 2030 and the end of the century (3) cost estimation. Work should be ready by 2013. It has to undergo a SEA. The Institute for Environmental Protection – National Research Institute has prepared a list of adaptation measures that have been forwarded to the Ministries for consultation. They have been working through seminars on the Science-Policy Interface.

■ Slovakia

Three initiatives are currently on-going:

- 1) Preparation work for a NAS,
- 2) SMHI project on CC impacts and adaptation (December 2011),
 - CCI on human natural systems until 2050
 - Main basis of work for NAS development, Included economic evaluation



3) Governmental program on revitalisation of the landscape and integrated river basin management

- Basis for creating a conceptual approach to the prevention of floods, drought and some symptoms of natural disasters
 - Temporarily suspended because of changes in government (Mar 2012) but should be picked up again in 2012; adopted Oct 2010 after huge floods spring/summer); basis for conceptual approach to flood prevention; timeframe 6-10 years (currently in 2nd phase; strong SE aspects (>500 villages involved; has issues of transparency. Shows practical examples (see photos)

■ **Slovenia**

Slovenia has a similar situation as Hungary with different regions having different scenarios for impacts and vulnerabilities making the analysis for NAS very complex. For forest and agriculture, national adaptation strategies have been developed (document covering adaptation and mitigation) in 2008 (explored via workshops with experts); Adaptation Action plan for those 2 sectors (2010-2011) are available and now being up for parliament approval. 2009 was the establishment of a public climate office. This office took the recently approved low-carbon strategy and got the responsibility of promoting a NAS for all sectors. The NAS is a vision and guidelines for various sectors for the timeline until 2050. Forest and agriculture action plans were concluded, but highlighted the lack of knowledge base (collection of other projects data with a new 'label' called adaptation). Expectation from the EU level is an external 'push' for action (EU setting the example for action). Comprehensive minutes of the meeting and all presentations are available under: <http://www.circle-era.eu/np4/464.html>

C. Synthesis of Nordic country meeting

The Second Nordic International Conference on Climate Change Adaptation was held in Helsinki from 29-31st of August 2012. The conference was used to get an overview on the state of art on adaptation in the Nordic countries. 250 scholars and practitioners interested in climate change impacts, vulnerability and adaptation attended the 3-days conference (for the list of participants and the detailed conference programme please follow the links in the footnotes³⁴).

Sabine McCallum and Andrea Prutsch (both EAA) hosted two sessions on the issue of climate change adaptation strategies at national level. The main question to be addressed in both sessions was:

- Many countries have developed climate change adaptation strategies, but do decision-makers really have the appropriate information, expertise and tools available to them to implement adaptation decisions?

In one session, the focus was on relevant policy issues such as monitoring and evaluation. While some presentations critically reflected the current state of policy making on adaptation across Europe, others focused on practical experiences gained with carrying out evaluation processes for national adaptation strategies (NAS). The second session highlighted the link between policy making on adaptation and science. Practical approaches such as the one carried out in Finland was presented.

Both sessions provided relevant insights in the state of art in Europe which also provide interesting lessons learned for policy making at European level.

A final plenary discussion was attended by Sabine McCallum (EAA) as panellist together, inter alia, with the Finnish Minister of the Environment. The panel discussion was centred on the following questions:

- How should priorities be set in fostering adaptation: which sectors, what types of action?
- Does adaptation lead to a shift in responsibilities between the public, the private sector and civil society at large?
- What encouragement/incentives can/should be developed for the private sector and civil society?
- How do private companies respond to/prepare for climate change, and what do they expect from the public sector?
- What can countries learn from one another in developing adaptation?

Conference participants could raise their questions per SMS which appeared on the screen in the Auditorium. Apart from the questions listed above, the issue of how research results can best meet the needs of decision-makers has been addressed. One question posted by a

³ https://www.eiseverywhere.com/file_uploads/32b26189ef48da571cb7b3e2e5e76d42_Participant_list.pdf

⁴ https://www.eiseverywhere.com/file_uploads/7cb850cf5759e724dfc3ce04304565ef_detailed_programme_draft_280812.pdf

participant was requesting the view from the panel about the need of an EU Directive on Climate Change Adaptation. All panellists were in principle in support of EU legislation with the reservation that it depends on the content.

3.2.3 Strengthen engagement of the private sector and EU companies

Engagement with the private sector represents an important pillar of the Commission's approach to adaptation to harness the potential of the market and private sector actors to achieve adaptation objectives. Thus, the Commission aims to engage meaningfully with the private sector to establish a two-way dialogue and a productive working relationship.

The private sector is important to adaptation within Europe because it is responsible for a large proportion of decisions and investments that determine the resilience or vulnerability of the economy, environment and society to climate change. Market based instruments can be adapted to efficiently mainstream climate change into business decisions, but only if the appropriate policy frameworks are in place and business leaders are sufficiently aware of the risks and opportunities posed to them by a changing climate.

Private sector actors have been approached by two strands of engagement:

- A short, targeted questionnaire;
- Dedicated meetings for specific issues.

A. Private sector questionnaire

The questionnaire was distributed to 43 private sector stakeholders in the following sectors: agriculture, construction, energy, transport, finance, insurance and organisations representing the interest of SMEs (see Annex 1 for a copy of the questionnaire and full list of recipients).

Seven responses to the questionnaire were received from:

- European Association of Crafts and Small and Medium-Sized Enterprises (UEAPME) (buildings and energy);
- KfW Bank Germany (insurance);
- Association of British Insurers (ABI) (insurance);
- National Farmers Union (NFU) (agriculture);
- International Road Transport Union (IRU) (transport);
- Royal Bank of Scotland (RBS) (insurance); and

- EUROCONTROL (European Organisation for the Safety of Air Traffic Management) (transport).

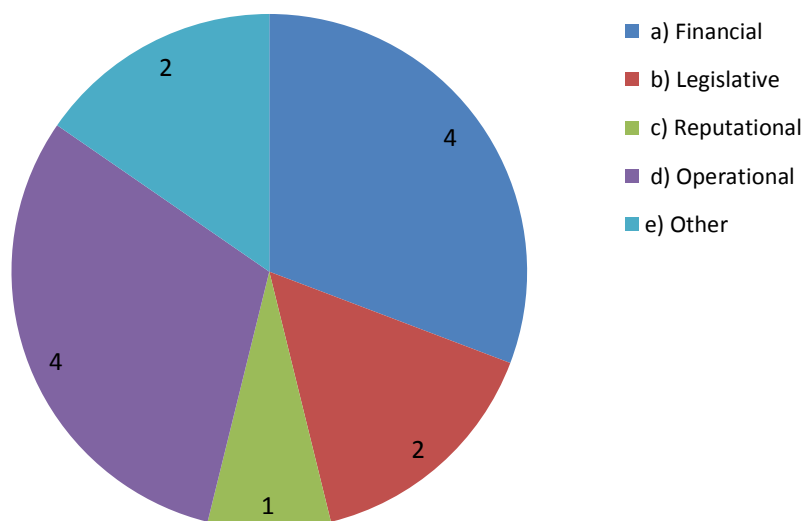
It should be noted that one respondent confused adaptation with mitigation (International Road Transport Union). This response has been removed from the analysis and the total number of valid responses is six.

The results from the questionnaire are being used to inform the Background report to the Impact Assessment, Part I including the assessment of policy options relevant to problem “Capture the potential of the market”.

Summary analysis of private sector questionnaire responses

Drivers for adapting to climate change

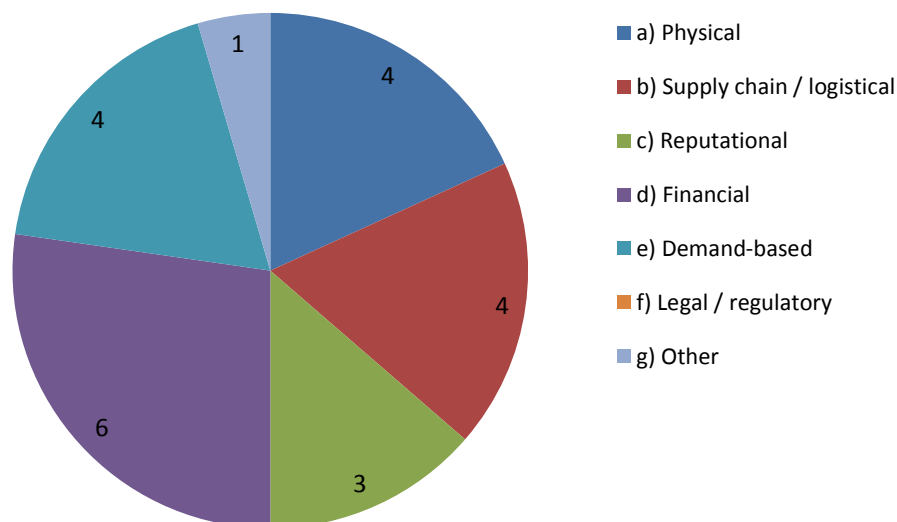
Figure 1: What are the key drivers for your sector to adapt to climate change?



The key drivers identified by respondents for adapting to climate change are financial and operational (4/6 respondents). Only 1/6 respondents stated that reputation was a driver, and only 2/6 stated that legislation was a driver (no further detail provided). According to KfW Bankengruppe (Germany) the demand for specific financial solutions for climate change adaptation is an important driver for the financial sector at a general level. For promotional banks, which are established to channel inexpensive long-term funds to the target group via local commercial banks and savings banks, which bear full liability for the loans, the government mandate is a key driver.

Climate change risks and opportunities

Figure 2: Are you aware of the climate change risks and opportunities for your sector?



Respondents had different views on the risks and opportunities facing their sector. The most common risk was finance-related (6/6 respondents), with further explanations specifying risks associated with increased operating costs and potential increased insurance premiums (EUROCONTROL). KfW Bankengruppe stated “climate change might have a (negative) impact on the asset side of the balance sheet of financial institutions (e.g. through its impact on credit portfolios) and especially long-term assets and/or derivatives”.

The Association of British Insurers linked the financial risk to reputational risks for insurance companies, but interestingly KfW Bankengruppe identified an opportunity surrounding reputation: “providing for specific financial solutions for climate adaptation might have positive reputational effects for financial institutions”. However the Association of British Insurers also stated that reputational risk to insurers tends to rise when significant ‘claims events’ occur, such as major floods, and that climate change is likely to increase the frequency and magnitude of such events.

4/6 respondents identified demand-based risks and opportunities for their sector, e.g. EUROCONTROL stated that there may be changes in passenger demand due to changing climatic conditions at some destinations: some destinations may see a decrease in traffic or season adjustment whilst others may see an increase. ABI stated that as premiums shift to reflect new realities there is always a risk of shifts in demand (both positive and negative). Similarly 4/6 respondents highlighted the supply chain risks associated with climate change, e.g. loss of energy supply (EUROCONTROL).

When asked whether adaptation would present commercial opportunities, respondents were generally positive. Responses included “it depends from the sector or type of SMEs. Perhaps advantages for eco-innovative SMEs as they will be able to sell their new equipment and install them (e.g. new irrigation technologies, equipment for the recovery of water from rain, etc). It is important that climate adaptation does not present commercial constraints to SMEs. In order to prevent this, work with SME business representatives is essential” (UEAPME). In terms of an expanding market share, EUROCONTROL stated that some destinations may experience an increase in demand due to changing climatic conditions. However, this must be balanced against possible reductions in demand at other destinations.

Exposure to climate change impacts

3/6 respondents considered themselves to have experienced positive impacts associated with climate change, e.g. a good climate adaptation strategy and sector-based climate adaptation measures can cause positive impacts to businesses as they will be able to benefit from more solid infrastructures and also from safer environments (UEAPME). KfW is one of largest financiers of climate and environmental protection projects. The reputational effects of these business activities are predominantly positive for KfW.

2/6 respondents considered they had experienced negative impacts, e.g. safer operating measures and more solid infrastructures can be costly for SMEs. It is also important to bear in mind that climate adaptation measures should not increase red tape for SMEs.

Adapting to climate change

What is the level of awareness within your sector of how to adapt to climate change?

3/6 respondents indicated a ranging level of awareness, from low to high, e.g. National Farmers Union and EUROCONTROL, with the latter stating that some countries are highly aware of the potential impacts and have adaptation plans in place while other countries are less aware and have not begun to draw up adaptation plans. According to KfW, there is a moderate to low level of awareness of how to adapt to climate change within the banking sector. As a promotional bank with a focus on climate protection, KfW has a high level of awareness/competence in the area of financing renewable energy and energy efficiency projects. KfW's current promotional business is focused on reducing greenhouse gas emissions, however our promotional programmes (e.g. for the financing of energy efficient housing in Germany) also have a positive effect on the capacity of households and enterprises to cope with/adapt to the negative effects of climate change (cost efficient heating/cooling of housing).

Specifically for SMEs, awareness varies depending on the sector concerned. But in general, SMEs are not very aware of the impacts of climate change. The lack of financial and personal resources to deal with climate-related issues is one of the reasons for having low awareness. Therefore, public authorities should work hand-in hand with intermediary business organisations to raise awareness among SMEs (UEAPME).

Have you begun to adapt to climate change?

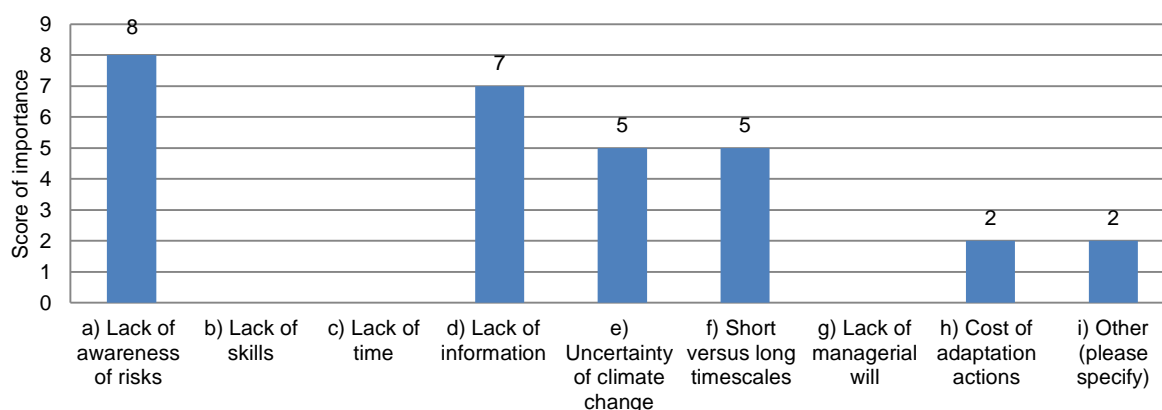
3/6 respondents stated their sector had begun to adapt to climate change while 2/6 respondents said their sectors had not started. Of those answering yes, responses include “a large amount of work has been done to understand climate impacts (e.g. ABI, 2009: The Financial Risks of Climate Change). The UK insurance industry is working constructively to develop a model to continue delivering affordable flood insurance in a high flood risk future, while continuing to incentivise effective flood risk management. KfW stated “KfW has been active on climate and environmental protection for many decades. However an international trend towards more business in the field of climate protection can be observed among promotional banks in recent years (EIB group is active in this field, UK recently founded the Green Investment Bank). One respondent from the National Farmers Union stated that some farmers have changed practice but this is probably more in response to weather than climate.

Barriers to adaptation

Stakeholders were asked to identify the top three barriers for their sector to adapt to climate change. The number one ranked barrier was given a score of 3, 2 for the middle barrier, and 1 for the lowest barrier. The figure below shows the barriers ranked by importance. Lack of awareness was the top barrier, followed by lack of information. Interestingly the cost of adaptation was ranked as the joint lowest barrier.

KfW also identified technological barriers, stating that promotional banks can and do provide long-term financing solutions for investments in climate protection projects. Depending on the specific project there might be technological risks, either due to investments in new developed (and therefore riskier) technologies and/or investments in existing technologies which do not pay an appropriate return because fast technological progress can supersede existing technologies only a few years after the investment decision.

Figure 3 Barriers to adapting to climate change



Support needs

Only one respondent said they were aware of any financial assistance available to adapt to climate change, namely LIFE+, suggesting that greater communication and awareness raising on this issue is required by the Commission and Member State governments.

Indeed 3/6 respondents stated that financial support was required from the Commission to adapt to climate change. KfW stated “based on our experience, financing e.g. through promotional loan offers, not only financial incentives for firms and households to invest in climate protection, also raises the awareness for climate protection/adaption and is therefore an appropriate tool to implement such policies (KfW often offers / arranges technical assistance, expert advice etc. in addition or as a precondition for promotional loans).”

With regard to SMEs, UEAPME stated they need a framework consisting of:

- Specific information adapted to SMEs
- Technical advice: technical assistance offered for free or at a reduced price
- Easy and affordable access to finance/financial incentives
- Availability of the right skills in the market

In a similar vein, EUROCONTROL stated that requirements of the aviation sector may differ greatly by state and by organisation. They suggest considering the development of an Adaptation Assessment Tool Kit for ATM and/or airports to be incorporated as part of the EC's Adaptation Platform/Strategy. EUROCONTROL also stated that support from senior managers was important.

Further engagement

5/6 respondents stated that they were interested in helping to develop and implement public policy on adaptation; 1/6 respondents requested more information. 6/6 respondents were interested in working with/assisting the European Commission to build adaptive capacity in the private sector beyond the life time of the support contract. Face to face meetings and email communications were identified as the preferred methods of engagement with the European Commission.

B. Stakeholder dialogues

The following dialogues have been carried out:

- Meeting with **CEN/CENELER** on the 9th of March 2012 on EU standards and the development and /or implementation/application of national standards, in particular for the energy, construction and transport sectors;
- 2nd Meeting with **CEN/CENELER/ Community of European Railways (CER)** on the 18th of June 2012 on EU standards and the development and /or implementation/application of national standards, in particular for the energy, construction and transport sectors.
- Meeting with experts **on climate scenarios and (the costs of) natural disasters** on the 15th of March 2012;
- Meeting with **forest experts** organised with the support of EUSTAFOR scheduled for the 19th of June 2012;
- 3 stakeholder meetings with **insurance** experts on the 27th March, 26th April, and 24th May in Brussels

3.2.3.1 Minutes of stakeholder dialogues

Meeting title, date and location:	Meeting with CEN/CENELER, 9 th of March 2012 in Brussels
Responsible contact person (s)	Sabine McCallum (EAA)
Target group	CEN/CENELER
Participants (<i>Name, Institution, Country</i>)	CEN/CENELER (Ashok Ganesh, Cinzia Missiroli), DG ENTR (Cyrill Dirscherl) DG CLIMA (Joan Canton, Claus Kondrup, Koen Frankhuizen)
Level of background knowledge of i)adaptation policy, ii) the EU Adaptation Strategy	i) medium ii) low
Involvement format	Informal meeting (1500-1600)
Event specific aims	Meeting to gain insight into the process of developing and /or implementing of EU standards or the of national standards, in particular for the energy, construction and transport sectors
Agenda	
Input documents	None
Expected outputs	Input on how to further proceed with the question on standards for adaptation purposes
Summary report/minutes (outputs)	It has been agreed to follow-up on 2 main issues:



Meeting title, date and location:	Meeting with CEN/CENELER, 9 th of March 2012 in Brussels
	(i) check CEN/CENELEC “guide for addressing environmental issues in product standards” as a potential entry point to include climate change considerations, (ii) consider a mapping exercise on climate change provisions in existing standards (inquiry from CEN/CENELEC for collecting information through their networks)

Meeting title, date and location:	Climate change adaptation and standards in the European transport sector, 18th of June 2012 in Brussels
Responsible contact person (s)	Koen Frankhuizen (COM), Thomas Dworak (FT),
Target group	Stakeholders in the transport sector and standardisation bodies
Participants (<i>Name, Institution, Country</i>)	
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	ix) Medium to high x) Low
Involvement format	13:00-16:30 round table
General objectives	The overall objective of this workshop is to mobilise the knowledge and experience of public and private actors in the transportation sector about employing industry standards for adaptation to climate change purposes.
Event specific aims	See above and expected outputs
Agenda	
Input documents	None
Expected outputs	<ul style="list-style-type: none"> ■ Share information on on-going developments and research in adaptation to climate change in transport sector; ■ Collect expert/stakeholder insights and views on whether and how standards can be seen as useful instruments for adaptation in transport sector on local, national and EU levels; ■ Identify concrete examples of standards being applied for adaptation purposes. ■ Identify the impacts of adapting (identified) standards to address the consequences of future climate change on infrastructure.
Summary report/minutes (outputs)	<p>Presentations have been provided by DG Climate Action, CEN/CENELEC, ACI-Europe, CER/ERFTC, CEDA and INE. Discussion focused on:</p> <ul style="list-style-type: none"> ■ Standards landscape is highly diverse and complicated. The participants advice to focus on general, strategic standards more focussing on the process (forcing constructors to think about adaptation issues during the planning and designing process) instead of very specific ones (e.g. diameter of a pole). However even identifying these key standards can be highly complicated and in particular for railways can take a lot of time (CER indicates 1 to 2 years at least). CEN/CENELEC has started with a mapping exercise, but this might result in 500-1000 relevant

Meeting title, date and location:

Climate change adaptation and standards in the European transport sector, 18th of June 2012 in Brussels

standards. It is stressed that the exercise is very time consuming.

- Standards (and regulations) should be based on solid R&D. Basic research is still very important in this field.
- Balance trade-offs between mitigation and adaptation, high level standards and competitiveness (within modes and intermodal), and well-developed standards versus flexibility to deal with uncertainties and regional differences.
- Standards for adaptation should not lead to increase environmental pollution. This might happen in some cases (e.g. better asphalt) if not monitored carefully.
- Competition can be either a killer (no long-term investments) or driver of adaptation (e.g. ports, which need high level of reliability to be competitive).
- Look at transport modes as a network, both within a mode as intermodal. A holistic, EU wide approach is needed. Both within a mode (one airport failing will lead to delays at other airports) and intermodal (knock-off effects). Also a pan-European vulnerability mapping is required. UK is a good example.
- Focus should be on adapting existing regulations and standards.
- Adaptation to any possible event is not possible. Risk assessment / trade-off between acceptable risk and costs should be part of the studies. Risk accepted is an outcome from a political or business decision.
- Adaptive management should be part of the approach. Adaptive management is possible within the precautionary principle.
- An European approach is very much supported from all participants. Large potentials / savings are available by sharing good practices and connecting modes. However Commission cannot force regional authorities or agencies / businesses to work together.
- In general, a strong focus on key standards and a clear purpose / goal is necessary to successfully integrate adaptation into standards. Resources are scarce, so focus on a few strategic directions. Prevent gold plating. At first glance focussing on standards concerning long life cycles would be favourable.

Meeting title, date and location:	Meeting with experts on climate scenarios and (the costs of) natural disasters, 15 th of March 2012 in Brussels
Responsible contact person (s)	Jaroslav Mysiak (FEEM)
Target group	Climate scientists, insurance sector
Participants (<i>Name, Institution, Country</i>)	<p>Bosello Francesco, Fondazione Eni Enrico Mattei</p> <p>Bouwer Laurens, Institute for Environmental Studies, University of Amsterdam</p> <p>Canton Joan, DG CLIMA; Dworak Thomas, Fresh-Thoughts</p> <p>de Lannoy Thomas, DG ECHO</p> <p>Mincheva Yordanka, DG ECHO</p> <p>Goodess Clare, University of East Anglia</p> <p>McCallum Sabine, Environmental Agency Austria</p> <p>Mysiak Jaroslav, Fondazione Eni Enrico Mattei</p> <p>Surminski Swenja, London School of Economics</p> <p>Ward Patrick, Fondazione Eni Enrico Mattei</p> <p>Wirtz Angelika, Munich Re, NatCatSERVICE</p>
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	<p>i.) high</p> <p>ii) low</p>
Involvement format	1-day workshop
Event specific aims	The event aimed at collecting inputs from practitioners and academics on the evidence base and use of climate scenarios and cost estimates.
Agenda	<p>10:00 –11:00 INTRODUCTION</p> <ul style="list-style-type: none"> ○ The EU strategy for adaptation to climate change (<i>Ingmar Juergens, EC/DG CLIMA</i>) ○ Activities planned in the area of Disaster Risk Reduction by DG ECHO (<i>de Lannoy Thomas, European Commission, DG Humanitarian Aid and Civil Protection</i>) ○ The EUAdaptStrat project: Support to the development of the EU strategy for adaptation to climate change (<i>Sabine McCallum, Environment Agency Austria</i>) ○ Scope of the workshop (<i>Jaroslav Mysiak, Fondazione Eni Enrico Mattei</i>) <p>11:00 – 13:00 ESTIMATING LOSSES TO NATURAL HAZARDS UNDER CURRENT AND FUTURE CLIMATES, AND THE</p>

Meeting title, date and location:	Meeting with experts on climate scenarios and (the costs of) natural disasters, 15 th of March 2012 in Brussels
	<p>IMPLICATION FOR CLIMATE ADAPTATION EFFORTS</p> <p>Key discussion topics: Databases of the historical events, Trend detection in recorded losses, Extreme events under changing climate(s), Non-climate-related drivers of disaster losses</p> <p><i>Discussion introduced and moderated by Jaroslav Mysiak, Fondazione Eni Enrico Mattei</i></p> <p>13:00 - 14:00 Lunch</p> <p>14:00 -15:30 MAKING A STRONG CASE FOR CLIMATE CHANGE ADAPTATION</p> <p>Key discussion topics: Climate-sensitive infrastructures, Vulnerability and resilience of key sectors, Economics and welfare effects of natural disasters, Inter-linkages and potentials for cooperation between DRR and adaptation; Adaptation scenarios/pathways</p> <p><i>Discussion introduced and moderated by Francesco Bosello, Fondazione Eni Enrico Mattei</i></p> <p>15:30 – 16:00 Coffee break</p> <p>16:00 - 17:00 THE WAY FORWARD</p> <ul style="list-style-type: none"> ○ Input for the Impact Assessment for the EU adaptation strategy ○ Identifying and filling knowledge gaps related to the economics of climate change impacts and adaptation in the future <p><i>Discussion introduced and moderated by Thomas Dworak, Fresh Thoughts; and Sabine McCallum, Environment Agency Austria</i></p> <p>17:00 - 17:30 WRAP-UP AND CONCLUSIONS</p>
Input documents	Background document for the workshop
Expected outputs	Further input to improve information on climate

Meeting title, date and location:	Meeting with experts on climate scenarios and (the costs of) natural disasters, 15 th of March 2012 in Brussels
	scenarios/natural hazards for the background report to the Impact Assessment, Part I.
Summary report/minutes (outputs)	<p>The morning session was dedicated to discussion of natural hazard related data and assessment methodologies, including data reliability, uncertainty and gaps, the purpose of the assessment and the value of historical data sets. The discussion has highlighted that the role of the full impact assessment of environmental, social and economic impacts of natural hazards and extreme events for 1) making a strong case for the investments in disaster prevention and preparedness, and 2) understanding the vulnerability and resilience undermined by unsustainable development and inappropriate management practices. The discussion also highlighted the practical challenges in detecting robust trends and patterns in the current global disaster databases.</p> <p>Strictly related to this, and very relevant for an EU adaptation strategy, is the need to understand better the distributional implication of climate change impacts: for different Member States, sectors and regions. Country specific vulnerability is determined by the impacts themselves (exposure), but also by the social-economic structure of the system impacted. Accordingly, the characteristics of the social economic development taken as reference, can be as important (and in the medium term probably more important) than the climate change stressor.</p> <p>There are different approaches to scenario building. The IPCC is proposing the “new” RCPS. Several FP projects were devoted to scenario construction. It has been pointed out that last year the Commission adopted two scenarios as references: one consistent with a “low carbon road map” leading to temperature stabilization at 2°C and another less ambitious environmentally, but anyway engaging for the EU as based on a “Copenhagen pledges” world. The challenge with scenarios is to translate/downscale consistently general information, applicable to macroeconomic drivers, into sector-specific input of use at the sectoral level.</p> <p>In the afternoon the discussion evolved around topics of the on-going research and policy</p>

Meeting title, date and location:	Meeting with experts on climate scenarios and (the costs of) natural disasters, 15 th of March 2012 in Brussels
	<p>relevance of the critical infrastructure; the existing Community financial instruments such as the European Solidarity Fund; and the impacts of climate change on ecosystems and services these provide. It was suggested to link case studies with the macroeconomic impact assessment. The representatives of the insurance sector presented at the workshop highlighted the different nature and scope of the models, different from the Computable General Equilibrium (CGE) models, applied analyse and assess risk. In these models, more emphasis is placed on uncertainty and probability modelling of economic losses. In places where insurance is not insulated from the influence of policy, the models used for risk analysis are subject to approval (and inference) by public decision makers. A good example is Florida where risk premiums are kept at very low level despite the high exposure and potentially large losses.</p>

Meeting title, date and location:	Workshop: Climate change and the forestry sector, 19th of June 2012 in Brussels
Responsible contact person (s)	Thomas Dworak (FT)
Target group	Stakeholders in the forestry sector
Participants (<i>Name, Institution, Country</i>)	<p>Andreas Bitter, AGDW Michael Bucki, European Commission Joan Canton, European Commission Thomas Dworak, Fresh Thoughts Consulting GmbH María Gafo Gomez-Zamalloa, European Commission Evija Grege-Staltmane, LVM Nuria Guerrero, CEPF Roland Kautz, Österreichische Bundesforste AG Matthias Kiess, EUSTA FOR Michael Krause, Österreichische Bundesforste AG Michaela Matauschek, Fresh Thoughts Ernst Schulte, European Commission</p>
Level of background knowledge of i) adaptation policy, ii) the EU Adaptation Strategy	<p>xi) Medium to high xii) Low</p>
Involvement format	09:30-16:30 round table
General objectives	The overall objective of this one day workshop is to mobilise the knowledge and experience of public and private forest owners about adaptation to climate change in the forestry sector.
Event specific aims	<p>The particular focus is to:</p> <ul style="list-style-type: none"> • Identify the main knowledge gaps in relation to climate change impacts and adaptation measures • Identify trade-offs and synergies between better resilience and other objectives for the forestry sector • How to mainstream climate change adaptation into EU and national forest policies
Agenda	
Input documents	None
Expected outputs	Better understanding of the adaptation needs and expectations of the EU forestry sector
Summary report/minutes (outputs)	The forestry sector is in a unique situation as related to climate change as on one hand it plays an important role in mitigating climate change, but on the other hand the sector also needs to adapt to the impacts from climate change. The forest sector provides also the basis for adaptation in other sectors (e.g. supply of construction material and energy; protection function of the forest sector against increased avalanches and landslides).

Meeting title, date and location:

Workshop: Climate change and the forestry sector, 19th of June 2012 in Brussels

Adaptation efforts in the forest sector should consider/address the following issues:

- There is an overflow of information at all levels. This makes it difficult to draw attention of the sector on adaptation.
- Forest management can have different objectives also economic ones. This should be considered when trying to convince forest managers to take actions in the area of adaptation to climate change.
- Structural aspects of the sector. The overall discussions on adaptation at EU level hardly reach the ground (single forest owner) due to the diversity and fragmentation of the sector (few large companies versus several small forest owners). Also small forest owners which are often part time do not have clear forest management objectives and plans which makes the implementation of EU policies on the ground also more difficult.
- Forestry is not a policy field on the European Union Institution's level yet. Forest management at this level is mainly ruled by several other policy areas such as biodiversity, the CAP or nature conservation. The proposed EU Forestry strategy tries to integrate these different policies into an overall strategic framework. Adaptation to climate change should not be seen as a stand-alone issue and therefore integrated as a cross-cutting issue into this framework.
- It is important to increase the awareness on adaptation at the local level. This should be mainly done due to the use of advisory services and the creation of local forest organisations (co-operations). Such organisations are seen as a suitable entry point for increasing awareness about EU policies in general but also for adaptation in particular. For larger companies it is also important to create a business case for adaptation.
- The role of forestry management plans to trigger adaptation was seen as controversial. While they might be beneficial for large companies and co-operations, they might not be appropriate for small forest owners (e.g. less than 10ha) as they represent an administrative burden to them.
- Adaptation possibilities are often limited due to legal requirements in other policy areas such as nature conservation obligations (e.g. planting of new non-native species).
- The sector has some specificity that makes the use of insurance more difficult in the sector.
- The role of payments for ecosystem services (e.g. for providing protection to settlements) should be

Meeting title, date and location:

Workshop: Climate change and the forestry sector, 19th of June 2012 in Brussels

assessed and strengthened. However the details on how to do this and for which services need further investigations.

- Trans-boundary issues of relevance in the forestry sector are: i) changes in trade and in the market due to climate change impacts outside the EU (for example if less can be imported prices increase); ii) changes in trade and in the market due to climate change impacts inside the EU such as a large scale wind falls which increase the dependencies on imports; iii) pest management
- Future Research should address the following issues: i) effective ways on how to communicate and implement EU policy objectives to the local level; ii) how adaptation efforts of the forestry sector will impact other sectors (e.g. forestry – energy relation under a changing climate) and vice versa (how sectoral adaptation efforts impact the forest sector) iii) how to deal with uncertainty in particular with rapidly changing harvesting condition (e.g. no normal harvesting over years) iv) adaptive capacity of the sector, considering forest sector structures and management practices
- Currently various approaches exists, which makes is difficult to compare the predicted impacts between MS. There was an idea to use more standardised approaches/tools for assessing risks and vulnerabilities.
- Information exchange between different forest owners on how to adapt to climate change should be facilitated.

Meeting title, date and location:	Stakeholder meeting with insurance experts, 27th of March 2012 in Brussels
Responsible contact person (s)	Andrew Dlugolecki
Target group	Insurance experts
Participants	David Bresch (Swiss Re) Trevor Maynard (Lloyd's)
Involvement format	Workshop
General objectives	Knowledge exchange and discussion on current state of climate change adaptation in insurance sector
Agenda	<p>Discussion along the following questions:</p> <ol style="list-style-type: none"> 1. Did we cover main market barriers and potential climate change impacts? 2. Are the identified solutions and potential actions adequate and potentially effective? Which ones could be most promising? How they could be better targeted? 3. How the effective use of insurance for adaptation can be ensured i.e. how to ensure 3 aspects presented in chapter 3 (information, incentives, climate risk management)? 4. How conflicting objectives could be addressed e.g. incentives for risk prevention with affordability and availability of insurance? 5. Are the knowledge gaps well covered in chapter 4? 6. Which issues we should concentrate on and what input should seek for at the foreseen workshops with insurers?
Input documents	Input document was made available
Summary report/minutes (outputs)	Output of the workshop was used to develop the background report on insurance further

Meeting title, date and location:	Stakeholder meeting with insurance experts, 26 th of April 2012 in Brussels
Responsible contact person (s)	Andrew Dlugolecki
Target group	Insurance experts
Participants (<i>Name, Institution, Country</i>)	Andrew Mitchell (Willis Re) Guillaume Gorge (AXA) Alice Steenland (AXA) Pauliina Murphy (Royal & Sun Alliance) Susan Penwarden (Royal & Sun Alliance) Ernst Rauch (Munich Re)
Involvement format	Workshop
General objectives	Knowledge exchange and discussion on current state of climate change adaptation in insurance sector
Event specific aims	<ul style="list-style-type: none"> • Reflect on the scope of the report i.e. if all main issues related to insurance and climate change are well covered. • Suggest which market barriers and climate change impacts on insurance are most important to be addressed and which solutions for these issues would be most effective • Suggest how to use insurance effectively for adaptation. • Suggest how the solutions in (2) and (3) above could be translated into action.
Agenda	10:00 – 10:15 <i>Introduction</i> 10:15 – 10:30 Overall scope 10.30 – 11:00 Risk transfer conditions 11.00 – 11.30 Availability 11.30 – 12.00 Demand 12.00 – 12.30 Financial performance of insurance companies 12.30 – 13.30 <i>Lunch break</i> 13:30 – 14:00 Insurance as an instrument for climate change risk management 14:00 – 14:30 Insurance as a tool to provide incentives for risk prevention 14.30 – 15:00 Insurance as a tool to provide information on climate change 15.00 – 15.30 Actions 15.30 – 16.00 <i>Summary and next steps</i>
Input documents	Input document was made available
Summary report/minutes (outputs)	Output of the workshop was used to develop the background report on insurance further.
Responsible contact person (s)	Andrew Dlugolecki

Meeting title, date and location:	Stakeholder meeting with insurance experts, 26 th of April 2012 in Brussels
Target group	Insurance experts, experts on climate change adaptation
Participants (<i>Name, Institution, Country</i>)	<p>Ariane Becker, GDV (German Insurance Association)</p> <p>Ecaterina Matcov, Insurance Europe,</p> <p>Andre Jol, European Environment Agency</p> <p>Rob Schoonman, Netherlands Ministry of Infrastructure and Environment: Directorate for Spatial Development and Water Affairs, Climate Adaptation International</p> <p>Pieter van den Broeck, Catholic University of Liege</p> <p>Peter Defranceschi, ICLEI</p> <p>Matthew Cullen, ABI (Association of British Insurers)</p> <p>Roland Nussbaum, MRN (Mission des sociétés d'assurance pour la connaissance et la prévention des risques naturels)</p>
Involvement format	Workshop
General objectives	Knowledge exchange and discussion on current state of climate change adaptation in insurance sector
Event specific aims	<p>Questions for discussion:</p> <ol style="list-style-type: none"> 1. Would hazard zoning and resilience standards be feasible in practice? At what level (local, national, EU) they would be most effective? 2. Would hazard zoning and resilience standards help ensuring insurance availability and affordability and protection of high risk zones? 3. How to ensure that new developments are done according to climate resilient standards? 4. How to ensure that new developments in very high risk areas are avoided? 5. How to ensure that the recovery after disasters is done according to climate resilient standards? Can insurers require certain standards as a precondition for providing insurance and payouts? 6. How to ensure that insurance is used effectively as a tool in planning and decision making to cope with risk increase? Would insurers be interested in developing guidance? 7. Would information sharing on national insurance schemes and available products be helpful? 8. How to ensure that information is provided to a customer by insurers and intermediaries? 9. How to ensure that the risk transfer conditions are adjusted according to the risk prevention efforts taken by a customer.
Agenda	<p>10:00 – 10:30 <i>Introduction</i></p> <p>10.30 – 11:30 Protecting high risk areas</p> <p>11.30 – 12.30 Climate proofing new</p>



Meeting title, date and location:	Stakeholder meeting with insurance experts, 26 th of April 2012 in Brussels
	<p>developments</p> <p>12.30 – 13.30 <i>Lunch break</i></p> <p>13.30 – 14.30 Strategic risk management & planning processes</p> <p>14.30 – 15.30 Information on risks and incentives for risk prevention</p> <p>15.30 – 16.00 <i>Summary</i></p>
Input documents	Input document was made available
Summary report/minutes (outputs)	Output of the workshop was used to develop the background report on insurance further.

4 PUBLIC CONSULTATION

4.1 Introduction

In April 2009 the European Commission adopted the White Paper on adaptation to climate change entitled "Adapting to climate change: Towards a European framework for action". The implementation phase of the White Paper (2009-2012) led to significant achievements. In particular:

- The vast majority of the 33 actions announced in the White Paper have now been implemented or are about to be.
- The European Climate Adaptation Platform, Climate-ADAPT (<http://climate-adapt.eea.europa.eu/>), was launched in March 2012.
- More and more research findings are being made available on the costs of inaction and action on climate risks.
- Mainstreaming climate change adaptation into key EU policies has been and will continue to be an important element.

Building on this existing work, the EU Adaptation Strategy aims to enhance the preparedness and capacity to respond to the impacts of climate change in the EU, its Member States and regions, down to the local level. This includes, inter alia, preparing for and responding to rising temperatures, changing precipitation patterns, and extreme weather events.

Three key issues have been identified as specific objectives:

- **Better informed decision making:** the EU Adaptation Strategy should further the understanding of adaptation, improve and widen the knowledge base where knowledge gaps have been identified and enhance dissemination of adaptation-related information
- **Increasing the resilience of the EU territory:** the EU Adaptation Strategy should promote adaptation action at sub-EU level, and support and facilitate exchange and coordination. In doing so, the Strategy should address cross-border climate impacts and adaptation measures.
- **Increasing the resilience of key vulnerable sectors:** The EU Adaptation Strategy should develop initiatives for a consistent and comprehensive integration of climate change adaptation considerations into sectors that are closely integrated at EU level through common policies

In the context of developing the EU Adaptation Strategy, a public consultation was carried out with the aim to collect opinions from stakeholders and experts in the field of adaptation to climate change. The results of the public consultation will feed into the considerations of

which potential policy options to take forward under the Adaptation Strategy. Additionally, the public consultation responses will be used to facilitate the impact assessment work of the Strategy.

4.2 Overview of respondents

The public consultation on the preparation of the EU Adaptation Strategy received 164 responses. The following graph provides a breakdown of responses by country.

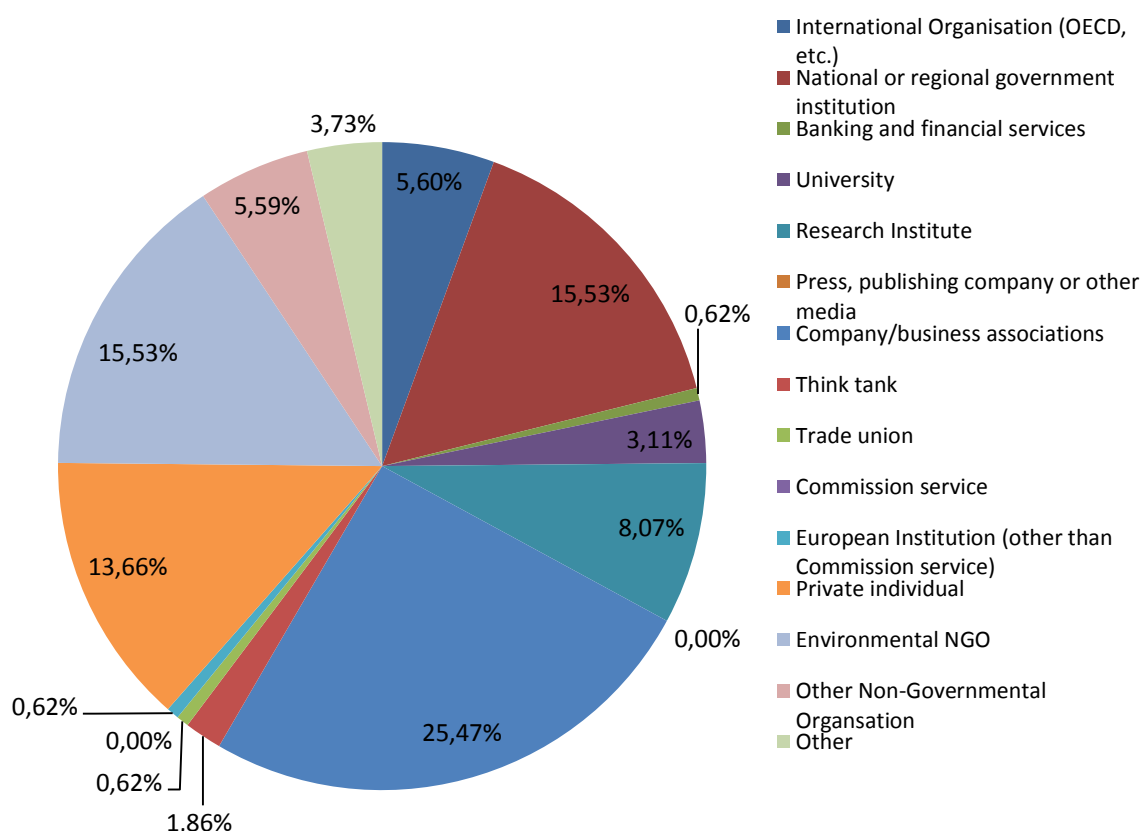
Table 1: Distribution of responses per country

	Number of requested records	% records
EU Member States		
Austria	3	1.86%
Belgium	35	21.74%
Bulgaria	2	1.24%
Czech Republic	2	1.24%
Cyprus	2	1.24%
Denmark	1	0.62%
Finland	4	2.48%
France	13	8.07%
Germany	16	9.94%
Hungary	3	1.86%
Ireland	6	3.73%
Italy	9	5.59%
Latvia	3	1.86%
Lithuania	2	1.24%
Malta	1	0.62%
Netherlands	10	6.21%
Poland	2	1.24%
Portugal	3	1.86%
Romania	1	0.62%
Slovakia	1	0.62%
Spain	8	4.97%
Sweden	7	4.35%
UK	24	14.91%
Non-EU	3	1.86%

In addition, non-papers responding to the Questionnaire but also highlighting additional aspects were submitted by the UK Government, the Convention of Scottish Local Authorities France, UNEP, the World Food Programme, Eurelectric and Climate Alliance.

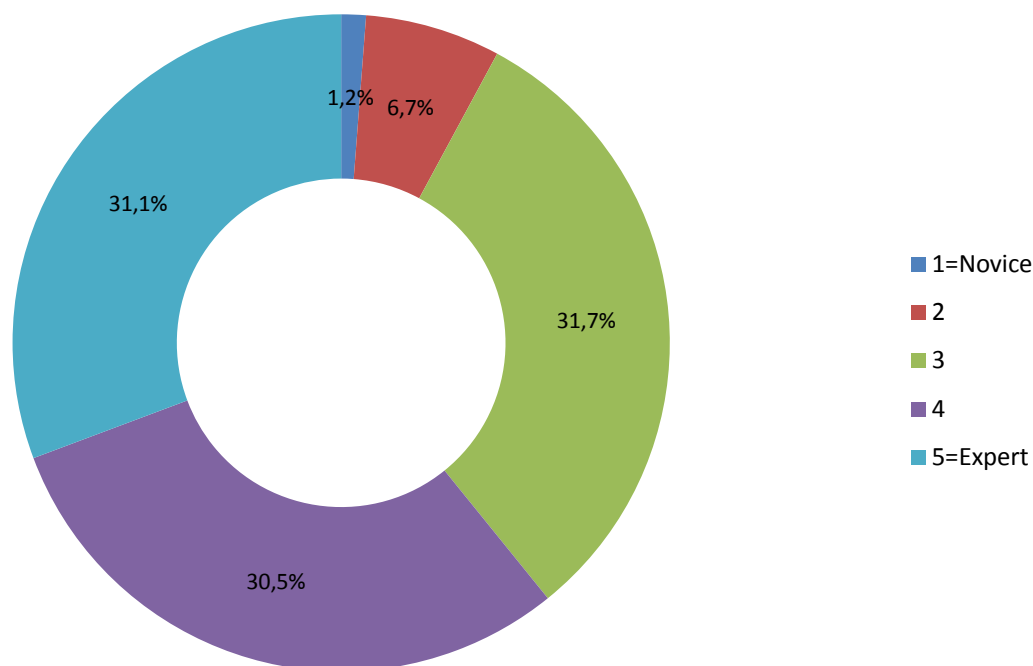
The pie chart below presents the distribution of respondents by stakeholder category. The greatest number of participants was company/business associations, followed by an equal share of environmental NGOs and national/regional governmental institutions; private individuals were also well represented. Research facilities, universities and think tanks only marginally took part in the questionnaire; the same for international organisations and European institutions. Both business specific and nature oriented associations were well represented; therefore, the responses to the questions in the public consultation include a broad range of special interests. Out of the 25 respondents from environmental NGOs, almost ½ (11 out of 25) are bird specific interest groups, represented by, for example, national Birdlife chapters and national ornithology groups.

Figure 4: Distribution of responses per affiliation



Respondents were asked to self-assess their expertise regarding climate change adaptation on a scale from 1 being novice to 5 being expert. Most of the respondents rated themselves with a 3 or higher (151 out of 164).

Figure 5: Level of expertise regarding climate change



Out of the 164 respondents, only 23 requested that their contribution remain anonymous.

The following sections present the detailed results to each question and focus in particular on the responses provided by the top four stakeholder groups (“company/business associations”, “environmental NGOs”, “national/regional governmental institutions” and “private individuals”) where a distinction between answers is appropriate. Additional contributions from the non-papers are presented as well; the rest on the information provided by the non-papers is summarised in Annex 2.

4.3 Evaluation of the questions relating to problem description

Part 1 of the public consultation asked questions relating to the current problems the environment and society are facing in light of climate change, as well as issues relating to the potential for adaptation measures to increase the economy’s resilience.

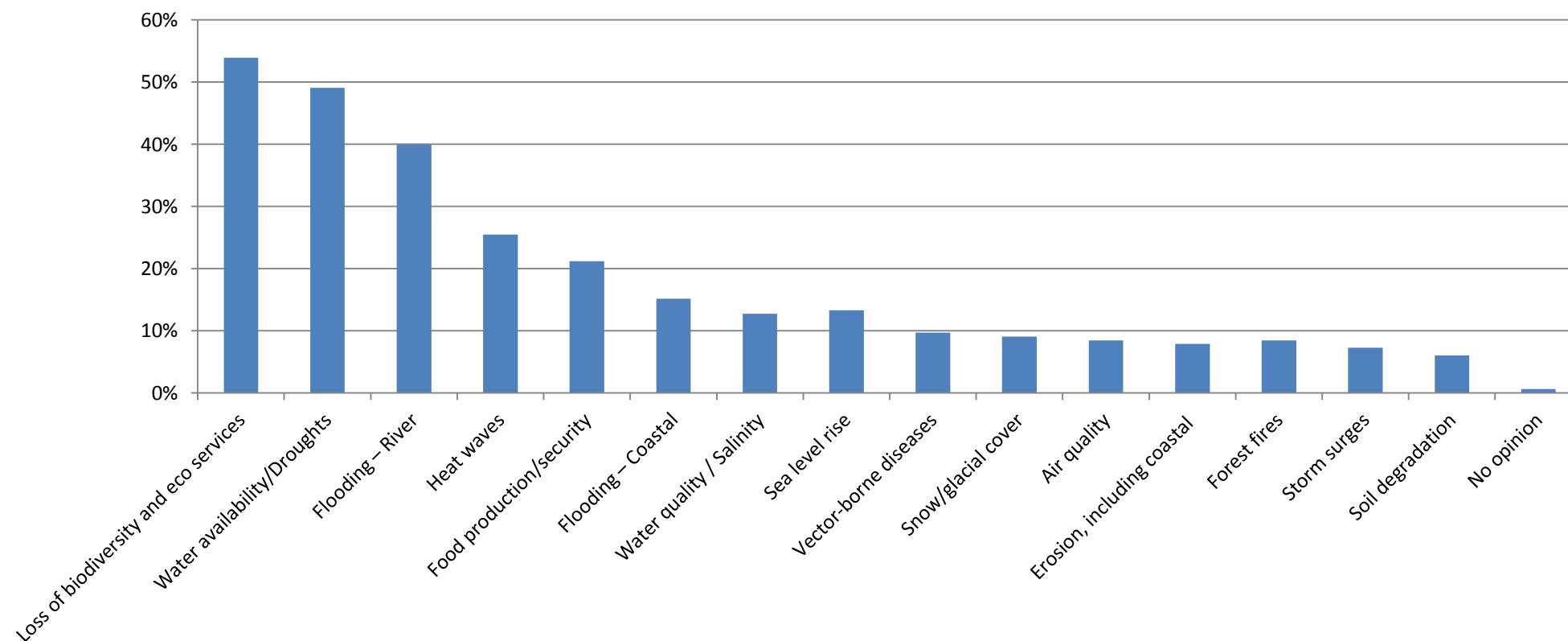
4.3.1 Effects of climate change on the environment and society

Respondents were asked **to select a maximum of three adverse effects of climate change that concern them the most**. The effect with the highest selection was ‘biodiversity loss and degradation of ecosystem services’ (53% of respondents), followed by ‘water availability/droughts’ (49%) and ‘flooding of surface waters’ (41%) (See figure 6 for a complete picture).

For this question choices vary greatly depending on the stakeholder category. For example, 92% of environmental NGOs selected 'biodiversity loss and degradation of ecosystem services' compared to only 24% of the company/business associations. On the other hand, 71.4% of company/business associations selected 'river flooding', compared to only 20% of the environmental NGOs. Interestingly, private individuals chose 'biodiversity losses' much more often (77.3%) than 'river flooding' (18.2%). For 'water availability/droughts' – the second most chosen effect – companies/business associations, environmental NGOs and national/regional governmental institutions selected the adverse effect rather equally: 52%, 60%, and 46%, respectively. 'Food production' was selected by 41% of private individuals compared to only 12% of company/business associations, and 3.6% of national/regional governmental institutions. Heat waves were selected by about 33% of company/business associations and national/regional governmental institutions, but only 8% of Environmental NGOs and 9% of private individuals selected this problem.

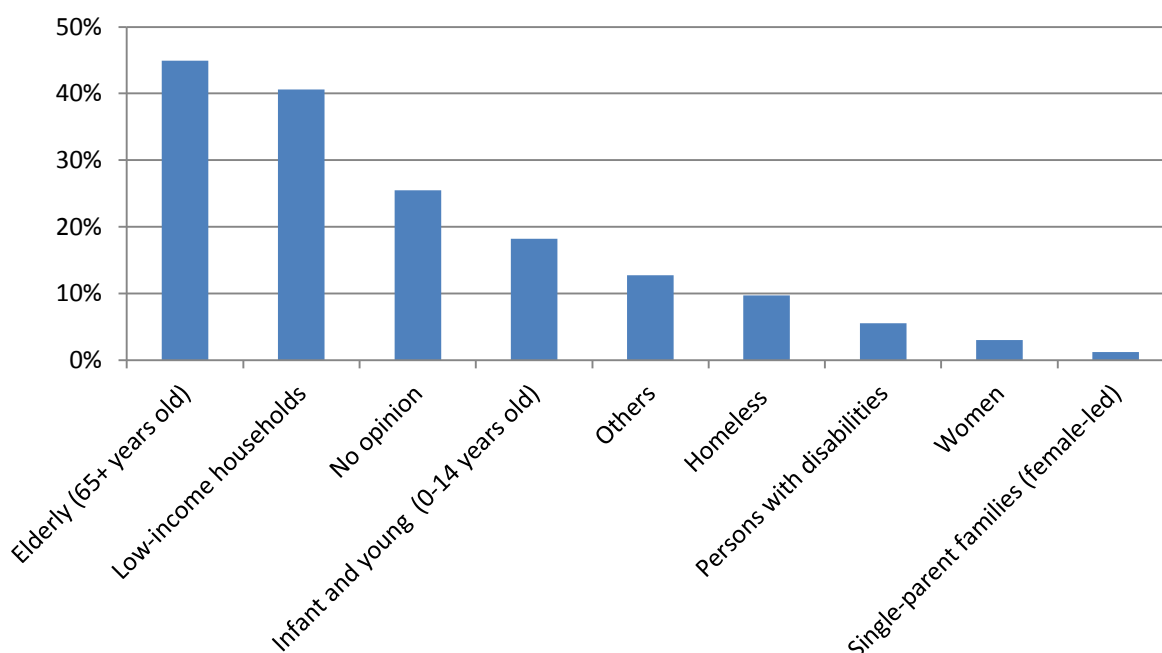
In its non-paper, the UK mentions that the Strategy should not focus only on impacts of climate change within the EU, but also impacts on the EU from effects of climate change globally. The French non-paper stated that all of the adverse effects of climate change must be considered to avoid missing potentially significant environmental problems.

Figure 6: The most adverse effects of climate change as selected by respondents



Respondents were asked to **select a maximum of 2 populations/groups that in their opinion are the most vulnerable to the adverse impacts of climate change**. The ‘elderly population’ and ‘low-income households’ were most often selected (45% and 40.6% of respondents, respectively). The different stakeholders generally shared the same opinion regarding the vulnerability of different societal groups. Environmental NGOs and other NGOs consider low-income households as more vulnerable compared to the elderly. About 1/2 of the business and environmental NGO respondents had no opinion.

Figure 7: The most vulnerable groups to climate change as selected by respondents



4.3.2 Barriers that prevent the economy from becoming more climate resilient

Respondents were asked to **rank suggested barriers (indicated in the graph below) that prevent the economy from becoming more climate resilient**. Respondents could either indicate no opinion or rank the barriers from 1 to 5, with 5 being very significant and 1 being not significant at all.

The graph below highlights the level of significance given to each barrier. The barrier ‘Short term vs. long-time horizons’ received the highest ranking with an average 4.4⁵. The average ranking for the barrier ‘Policy and regulatory weaknesses and change’ was 4. ‘Lack of awareness of climate-change related risks’ received a 3.8, whereas ‘Cost and reversibility of adaptation actions’ received the lowest average with a 3.4.

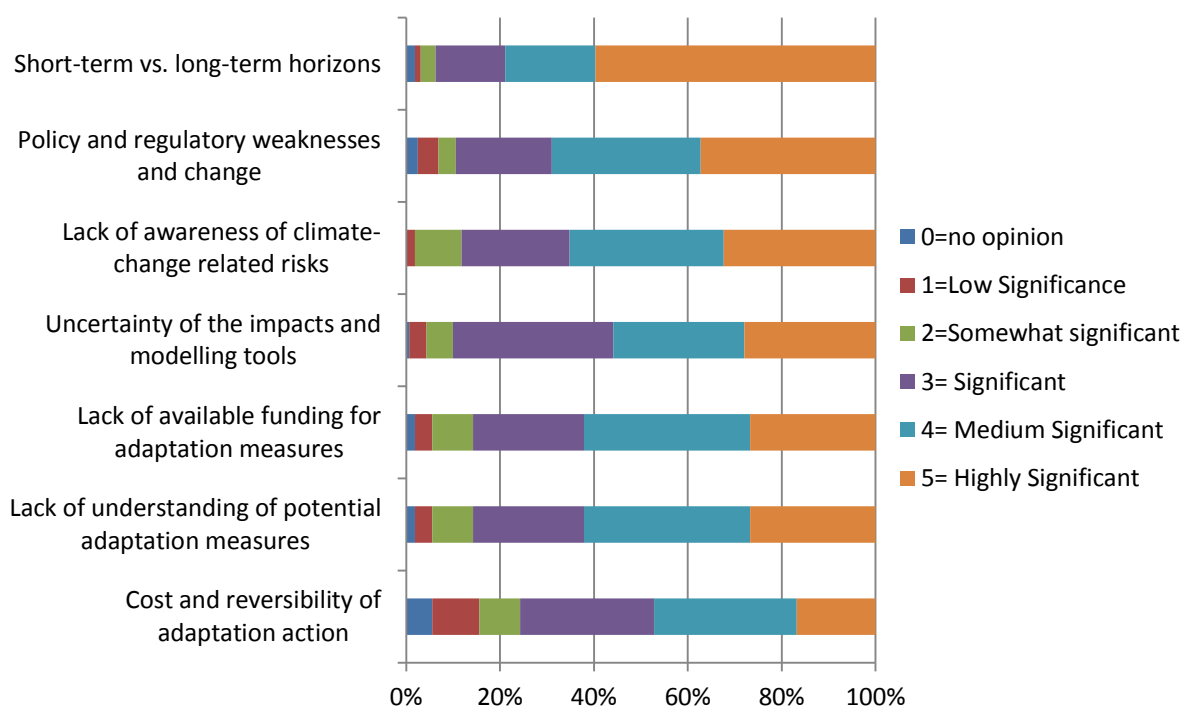
⁵ Where the average "m" is calculated as follows: $m = R \cdot n / T$, where R=rank, n= number of respondents selecting the rank and T= total number of respondents.

Both the private individual groups and the national/regional governmental institutions gave similar average rankings to all seven barriers, ranging between 3.6 and 4.3, indicating that a) these groups find all the barriers moderately important and b) that they show no distinct preference towards a specific barrier. The company/business associations ranked 'Awareness-raising' the lowest with a 3 average, while 'short-term vs. long-term horizons' received the highest average with 4.2. The environmental NGOs strongly emphasised the barriers 'Short-term vs. long-term horizons' and 'Policy and regulatory weaknesses', which received averages of 4.95 and 4.6, respectively.

Interestingly, the environmental NGOs indicated that they do not feel that 'Cost and irreversibility of adaptation measures' is a significant barrier, giving it an average 1.9 score. This barrier in total received the lowest average, mainly in part due to the lack of importance the environmental NGO representatives allocated to it. The other groups placed a higher emphasis on costs barriers: the company/business associations group gave it an average 3.7, the national/regional governmental institutions a 3.7 and private individuals a 3.9.

Without the strong ranking of the 'Policy and regulatory weaknesses' by private individuals (4.5) and environmental NGOs (4.6), this barrier would not have received overall the second highest ranking. Company/business associations only ranked it a 3.2 and national/regional governmental institutions a 3.6.

Figure 8: Significance of barriers in preventing the economy from achieving climate resilience



Respondents were asked to list other barriers they had identified that prevent the economy from becoming more climate resilient. Although this question was optional to fill

out, 103 responses were received. Some of the additional barriers mentioned are strongly linked to the barriers included in the questionnaire:

- **Short-term vs. long-term horizons:** Respondents from private individuals, business, env. NGOs mentioned that planning horizons (preferring short-term interest over long-term benefits) prevent many from considering adaptation and that uncertainty should be taken into account in planning.
- **Costs of adaptation actions/lack of available funding/economic constraints:** Additional barriers mentioned include the lack of effective help for the industry to implement technological solutions; economic pressures on the private sector; price signals that make climate friendly goods & services not the cheapest option; the current economic crisis and the lack of a financial instrument dedicated to climate change adaptation. The need to ensure that there are no gaps in the future EU Multi-Annual Financial Framework 2014-2020 was mentioned by national/regional governmental institution respondents.
- **Lack of awareness of climate-related risks:** The environmental NGOs linked to Birdlife International produced a common statement asserting that an additional barrier that prevents the economy from becoming more resilient is the *“failure to recognize fundamental importance of successful adaptation for the natural environment and its contribution to economic & social well-being”*. Respondents from business and national/regional governmental institutions mentioned that the barrier of private actors not being convinced about climate change and a general lack of awareness. National/regional governmental institutions also highlighted uncertainties over the level of risk to accept.
- **Lack of understanding on the potential of adaptation options:** Respondents mentioned the lack of skills and knowledge amongst available workforce.
- **Policy and regulatory weaknesses and change/poor governance:** Respondents from all the stakeholder groups mentioned various problems with the current governance structure, such as conflicts at the national level; inaction at policy-making level; lack of communication between different ministries and conflicting priorities; contradictory requirements from different EU policies and the need to improve existing legislation so it does not impede adaptation; removal of harmful subsidies; the lack of capacity and organisational structure; and at the local the problem that different ownership structures (e.g. on land, forest, water body) hinder measures implementation. Additionally, national/regional governmental institution respondents stressed the need for medium term regulatory predictability so that regional/local councils can better organize their administrative capacities and financial budgets. Another aspect mentioned is the need to avoid duplication of activities undertaken at sub-state, Member State or EU level, so coordinating policy formulation should be enhanced with the Member States and the EU.

Additional common barriers identified include a lack of communication about local & sector-specific actions within and among MS; the inability to move from the identification of risks to the prioritisation and implementation of key projects; and the lack of information on how costs, benefits and risks will vary across Europe and between sectors.

4.3.3 Sectors that are most relevant for improving Europe's resilience to climate change impacts

The public consultation asked respondents **to rank sectors regarding their relevance for improving Europe's resilience to climate change impacts.**

According to the respondents, the sector with the highest relevance for improving resiliency is 'water' (4.5 average score). This is closely followed by 'agriculture and rural development' (4.4) and 'nature conservation' (4.2). The 'energy sector' also received a high overall ranking with a 4.2 average. The 'employment sector' received the lowest overall score with a 2.8. See the graph below for a complete picture.

The selection of sectors most relevant (i.e. receiving a '5') for improving Europe's resilience was largely split according to the type of stakeholder; water was highly ranked by all stakeholder groups. Company/business associations focused on the sectors 'energy' (51%), 'water' (43%) and 'transport' (32%). The top three sectors for Environmental NGOs were 'water' (100%), 'nature conservation' (88%) and 'forestry' (80%). National/regional governmental institutions selected 'energy' (52%), 'water' (48%) and 'nature conservation' (40%). Finally, private individuals selected 'water' (73%), 'energy' (68%), and 'forestry' and 'nature conservation' (51%). These responses highlight that the most homogenous group in choosing sectors were the environmental NGOs.

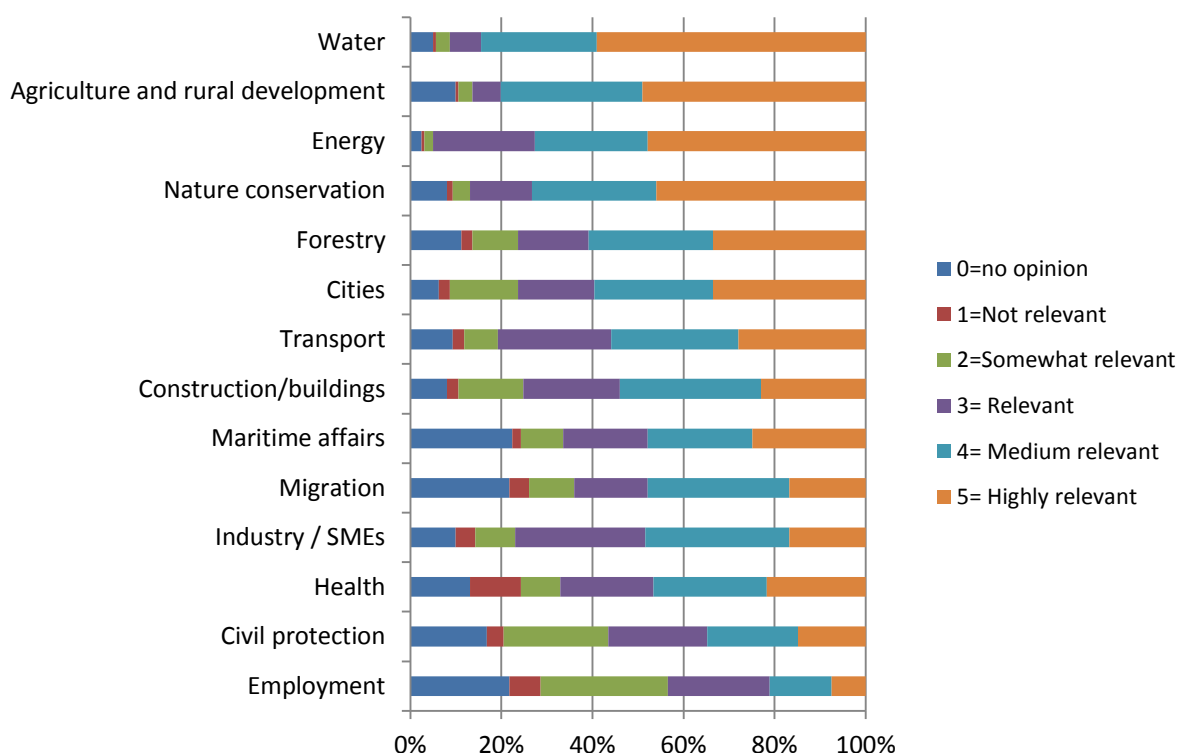
The UK non-paper stated that impacts of climate change and adaptation options are often best defined at local and regional levels and are often sector specific. As a result, the most effective approaches to increasing EU's resilience would be actions defined by, and implemented at, Member State level, rather than at EU level. There are, however, some sectors where EU intervention could add value to Member States actions, most notably:

- 'Agriculture and Rural Development', where CAP is a significant driver of MS policies in this area. Forward planning is also needed within the future programme, and should be coupled with on-going monitoring and refinement – not simply one-off adaptation plans.
- Reliance of Member States' economies on imports and exports also could support action at EU level to address trans-boundary issues in relation to 'Transport'.
- Similarly, trans-boundary issues relating to 'Water' (flooding, water quality and resources) could also be considered.
- 'Nature conservation', where currently there are a number of targets and programmes in place across the EU, may also be an area where an EU approach could

complement Member States action. The resilience of the natural environment should also be enhanced through promoting and encouraging the use of ecosystem based adaptation approaches.

Areas such as 'Civil Protection', 'Employment' and 'Migration' are best considered at national level, where considerations of domestic circumstances and political drivers will mean EU wide action would not be appropriate or valuable.

Figure 9: The relevance of EU action in certain sectors to help improve Europe's resilience to the adverse effects of climate change



4.3.4 The potential outcomes of climate change adaptation actions

The results of the public consultation have underlined that climate change is considered a pressing issue and EU action is very important in a number of sectors in order to improve the EU's resilience to the identified climate change impacts. Respondents were asked to indicate in give their views on what time scale adaptation efforts will lead to certain outcomes; multiple answers were possible.

Whereas respondents think that 'job creation and growth' will largely happen in the short (60.8% of responses) and medium term (68.9%), 'social objectives' will more likely be achieved in the medium (69%) and long term (57%). Attaining a 'resilient economy' will more like happen in the medium (79.5%) and longer term (71.4%). Similarly, attaining a 'resilient environment' will more likely occur in the medium (71%) and longer term (71.4%) due to climate change adaptation efforts. The responses highlight that overall the stakeholders think

that most of the outcomes are less likely to be realised in the short term. Medium to long term time horizons should, therefore, be considered when analysing the impacts of climate change adaptation efforts.

However, the breakdown of answers according to stakeholder groups shows diverging opinions regarding the timescale of certain outcomes. Whereas 47% of the company/business associations had no opinion for the outcomes 'to create jobs' and 'contribute to EU social objectives', the environmental NGOs, national/regional governmental institutions and private individuals felt that they are likely to occur in the medium term. Only the environmental NGOs strongly felt that adaptation actions could 'create jobs' in the short term (92%). With respect to the outcome 'social objectives', 96% of environmental NGO respondents think this can happen in the medium term compared to 41% of the company/business associations. Regarding the question on whether adaptation could make the 'EU's environment more resilient', just 17% of business respondents felt that this outcome can be achieved in the short term, compared to 76% of environmental NGO respondents and 56% of national institution respondents.

Table 2: Potential of climate change adaptation to achieve certain outcomes according to timescale

	In the short term (2020)	In the medium term (2030-2040)	In the longer term (2050 and beyond)	Not at all	No opinion	Total # of records
Create or secure jobs and growth in the European economy	98 (60.8% of respondents)	111 (68.9% of respondents)	72 (44.7% of respondents)	5 (3% of respondents)	18 (11.2% of respondents)	304
Contribute positively to the EU's social objectives	56 (34.8% of respondents)	112 (69% of respondents)	92 (57% of respondents)	6 (3.2% of respondents)	26 (16%)	292
Make the EU's economy more resilient to climate change and extreme events	65 (40.4% of respondents)	128 (79.5% of respondents)	115 (71.4% of respondents)	2 (1.2% of respondents)	5 (3.1% of respondents)	315
Make the EU's environment more resilient	74 (46% of respondents)	114 (71% of respondents)	115 (71.4% of respondents)	4 (2.5% of respondents)	9 (5.6% of respondents)	316

4.3.5 Important issues regarding the effectiveness of adaptation policies and measures

Out of the total of 164 respondents, 144 provided input regarding **the three most pressing issues the EU should address for adaptation policies and measures to be effectively implemented**. A wide variety of issues were submitted; the most frequent issues raised concerned ensuring funding (47 times), taking a long-term approach (15 times) and facilitating cooperation among and within Member States at all levels of government (15 times). Responses included:

- **Policy frameworks:** Respondents emphasized the need to take a cross-sectoral, horizontal approach to climate change adaption in order to capitalise on the multiple co-benefits across the sectors for almost any measure. Respondents believe that adaptation should be integrated in long term planning for energy, housing, city planning, agriculture and other infrastructure and development, thus mainstreaming adaptation within key EU policies. In addition, the respondents called for policy frameworks to be established to encourage adaptive responses at EU level and at all levels of governance. However, due to differences in how climate change will impact regions, some respondents felt that concrete regulatory and/ or strategic action should be left within the responsibility of Member States. Instead the respondents think the EU should rather focus on are: facilitating knowledge sharing, programmes supporting awareness, support for local authorities and exchange at local level between stakeholders; EU action is seen as especially important regarding trans-boundary issues. Some stakeholders called for the EU to propose a legal framework for establishing an effective insurance system for adaptation, including ex ante payments in cases of natural disasters.
- **Financing:** Many respondents called for the establishment of financial mechanisms to support adaptation, including the development of market oriented initiatives. Suggestions included raising revenue from innovative sources, such as carbon markets and financial transactions. The respondents emphasized that the EU should ensure that adaptation financing is transparent. Additionally, the EU should ensure central harmonisation and alignment of funding mechanisms so that funding for multi-country projects is properly tracked and accounted for. An additional aspect highlighted by some respondents is that the private and public sectors should focus on the long-term perspective when initiating programmes and that Public-private partnerships should be introduced that focus on adaptation.
- **Increasing research knowledge dissemination:** Respondents highlighted the need to increase knowledge about impacts and vulnerability at regional and local level. Actions the EU could take include facilitating pilot studies between Member States and exchanging information on good practices. Respondents also highlighted the need to raise awareness in the business sector and also suggested that efforts should target capacity building and governance at the local level to implement local solutions. Respondents would like researchers to work on improving data and

scenario availability, as well as developing indicators and promoting clear and easy-to-implement guidelines and recommendations. In addition, research undertaken under EU funding programme should be better integrated into policy making.

- **Water and natural environment:** Adaptation in the water sector was raised a number of times as a pressing issue in terms of reducing vulnerability and water scarcity problems. In addition, multiple respondents stressed the need to ensure successful adaptation of the natural environment, its biodiversity, habitats, ecosystems and their services through better understanding the value of public goods. Respondents also mentioned that economic growth should be decoupled from natural resource use and environmental impacts.
- **Addressing all sectors:** Respondents from health NGOs stressed the need to fully integrate health impacts of climate change into EU adaptation policies and to increase recognition of the link between climate change, rates of vector borne disease and the impact that this may have on public health.

For the companies/business associations, the main issues to be addressed are facilitating cooperation and raising awareness at all level (local, regional, national and international), and ensuring funding. For the environmental NGOs and the national or regional government institutions, the indicated priorities are the adaptation of the water sector and the natural environment, the implementation of financial mechanisms and improving the policy framework. International organisations, other NGOs and private individuals mainly consider the need to facilitate cooperation and to raise awareness at all level. Other, NGOs, private individuals and research institutes also consider the water sector and natural environment as priority issues.

4.4 Evaluation of the questions relating to knowledge

Part 2 of the consultation asked participants to consider where gaps in research remain and how best to develop funding mechanisms further.

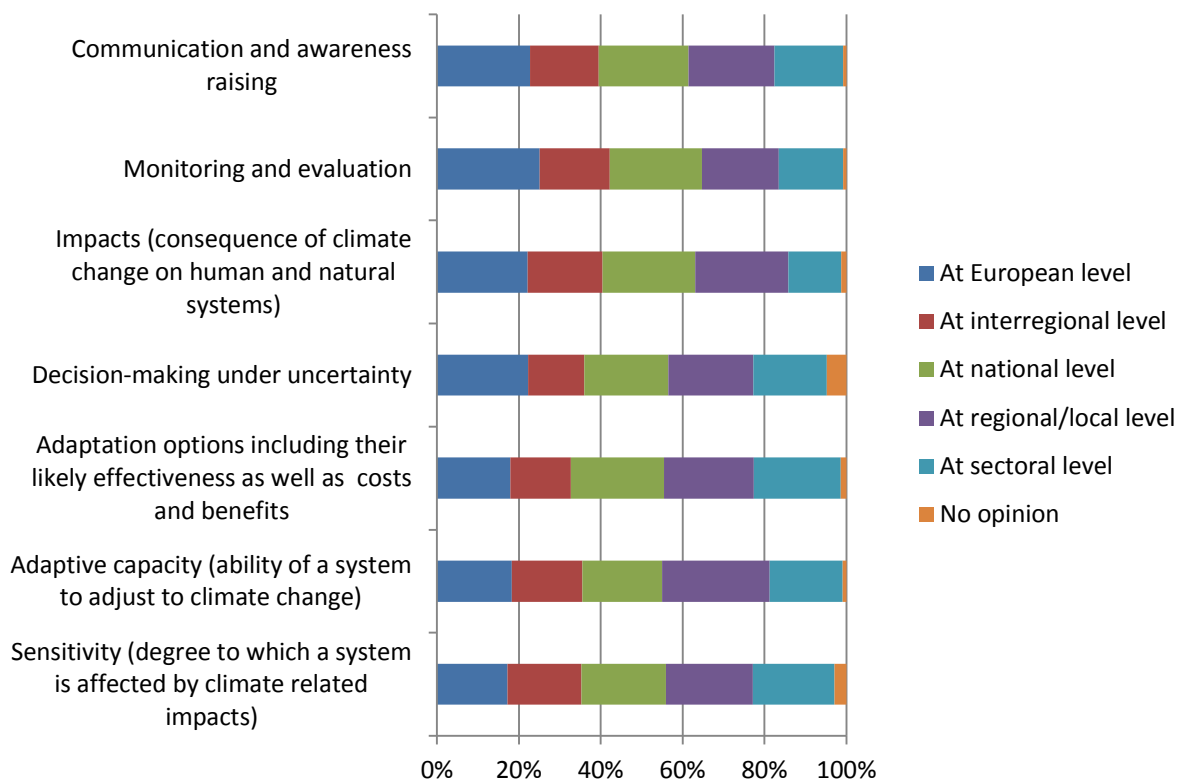
4.4.1 Areas of climate (adaptation) research that require attention

Respondents were asked to **point out which areas of climate (adaptation) research require attention and/or resources at different levels of governance.**

Respondents favoured action at European level with respect to 'Monitoring and evaluation' and 'Communication and awareness-raising'. For 'Sensitivity' and 'Adaptation options', respondents most often felt that national and regional/local level administrations should be involved. Respondents felt that 'Research on adaptive capacity', however, should rather be facilitated at the regional/local level. 'Decision-making under uncertainty' and 'Research on impacts' were evenly spread between EU, national and regional level, while interregional level was not considered as relevant in this research domain (34%). Sectoral level

involvement only received moderate support for research relating to 'Sensitivity' (51.5%), 'Adaptation options' (59%) and 'Communication' (57%).

Figure 10: Levels of governance that should be involved in addressing gaps in certain climate adaptation research topics



According to the French non-paper, fundraising efforts for knowledge generation should be maintained and should also encourage bridging the knowledge gap in certain areas, including outermost areas or areas of strategic interest such as the Mediterranean basin.

The Climate Alliance emphasized that adaptation strategies and action plans at local and regional levels are not yet very common, so more research and exchange is needed at these levels of government to better organize the integration of adaptation into local climate policy. Regional research should be supported by EU funding programmes (e.g. Structural funds, Life).

The UK Government mentioned that where EU action can provide the most effective direct support would be through funding of the underpinning analysis and evidence base needed to support policy decisions on climate change impacts and sensitivity of systems. In addition, the UK non-paper mentioned that the interdependencies between risks and impacts on sectors should be further researched. While many of these issues are at a national level, the EU could usefully investigate interdependencies between Member States for cross-border issues covering all sectors. In addition, little is known about the impacts of climate change which occur outside the EU and how these might affect the EU's markets, resources, supply

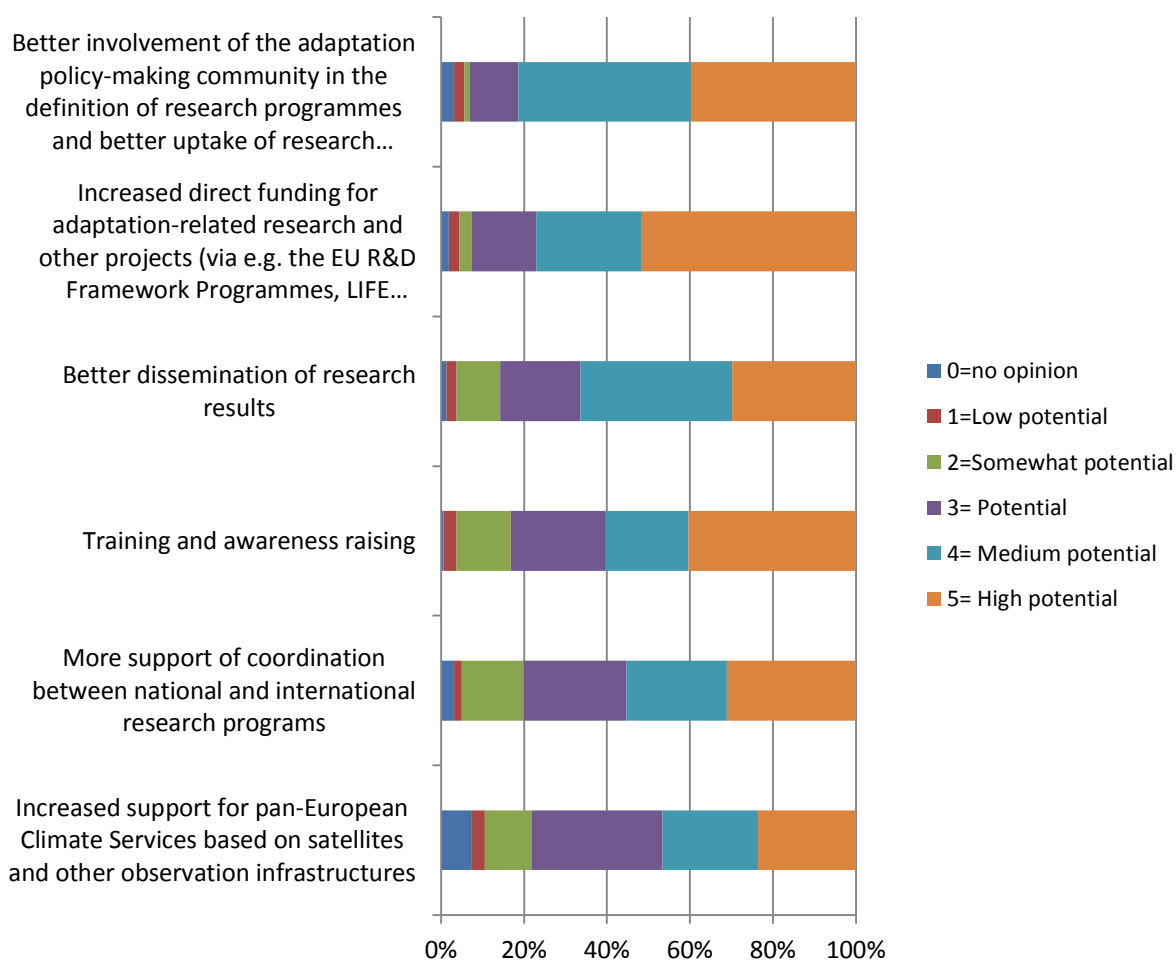
chains etc., and this is an area where coordination of research by the EU would be of great value across all Member States.

4.4.2 Potential of measures/actions to improve the use of EU funding for climate change adaptation projects

Respondents were asked **to rank the capability of actions to improve the use of EU funding for climate change adaptation projects**.

Out of the 6 actions presented in the questionnaire, the options to 'Increase direct funding for adaptation-related research' and 'Better involvement of the policy-making community' received the highest average ranking with a 4.2. 'Better dissemination of research results' and 'Training and awareness-raising' both received an average rating of 3.8. Respondents gave 'More support of coordination between national and international research programmes' a 3.7. The least selected action to improve the use of funding was 'Increased support for pan-European Climate Services', which received an average score of 3.6. Overall, the 6 actions were well-scored and none of them were particularly discarded by the respondents.

Figure 11: Options to improve EU funding of climate change adaptation research



The French non-paper states that in France EU funds will be top of the list of funding devices for adaptation. France mentions that various financial tools should be mobilized in accordance with the objective of integration of climate change adaptation policy into other Community policies, for example the common regulation to all the Structural Funds (ERDF, EAFRD, ESF, CF FEAMP6) guaranteeing priority to climate change adaptation and risk management, the framework for future research and development (PCRD), the Common Agricultural Policy, or the European financial instrument for the environment (LIFE) with the creation of a new subroutine dedicated to climate change. France emphasizes that whatever the funding mechanism for adaptation investments is, care must be taken not to create distortions in access to finance and the award criteria. In any event, the French authorities do not wish for a development of a specific Community financial instrument on adaptation.

4.4.3 Additional actions to facilitate knowledge dissemination

The final question in this section asked respondents **to judge additional actions that could be considered at EU level to facilitate further knowledge and dissemination and sharing**. Respondents could make multiple selections.

As the table below shows, most of the options were well regarded. 'Activities to promote the use of the European Climate Adaptation Platform' was not as well received as the other options, although it was nevertheless selected by over half (54.66%) of the respondents. 'Support of pan-European discussion forums to exchange best practice' was most often selected by respondents (76.4%).

Table 3: Additional actions that could be taken at EU level to improve knowledge sharing

Actions	Number of responses	Percentage of respondents
Support of pan-European / pan-regional discussion fora on adaptation (workshops, conferences) to share experience and good practice	123	76.40%
Direct support to targeted dissemination and awareness-raising campaigns (e.g. local communities, stakeholder groups)	119	73.91%
Training/Dissemination activities to stakeholders and decision makers of climate change and adaptation information	114	70.81%
Activities to promote the use of Climate-ADAPT, the European Climate Adaptation Platform	88	54.66%
Other	27	16.77%
No opinion	2	1.24%

Only 17.7% of respondents (29 out of 164) from 10 different stakeholder groups chose to suggest more additional actions, such as:

- Raising awareness about costs and benefits of adaptation options and synergies with climate mitigation (NGOs)
- Integrating adaptation into policy objectives on sustainability of construction sector (Company/business sector)
- Taking advantage of professional associations to train people at the local level (University)
- Setting out a clear vision of what a “well adapted” EU would look like (Company/business sector)
- Focusing on bottom-up approaches to better inform the general public (Company/business sector) and supporting greater public participation in implementation (Environmental NGOs)
- Improving research: Ensuring that science guides policy and not vice versa; ensuring that results of adaptation research projects are specific and applicable; focusing on making the results of research more accessible to policy makers (private individuals); ensuring transparent EU water information base and an EU innovation platform and market place for water solutions (‘other’); Better linking EU databases and research projects (research institute and think tank); Creating an inter-sectoral and interdisciplinary discussions for better understanding the role of ecosystem services (Environmental NGO); Focusing on including local and regional adaptation policies in the European Climate Adaptation Platform

4.5 Evaluation of the questions relating to cooperation among stakeholders

This section of the consultation focused on how respondents view the role of the EU in facilitating working among the Member States, also in the context of trans-boundary issues.

4.5.1 How the EU can facilitate the work of local authorities in adapting to climate change

The consultation asked respondents **how the EU can facilitate the work of local authorities in adapting to climate change**. were often selected; ‘Enhancing awareness’ and ‘Providing guidance on adaptation at regional/local level’ received the greatest support.

The respondents from the environmental NGOs group strongly supported the 3 actions: 96% selected ‘Enhancing awareness of the potential consequences at sectoral level’ and all of them selected ‘Enhancing awareness of the potential consequences at regional/local level’ and ‘Guidance on climate risk assessment’. None of the environmental NGO respondents felt that EU intervention was not needed. This is in stark contrast to the respondents from the company/business associations, where 19.5% selected ‘no direct EU intervention needed’.

The company/business associations respondents most often selected 'Providing guidance on climate risk assessment' (73.2%) and 'Enhancing awareness at regional/local level' (61%). Only about 50% of the company/business associations selected the option 'Awareness at sectoral level' in contrast to the other main stakeholder groups (68% of national/regional governmental institutions and private citizen respondents).

The national/regional governmental institutions and private individuals very much agreed with 'Enhancing awareness at regional/local level' (80% and 77%, respectively) and 'Providing guidance on climate risk assessments' (72% and 77%, respectively).

Table 4: Actions the EU should take to help local authorities adapt to climate change.

Actions	Number of times selected	Percentage of respondents
Enhance awareness of the actual and potential consequences of climate change and the need and possibilities for adaptation to climate change at sectoral level	108	67.08%
Enhance awareness of the actual and potential consequences of climate change and the need and possibilities for adaptation to climate change at regional/ local level	126	78.26%
Provide guidance on developing climate risk assessment and adaptation strategies at local level	133	82.61%
No direct EU intervention needed	13	8.07%
No opinion	1	0.62%

The UK non-paper also emphasized the need to make funding available through relevant funding streams, including under the MFF, to support activities in this area. However, the UK government stressed that such support should be channelled through climate proofing of current policies and instruments, rather than specific or additional funding for adaptation.

The Climate Alliance non-paper mentioned that while the EU's support to local authorities is important, exchanging experiences and sharing know-how among different levels of government - Member states, regions and municipalities - should also be encouraged. They suggest that this could partly be done via projects but also by enhancing the work of Climate-ADAPT by inviting interested parties to discuss and develop policy recommendations on relevant adaptation issues.

EURELECTRIC highlighted that adaptation responds to local risks and that the benefits are realised at local and/or national levels. Since responses to adaptation needs will vary between Member States, within Member States and between industry sectors, Eurelectric considers that the national and local levels are the best choice to conduct adaptation strategies.

4.6 Role of the EU in trans-boundary climate change impacts

In the context of trans-boundary issues relating to climate change, respondents were asked **to select between 1 and 4 options that the EU could take.**

Most of the options were well regarded, but only 26% of respondents feel that the ‘Creation of EU agencies to address trans-boundary risks’ was an action the EU should consider.

‘Facilitating cooperation among countries’ received the greatest number of responses (82.6%) and was consistently selected by the major stakeholders. For the option ‘Awareness and guidance’, around 50% of environmental NGOs selected this measure, compared to 77% of private individuals and 63% of company/business associations.

Table 5: EU options to improve its handling of trans-boundary climate change impacts

Actions	Number of times selected	Percentage of respondents
Facilitate cooperation and coordination among affected countries	133	82.61%
Promote the creation of dedicated EU Agencies in charge of managing trans-boundary risks	42	26.09%
Provide EU funding to address trans-boundary adverse effects of climate change, increase resilience and reduce vulnerability	123	76.40%
Enhance awareness and develop guidance on the trans-boundary adverse effects of climate change	102	63.35%
No opinion	1	0.62%

4.7 Evaluation of the question related to mainstreaming adaptation in EU policies and strengthening adaptation by the private sector

This section focused on the link between EU policies and the private sector and on what can be done at EU level to facilitate work on the national level.

4.7.1 Support actions that will help Member States in the preparation of national adaptation strategies

The consultation asked respondents **to select which type of instruments would bring the most added-value to further support and incentivise Member States to develop national adaptation strategies (NAS).** Respondents were able to select between 1 and 4 answers.

By far, respondents felt that ‘Guidance on developing national adaptation strategies’ would have the most value added (60.25%). Company/business associations (71%) and

environmental NGOs (68%) selected this option more often than national/regional governmental institutions (60%) and private individuals (41%). The option 'To review existing legislation' was selected by 68% of national/regional governmental institutions, significantly more so than by other stakeholders. Only 36% of company/business associations and private individuals and 8% of environmental NGOs selected this option.

The option to have 'Legislation in place that requires Member States to develop NAS' received the least number of responses (around 25%). None of the business sector respondents selected the legislation option, whereas 68% of environmental NGO respondents did; only 6% of national institutions and 13.6% of private citizen respondents selected enacting legislation. It is important to note that 35% of the respondents selected a combination of the three instruments; thus, the low percentage of respondents that selected 'Legislation' alone as a potential instrument should be interpreted in view of this result.

Table 6: Potential Instruments to include in national adaptation strategies

Instruments	Number of times selected	Percentage of respondents
Legislation asking Member States to develop a national adaptation strategy	40	24.84%
Development of guidelines or guidance on national adaptation strategies and action plans	97	60.25%
Review of existing EU legislation such as horizontal directives and regulations (mainstreaming/integration of adaptation into EU legislation)	69	42.86%
All these options together	52	32.30%
No opinion	1	0.62%

According to the French non-paper, France supports the proposal that each Member State should develop a national action plan for adaptation, but with a flexible framework based on methodological tools proposed by the Commission. However, it is not desirable to impose on each State member a too rigid framework for developing an adaptation policy. France believes that information exchange for the preparation of such documents would be useful at European level. French authorities also support the action taken by the Commission aimed at mainstreaming adaptation into all EU policies (existing or new).

The UK non-paper mentioned that legislative approaches ('Legislation asking MS to develop a National Adaptation Strategy') would be premature, given that most Member States are already in the process of developing domestic national adaptation strategies. The Commission's efforts would be best placed in providing support for Member States rather than using legislation. It also stated that the Commission can provide most support through drawing from experiences across Member States and providing guidance, rather than

guidelines – developed by taking best practice from Member States that have written adaptation strategies.

The Climate Alliance thinks that a legal framework would ensure that adaptation is mainstreamed, with flexibility to deal with regional, local and sectoral problems. National governments could be required to prepare national adaptation plans with an emphasis on creating common ground between mitigation and adaptation and thus creating coherent and integrated approaches. Climate Alliance stressed that the European Commission should encourage cooperation between national governments and regional / local governments when drafting these plans.

4.7.2 Actions the EU should take to help strengthen the adaptive capacity and climate impact preparedness of the private sector

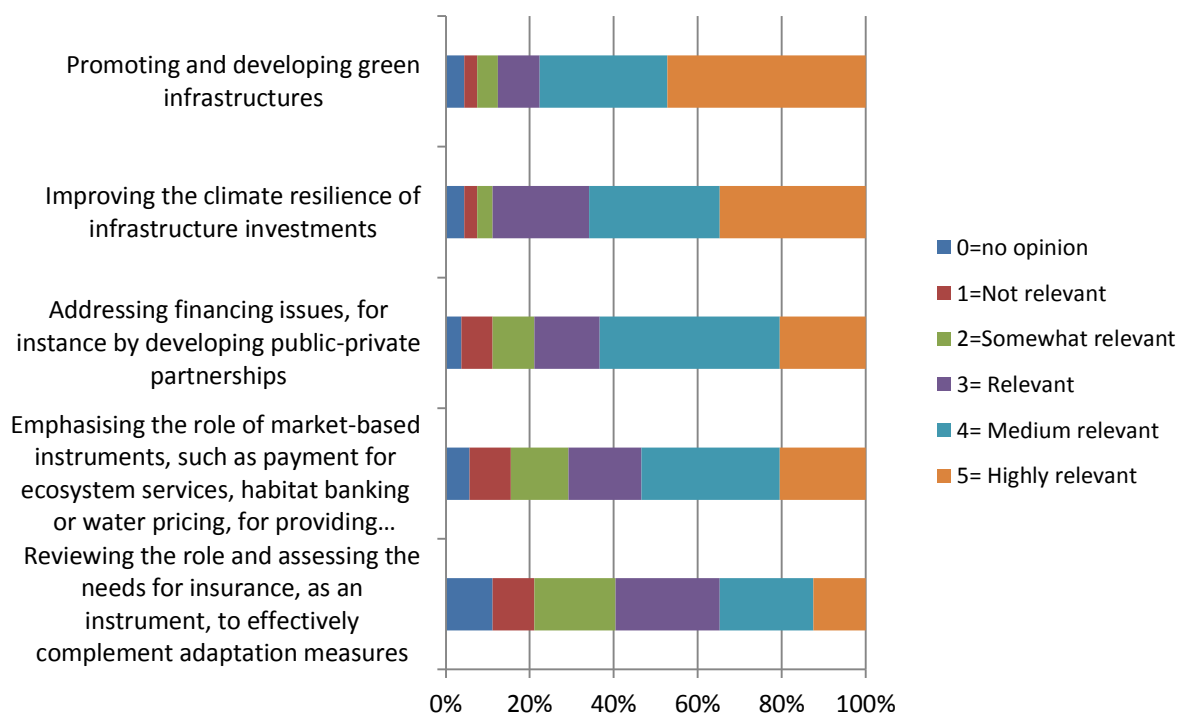
Respondents were asked **to rate actions at the EU level to strengthen the adaptive capacity of the private sector.**

‘Promoting and developing green infrastructure’ received the overall highest average with a 4.2. ‘Improving the climate resilience of infrastructure investments’ receive the next highest overall average with a rating of 3.9. ‘Public-private partnerships’ received an overall average score of 3.6, and ‘Emphasising the role of market-based instruments’ received an overall average score of 3.4. The action to ‘Review the role and assess the needs for insurance’ received the lowest overall average rating with a 3.1.

There are clear differences on the emphasis different stakeholders give to the potential actions to strengthen EU adaptive capacity. The respondents from the environmental NGOs group ranked ‘Green infrastructure’ with an average 4.76, while the respondents from the company/business associations ranked this option with a 3.7. National/regional governmental institutions and private individuals ranked ‘green infrastructure’ highly with a score of 4.4 and 4, respectively. Conversely, for the action ‘Improving infrastructure investments’, the business respondents ranked this action the highest with an average 4.1, while the environmental NGO respondents ranked this action with an average 3.4. The national institutions and private citizen respondents were more in line with the business respondents, ranking this action with an average 3.9 and 4, respectively.

The four major stakeholder groups were in agreement with respect to the action on ‘Insurance’; it received between a 2.7 and 3 average score, by far the least ranked action. Additionally, the stakeholder groups ranked the action relating to ‘Public-private partnerships’ about the same with a range between 3.2 and 3.8. Interestingly, the environmental NGOs rated this action with an average score (3.8) greater than that of the business respondents (3.5). With respect to the action supporting ‘market-based instruments’, the business respondents gave it a low average rating of 2.9, whereas the environmental NGOs, the national institutions and private citizen respondents gave similar ratings between 3.4 - 3.6.

Figure 12: Priority actions at EU level to strengthen the adaptive capacity of the private sector.



4.7.3 Additional EU level actions that could strengthen the adaptive capacity and climate change impact preparedness and responses of the private sector

Respondents were asked if they had **identified other priority actions at EU level that could strengthen the adaptive capacity and climate impact preparedness and responses of the private sector**. This question was optional; nevertheless, 82 out of 164 respondents provided input. Shared interests included:

- **Reliable regulatory and legislative framework:** Some respondents would like to see a clear framework on adaptation at national level. Respondents mentioned that in order to facilitate investment in infrastructure, it is essential that investors have confidence in the regulatory regime.
- **Information/Guidance:** Respondents would like to see guidance on how to integrate the valuation of biodiversity and ecosystems into the accounting systems and decision-making processes of private companies. Guidance on interdependencies between sectors was also suggested.
- **Knowledge dissemination and exchange:** Respondents mentioned that sectors should exchange expertise, especially on the use of ecosystem based adaptation. In addition, respondents encouraged more collaborative networks to bring communities together to support each other and become more resilient. Respondents also

suggested that best practice in the field of cost-benefit analysis should be disseminated to businesses to promote consideration of adaptation.

- **Research and Development:** Respondents emphasized the need to develop schemes supporting and facilitating the investment of SMEs and strengthening their adaptive capacity.

In its non-paper, EURELECTRIC stressed the importance of mainstreaming adaptation concerns in other EU policies in a consistent manner. Any initiative on climate change adaptation in the energy sector should bear in mind possible conflicts with mitigation goals. They also emphasized that adaptation measures should be proportionate to adaptation risks and should reflect the levels of uncertainty. EURELECTRIC suggested that the EU can improve adaptive capacity by strengthening the common energy market, i.e. remove still existing barriers to competition.

The Convention of Scottish Local Authorities stated that they agree that the public sector should play the leading role in defining the priorities and setting the strategic framework and in steering the market towards the supply of appropriate products, services and processes. However, it is also clear that the private sector needs to be brought on board early so that planning and research and development work is focused on areas that will fulfil long term demand (i.e. examples of bridges, buildings needed to be 'climate proof' mentioned in the green paper). The Convention points out that while European and national governments have a role in steering the market towards appropriate processes, it is vital to involve and cooperate with the private sector to get adaptation measures right.

4.8 Additional issues that should be addressed in the EU Adaptation Strategy

The final question in the consultation asked respondents whether there are other issues that should be addressed in the EU Adaptation Strategy that were not mentioned in the questionnaire. 105 responses were recorded. All of the stakeholder groups made additional comments covering many different topics and different sectors. As such, there are no discernible differences among the stakeholder groups in terms of issues raised. The comments received have been grouped along the four main objectives of the EU Adaptation Strategy. Comments included:

- **Improving knowledge:** Respondents mentioned that a good Adaptation Strategy at European level should propose/promote adaptive approaches and methodologies, and the European Commission should develop a central knowledge base proposing to national and local authorities' specific decision-support with real cases of adaptation solutions implemented in the EU or outside. They emphasized that a potential weakness of a Climate Change Adaptation Strategy (at European, National or local level) is the lack of certainty and/or knowledge. To improve the knowledge

base, the Respondents recommended that an analysis of the extreme weather events in the EU should be developed, taking into account: requirements for construction of wind turbines, solar panels, demands related to flood protection, emergency response plans, etc. Those analyses should be developed at the local level, so the operators of assets/infrastructure are able to analyse the impact of climate change on their plants/devices, and identify subsequent necessary adaptation action. A few of the company/business associations considered an assessment of vulnerability of infrastructure and enhancement of its resilience as a critical component of any adaptation strategy.

- **Facilitating cooperation:** Cooperation between all levels of government and among sectors was stressed by the Respondents in order to improve the harmonization and coordination between the different EU policies concerned, including Environment, Climate Action, Enterprise and Industry and Energy policies. A specific suggestion is to promote cooperation between insurers and policymakers to ensure that a flexible approach to adaptation and natural catastrophes in Europe is taken.
- **Improving mainstreaming:** According to all the respondents, the Adaptation Strategy must provide an effective framework and funding for adaptation of the natural environment, biodiversity, habitats, protected areas, landscapes and ecosystem services to impacts of climate change. In this context, some respondents emphasized the need to manage Natura 2000 sites for climate change, with measures to accommodate species range shifts and better integration with wider land use. This statement was made by 12 out of 19 responses from environmental NGOs (i.e. those linked to Birdlife International). Other NGOs emphasized that health needs to be given a higher priority in adaptation planning, and it should be at the heart of the EU Climate Adaptation Strategy. Respondents also focussed on disaster management systems and that they need to become “climate proofed” based on future oriented strategies (including “climate smart” preparedness measures). Specific requests by some respondents also included the need to include adaptation in relevant national building codes and Eurocodes to ensure that future constructions resist the consequences of climate change. In addition, standards for assessment of sustainability of buildings such as CEN/TC 350 standards should take into account adaptation to climate change as an aspect of sustainability.
- **Capturing the potential of the market:** The Respondents agreed that adaptation to climate change is a critical issue for business and industry and that climate change is one out of many challenges for industry and SMEs, in particular in the future. Given the wide range of impacts and interconnectivity of the solutions required, respondents view collaborative efforts as essential in finding a way forward. These need to be encouraged at EU level by promoting public support and finance for adaptation. Another issue raised is that the EU should consider research into alternative economic systems to continued economic growth and unregulated markets that can deliver adaptive capacity and resilience while reducing consumption of fossil fuels and other scarce resources. Similarly, the strategy should encourage market-driven



initiatives and permit risk transfer mechanisms to adapt to the local conditions of the region where risk transfer systems are implemented. Some respondents feel that the costs of climate change policy could very negatively affect the economy and that any measure taken must be assessed in terms of economic efficiency. Therefore, some respondents think that the EU Adaptation strategy must consider that e.g. costs and availability of energy and resources or competition on international markets are challenges for businesses in Europe.

- A final comment made by a few Respondents is that it is of utmost importance that mitigation measures are seen in close connection with an adaptation strategy. This is of special relevance when it comes to water management policies and hydropower production.

5 ANNEXES

Annex 1 – Private sector questionnaire

1 Questionnaire

Questions	
Section 1: Your understanding of climate change adaptation	
<p>Question 1: What are the key drivers for your sector to adapt to climate change? Please provide examples where possible.</p>	<p>a) Financial <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
	<p>b) Legislative <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
	<p>c) Reputational <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
	<p>d) Operational <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
	<p>e) Other <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
<p>Question 2: Are you aware of the climate change risks and opportunities for your sector? Please select all applicable categories and describe the risks and opportunities for that category.</p>	<p>a) Physical <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
	<p>b) Supply chain / logistical <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
	<p>c) Reputational <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
	<p>d) Financial <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
	<p>e) Demand-based <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
	<p>f) Legal / regulatory <input type="checkbox"/></p> <p><i>Click here to enter text.</i></p>
	<p>g) Other <input type="checkbox"/></p>

	Click here to enter text.
Question 3: Have you experienced any impacts from these risks or opportunities? If so, please provide a brief summary of the impacts.	<p>a) Positive impacts <input type="checkbox"/></p> <p>Click here to enter text.</p> <p>b) Negative impacts <input type="checkbox"/></p> <p>Click here to enter text.</p> <p>If you answered yes to any of the above, please explain how you coped with or exploited the impacts?</p> <p>Click here to enter text.</p>
Section 2: Adapting to climate change	
Question 3: What is the level of awareness within your sector of <i>how</i> to adapt to climate change?	<p>a) Low <input type="checkbox"/></p> <p>b) Moderate <input type="checkbox"/></p> <p>c) High <input type="checkbox"/></p> <p>Please tell us why you selected this option?</p> <p>Click here to enter text.</p>
Question 4: Has your sector (in whole or in part) begun to adapt to climate change?	<p>a) Yes <input type="checkbox"/></p> <p>b) No <input type="checkbox"/></p> <p>If you answered yes, please explain what your sector has done, e.g. climate change risk assessment; altered supply chains?</p> <p>Click here to enter text.</p>
<p>Question 5: Please rank the top three barriers to adapting to climate change within your sector?</p> <p>a) Lack of awareness of risks</p> <p>b) Lack of skills</p> <p>c) Lack of time</p> <p>d) Lack of information</p> <p>e) Uncertainty of climate change</p> <p>f) Short versus long timescales</p> <p>g) Lack of managerial will</p> <p>h) Cost of adaptation actions</p>	<p>1) <i>Please insert number 1 barrier here</i></p> <p>2) <i>Please insert number 2 barrier here</i></p> <p>3) <i>Please insert number 3 barrier here</i></p>



i) Other (please specify)	
Question 6: Do you believe adaptation will present commercial opportunities for your sector? Please select all that apply.	<div>a) Expanding market share <input type="checkbox"/></div> <div>b) Creating wealth in communities <input type="checkbox"/></div> <div>c) Accessing new financing streams <input type="checkbox"/></div> <div>d) Other (please specify) <input type="checkbox"/></div> <div>Click here to enter text.</div>
Section 3: Support and further engagement	
Question 7: Are you aware of the financial assistance available to help your business sector adapt to climate change?	<div>a) LIFE+ <input type="checkbox"/></div> <div>Click here to enter text.</div>
	<div>b) Grants from Member States <input type="checkbox"/></div> <div>Click here to enter text.</div>
	<div>c) Revenue finance (loans) <input type="checkbox"/></div> <div>Click here to enter text.</div>
	<div>d)Equity finance <input type="checkbox"/></div> <div>Click here to enter text.</div>
	<div>e)Other (please specify) <input type="checkbox"/></div> <div>Click here to enter text.</div>
Question 8: What support do you need to adapt to climate change?	<div>a) Financial <input type="checkbox"/></div> <div>b) Tools and guidance <input type="checkbox"/></div> <div>c) Best practice / knowledge transfer <input type="checkbox"/></div> <div>d) Expert advice <input type="checkbox"/></div> <div>e) Other (please specify) <input type="checkbox"/></div> <div>Click here to enter text.</div>
	<div>a) Yes <input type="checkbox"/></div> <div>Click here to enter text.</div>
	<div>b) No <input type="checkbox"/></div> <div>Click here to enter text.</div>
	<div>c) More information required <input type="checkbox"/></div> <div>Click here to enter text.</div>

Question 10: Are you interested in working with / assisting the European Commission to build adaptation capacity in the private sector beyond the life time of this project?	a) Yes <input type="checkbox"/> b) No <input type="checkbox"/> c) More information required <input type="checkbox"/> <i>Click here to enter text.</i>
Question 11: Which engagement methods would be most suitable for communications between the European Commission and your sector?	a) Email communications <input type="checkbox"/> b) Teleconference <input type="checkbox"/> c) Face to face meetings <input type="checkbox"/> d) Newsletters (by e-mail) <input type="checkbox"/> e) Web resources <input type="checkbox"/> f) Other (please specify) <input type="checkbox"/> <i>Click here to enter text.</i>
Section 4: You and your work	
Name:	
Email address:	
Telephone number:	
Organisation:	
Job title:	
With what policy area(s) are you involved?	a) Agriculture / rural development <input type="checkbox"/> b) Buildings / construction <input type="checkbox"/> c) Energy <input type="checkbox"/> d) Transport <input type="checkbox"/> e) Insurance, market and finance <input type="checkbox"/> f) Non-sector specific <input type="checkbox"/> g) Other – please specify: <i>Click here to enter text.</i>

Can you provide additional contacts within business networks representing the sectors listed above who would be interested in completing this questionnaire?

Name of contact: [Click here to enter text.](#)

Name of business network: [Click here to enter text.](#)

Sector: [Click here to enter text.](#)

E-mail address: [Click here to enter text.](#)

Telephone number: [Click here to enter text.](#)

2 Recipients by organisation

Adaptation Scotland
NFU
Copa-Cogeca (Copa - European Farmers; Cogeca- European agri-cooperatives)
European Arable Farmers
European Federation of Agricultural Consultants
European Association of Agricultural Economists (EAAE)
European Dairy Association
UEAPME Construction Forum
European Builders Confederation (EBC)
European Federation of Timber Construction (FECB)
Association of European Building Surveyors and Construction Experts (AEEBC)
Royal Incorporation of Architects in Scotland (RIAS)
Civil Engineering Contractors Association (CECA)
IEC-SME-project
Engine-SME.eu

Carbon Trust Scotland
European Energy Network
UEAPME Transport Forum
The Community of European Railway and Infrastructure Companies (CER)
International Union of Railways
International Road Transport Union
ACI: Airport Council International - Europe (association of EU airport operators)
AEA: association of European airlines (or IATA: world association of airlines)
Eurocontrol : European inter-governmental organisation for the safety of Air Navigation service providers (Air traffic control)
CEA
Association of British Insurers
Royal Bank of Scotland
Network of European Financial Institutions for SMEs (NEFI)
KfW
European Association of Co-operative banks
European Banking Federation (EBF)
EUROCHAMBRES
Business Europe
Enterprise Europe Network
European Association of Crafts and Small and Medium-Sized Enterprises (UEAPME)

Annex 2 – Summary of additional comments from the submitted Non-Papers

Non-papers were received by the UK, France, the Convention of Scottish Local Authorities, EURELECTRIC, the Climate Alliance, the UNEP and the World Food Programme. Much of their content responded directly to the Questionnaire; this information was summarized in the relevant sections in the body of the report. This Annex presents the additional comments made in the non-papers that are outside the scope of the specific questions asked in the online Public Consultation.

The United Kingdom

According to the UK non-paper, the Strategy should not focus only on impacts of climate change within the EU, but also impacts on the EU from effects of climate change globally. Since adaptation and mitigation decisions taken by other Governments will also have consequences for the EU, it is important that the EU works with other countries to address global climate change. The EU should therefore take advantage of opportunities to share best practice globally and learn from those countries already dealing with climates that Member States may experience in the future. Such exchange could be furthered by, for example, strengthening links, through the UNFCCC and UNEP.

On addressing financing issues, the EU can provide most value through further investigating financing options available and identifying potential mechanisms which would be viable and utilised across the EU. The UK's overriding priority is to achieve restraint in the EU budget with the maximum acceptable increase in the next MFF a real-terms freeze in payment appropriations, year-on-year from a baseline of actual spending. Therefore, the UK would not want to see an increase in any area of the budget – even priority areas. However, finding appropriate mechanisms to support effective adaptation actions is important; many actions required are costly, with benefits not apparent for many decades. Support should be through climate proofing of current policies and instruments available, rather than specific or additional funding for adaptation. However, in many cases, tools and options available for further incentivising action or for funding are best considered and managed at Member State level. Insurance industry is one such example where diverse approaches are taken across Member States to suit national/local needs and as such EU intervention would not be of any significant value.

France

French authorities support the action of the European Commission to develop a European climate change adaptation strategy, as well as its wider efforts in the implementation of the White Paper on adaptation since 2009. France stressed that the European strategy must

respect the principles of subsidiarity and proportionality on the one hand, and promote the establishment of conditions for the development of national strategies and plans, border or subnational on the other hand. In addition, it will be essential to maintain, in parallel with this adaptation strategy, a strong ambition in terms of reducing greenhouse gas emissions, in order not to increase the need for future adaptation.

French authorities support the action taken by the Commission aimed at mainstreaming adaptation into all EU policies (existing or new). On-going actions in the Common Agricultural Policy, the recent consultations on the water policy (Blueprint), the provisions of the Flood Directive or proposals on the use of EU funds such as those of the cohesion policy, in particular, are welcomed. At the national level, France also carries the same approach of mainstreaming adaptation applied to public policies, which optimizes the on-going or new actions, to ensure their consistency with existing policies and facilitate the adoption of the cross-cutting nature of adaptation. In parallel, funding opportunities of the other Community policies should contribute to the financing of adaptation actions.

The French authorities support the idea that the EU adaptation strategy is submitted to the European Parliament to strengthen its visibility and mark the commitment of the EU in fight against climate change and adapting to its effects.

The Convention of Scottish Local Authorities (COSLA)

COSLA expectations for the EU Adaptation Strategy:

- COSLA reiterates that Climate Change Adaptation Strategies should be developed in full partnership with local and regional authorities to make full use of their proximity and better understanding of local climate impacts and to provide them with sufficient leadership and resourcing that could enable them to implement local adaptation initiatives.
- COSLA holds that place-based integrated policies may be used as a vehicle to help address horizontal and cross-policy challenges such as those posed by climate change as part of a mixed approach. In so doing, overlaps, inconsistencies and gaps between different policies and between governance levels, including the subnational levels can be addressed.
- Any future EU strategy, to be realistically implemented on the ground, should recognise from the outset that there are limited organisational and financial resources at national and local level.
- It is crucial to develop comprehensive and integrated methodologies including indicators to measure the success of responses; improve European-wide risk, impact and cost/benefit assessment for adaptation responses, as compared with "no action"; compare integrated EU-wide responses with sectoral approaches including analysis

of socio-economic costs and benefits; improved integrated assessment and the development and use of tools for demonstrating economic, environmental and social benefits of adaptation for European regions crossing national boundaries.

EURELECTRIC

EURELECTRIC welcomes the launching of the European Climate Adaptation Platform last March. They noted that the energy sector is not represented on the platform and are willing to exchange with stakeholders to present the strategies adopted or foreseen by the power sector to adapt to a changing climate. Adaptation to climate change is two-fold and covers both adaptation to long-term changes and adaptation to extreme weather events whose number and severity are expected to increase.

EURELECTRIC wants to stress the importance of mainstreaming adaptation concerns in other EU policies in a consistent manner. Any initiative on climate change adaptation in the energy sector should bear in mind possible conflicts with mitigation goals. Adaptation and mitigation measures must work together to reduce climate change risks. There is a concern that adaptation-driven revisions to environmental regulation and the planning process may lead to onerous requirements for the approval of new energy projects.

The Electricity Industry is also concerned by risks associated with the implementation of a “one size fits all” policy in particular for water-related issues. It is vital to recognise and respect the sunken investment in water-dependent infrastructure assets (which includes power plants and associated assets such as transport infrastructure, grids, etc).

Climate Alliance

The EU adaptation strategy must ensure that adaptation to climate change is perceived as an important part of climate policy and that it is integrated into necessary regulatory procedures. As adaptation is fairly local issue, financial constraints, information gaps, and the lack of resources in general in measuring future climate impacts needs to be carefully considered. Trans-boundary organisations and networks of local authorities, such as Climate Alliance, can help to make a link with the overall EU strategy and the local needs.

Even if adaptation is largely a local issue, the European level has a great potential in pushing forward the adaptation agenda through awareness raising, integrating climate issues in the existing and new policy initiatives and in supporting future research and concrete projects in this field.

UNEP

The input from the UNEP Brussels focusses on how the UNEP's Programme of Work may potentially complement the development of the EU Adaptation Strategy:

- The UNEP-facilitated "Programme of Research on Climate Change Vulnerability, Impacts and Adaptation" (PROVIA) aims to improve the coordination of international research on these topics and to strengthen the provision of high quality scientific information for decision makers.
- Harnessing the expertise and resources of the private sector in addressing climate risks, through the UNEP Finance Initiative (UNEPFI), which is actively engaging the insurance industry to explore risk management approaches, can facilitate adaptation to climate change.
- Collaboration on the economics of adaptation, where many countries are looking at ways to make their economies resilient to climate change. Determining appropriate and cost-effective responses to climate change risks and impacts is critical, and UNEP together with its partners are working closely together to better understand these and assist countries.
- The UNEP Flagship Programme on Climate Change – Ecosystem-Based Adaptation (EBA) coordinates projects in a range of ecosystems, to reduce human vulnerability to climate change by ensuring a strong natural resource base linked to well-functioning ecosystem services. Using EBA tools and knowledge, studies are already underway in the EU and elsewhere, and are currently assessing the cost-effectiveness of EBA approaches.
- UNEP is ready to discuss these and related areas of potential collaboration in our yearly High Level Meeting, which will take place on 10 October 2012 in Brussels, with the UNEP delegation to be led by the Head of executive Office, Michele Candotti.
- UNEP also expects that adaptation will be addressed under a strategic partnership meeting, in preparation between DGCLIMA and UNEP, that will address both mitigation, adaptation, REDD, and climate change science and outreach.
- UNEP would value continued engagement with the EC in the development and implementation of the EU Adaptation Strategy.

The World Food Programme

Although the new EU Strategy for adaptation to Climate Change will be largely EU focused, adaptation is a trans-boundary issue and it will have an impact also on developing countries which are most vulnerable to climate change. The increased frequency of climate change-related natural disasters threatens to significantly increase rates of hunger and malnutrition,

disproportionally affecting the most vulnerable people, particularly women and children. Producing food without damaging the environment is one of the greatest challenges the world faces today. Accordingly, it is important to help poor communities to address environmental concerns and become more able to resist future shocks.

Practical considerations:

- Enhance resilience-building outcomes for vulnerable people.
- Support governments and local communities in emergency preparedness and risk management by developing vulnerability analysis for food security, improving emergency preparedness and response, early warning systems and disaster risk reduction, and by developing new food technologies and logistics. It is important to minimize the impact of natural disasters through Disaster Risk Reduction (DDR) and contingency plans and support their mainstreaming into national plans.
- Support the establishment of safety net systems: because of recurrent disasters, there is growing demand for more predictable, long-term safety nets that take into account climate risks.
- Food and nutrition security should become focal sectors of EU development strategies and national governmental strategies.
- Support stronger partnerships: integrated, multi-sectoral approaches at various levels such as: local communities, governments, regional institutions, the private sector, NGOs, International Organisations and regional bodies. Analytical tools for anticipating and assessing the impacts of climate on food security, hunger and malnutrition are still largely missing.
- To counteract climate change-related hunger and undernutrition, a policy framework for mainstreaming climate change into EU development strategies is needed. Best practices should be identified.
- Adaptation and mitigation measures should be part of development programmes, including national and regional food and nutrition policies, strategies and action plans.