PLACARD Foresight Workshop summary: How can foresight help to reduce vulnerability to climate-related hazards?

PLACARD aims...

... at establishing a coordination and knowledge exchange platform to support multi-stakeholder dialogue and consultation between Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) research, policy and practice communities across scales.

In order to achieve this goal, PLACARD provides a common ‘space’ where CCA and DRR communities meet, share experiences and create opportunities for collaboration.

The Foresight task within PLACARD looks at the common elements between CCA and DRR, in the context of the Paris Agreement at COP21 on climate change and the Sendai Framework for Disaster Risk Reduction, both major steps towards increasing resilience to climate-related extreme events. Long-term risk and response analyses in support of these two agreements and the Intergovernmental Panel on Climate Change (IPCC) assessment reports tend to be dominated by the development and formal analysis of Representative Concentration Pathways (RCPs) and Shared Socioeconomic Pathways (SSPs). Such analyses are an important mechanism to advance analytical knowledge about future risks, yet they constrain creative analysis in support of action. PLACARD sees a complementary role for more and broader (qualitative and quantitative) foresight methods to be implemented by diverse experts and stakeholders to explore future vulnerabilities, risks, and opportunities.

Foresight definition

Foresight is a forward-looking approach that aims to help decision-makers explore and anticipate in a participatory way what might happen, and prepare for a range of possible futures, influence and shape them.

Foresight typically involves systematic, participatory, future-intelligence-gathering and medium-to-long-term vision-building processes to uncover a range of possible alternative future visions (FLIS Interest Group)\(^1\).

Thus foresight is about different methods, tools, formats with a high degree of participation and stakeholder engagement, looking at future developments and its integration into decision-making today, thus thinking, debating and shaping the future (JRC, 2001)\(^2\).

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**Workshop aims**

Applying foresight can strengthen both CCA and DRR in terms of science, policy and practice; link them with other international mechanisms such as the Sustainable Development Goals (SDGs); and explore the implications of the global agreements for European, national and local action.

With the Foresight workshop, PLACARD aimed to (i) explore the potential role of foresight methods, tools and processes to inform the implementation of the UNFCCC adaptation and Sendai disaster risk reduction mechanisms; (ii) identify relevant long-term trends (e.g. global mega-trends) and surprise events (wildcards) and other developments which would have implications for DRR and CCA; (iii) and explore the needs and priorities of connecting climate change, disaster risk response, sustainable development and other communities with respect to foresight.

**Workshop presentations**

Three presentations\(^3\) (cf Annex 1) served as an input for the workshop participants to bring everybody on the same page for subsequent discussions in parallel breakout working groups:

- Implications of megatrends for CCA and DRR;
- Scenarios as a foresight tool for CCA and DRR; and
- Climate-data use for Risk Reduction – a CCA and DRR perspective.

The mega-trends approach, focussed on the global mega-trends (see: Background Information – Mega-trends)\(^4\), was presented in three pitches (mega-trends clusters):

- “Living and working”, including Urbanization, Technological change, Economic growth and inequalities;
- “Health and wellbeing”, including Demography, Changing disease burden and pandemics, Environmental degradation, pollution and resources on ecosystems, and
- “Safe and secure”, including Migration, Global competition for resources and Diffusion of power.

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Each of the mega-trends in these clusters can have impacts on CCA and/or on DRR. Their relevance was assessed based on the following guiding questions:

- **What are the key trends and potential signals?**
  - What are the key drivers for CCA and DRR research?
  - How do global mega-trends affect risk to extreme weather events?

- **What are the potential surprises, wildcards and non-linearities?**
  - Which surprise events may increase/decrease risks & vulnerabilities?
  - What are their consequences for research and policies?

### Results of the working groups

The Working Group *Living and working* focussed on the mega-trends (i) urbanization, (ii) technological change, and (iii) economic growth and inequalities.

(i) **Urbanization may:**
- Lead to a higher exposure (to climate and natural hazards) of both people and properties/assets
- Disconnect people from the natural environment; hence it may reduce the interest of urban dwellers in environmental issues
- Lead to greater challenges in terms of urban planning, including critical infrastructures
- Be accompanied with the ageing of the society, leading to a change in the social structure, which may potentially increase people’s vulnerability (see also Health)

(ii) **Technological change may:**
- Modify the ratio of centralized/decentralized activities in society
- Increase the dependence on technologies and its associated devices, which could potentially increase vulnerability and deepen inequalities between urban dwellers having access to technology and the others
- Offer new opportunities for decreasing climate risks
- Change the behaviour of urban dwellers, while links between technological changes and behaviour changes would have to be accounted for
- Highly modify the way we live and the way we work (e.g. robots replacing current workers)

(iii) **Economic growth and inequalities may:**
- Fasten the depletion of natural resources, possibly affecting resilience
- Increase resilience of those benefiting from economic growth and decrease it for those who do not
- Modify the structure of the future labour market, which itself will considerably impact the social system, which would have to be more flexible and affordable

The focus of the Working Group *Health and well-being* was to explore how megatrends like demography, changing disease burden and pandemics, environmental degradation, pollution and resources on ecosystems affect risk and vulnerability to climate-related extreme events. To do so, this group focused on (i) trends and signals as well as on (ii) potential surprises and wildcards.

(i) **The relevant trends and signals identified were**
- A great impact of global urbanization on Europe is expected. It may affect the supply chains of products; enhance risks of conflicts in regions with rapid urban migration; and spread diseases through increased tourism.
Globalization may render the elderly more vulnerable, since a continued decrease of solidarity and an increase of individualisation are expected within a globalized world. However, the use of digital technologies in communication and response might enhance their protection towards climate-related extreme events, such as heat waves.

The DRR community is more concerned with short-term events (e.g. floods and storms) than with longer-term events (e.g. heat stress or diseases). The difference of perception and interest across countries depends on how DRR community is organized in different countries.

The interlinkages between megatrends and their drivers are expected to play a major role in the determination of future risks and vulnerability. Yet as they are not fully understood, their management may require new forms of governance and collaboration.

Within a world that faces such megatrends, information on social changes is of utmost importance and should be embedded within vulnerability assessments.

The time dimension is expected to be an important determinant for the implementation of adaptation and coping strategies.

The potential surprises and wildcards are mainly

- Cascading effects can bring surprises in both the impact and the response parts. For instance, environmental degradation affects food supply, which affects migration towards Europe. However, very little is currently known about these cascading effects.
- Terrorism and terrorist attacks pose a serious threat. However very little is known about European capacity to cope with and prepare for such threats (e.g. medically and psychologically).
- New types of wars and weapons might also appear, particularly along with the digital revolution and associated new vulnerabilities.
- Rapid political changes and policies adopted or changed as a consequence are also crucial wild cards that should be accounted for.
- Economic crises are hard to foresee, particularly in a globalization context.

Altogether, a reflexion should be started on how and where to engage (key areas, stakeholders mapping, social network analysis, target audience, etc.). In addition, these mega-trends have impacts beyond the field of CCA and DRR, and hence their management should be embedded within global strategies accounting for other environmental and societal fields.

The Working Group ‘Safe and secure’ looked at the following mega-trends: (i) Global competition for resources; (ii) Diffusion of power; and (iii) Migration. Among those, ‘migration’ was the mega-trend that dominated the discussion, while references were made also to the other two.

Main points of discussion regarding trends and signals identified

- Migration often results from poor governance. Instead of making a priori assumptions about migration (i.e. that it would have happened anyway), we should explore if and how development policies can enable people to be resilient in their home countries and hence avoid the necessity of migration.
- We need to manage vulnerability, exposure and coping capacity of people and develop relevant policies to support this before the need for migration emerges. To achieve this goal, we need to strive for:
  - coherence across different ministries at national level. The private sector and business should be involved in such efforts, and
b. cooperation at transnational level, including also links to the EU and the various DGs. Building such connections, especially with countries that have power (and money), might facilitate innovation and knowledge transfer in the future.

- The time and place where extreme weather events take place and where migration flows are provoked as their result might differ significantly. Thus, a broader perspective is required to address the implications of migration and seize the opportunities that might emerge. This should account for a longer temporal and a wider spatial scale, and include both short-term and long-term policies.

- We need to improve our understanding of:
  a. The patterns and flows of migration;
  b. The types of migration and their underlying reasons. There are, for example, social, economic, political and environmental issues that trigger migration (e.g. disasters war, human relationships, work and education). Also, different types of migration are linked to different ways of thinking and rational. For example, in the case of a war or a major disaster, people tend to have more immediate reactions and short-term thinking, than when being in other situations.

- Communication of disasters and their complexity becomes increasingly urgent for a diverse group of societal actors (i.e. people with a wide range of profiles, who come from a variety of backgrounds and contexts). Communication with them can be constrained, among others, by cultural barriers, language, or a misleading perspective that migration is not relevant to them.

- Research evidence should be used to inform policy decisions, especially those related to ‘preparedness’ (e.g. related to buildings/housing) and spatial planning. For example, people living in marginalised areas or in unsafe housing are in higher risk to be affected by disasters.

(ii) Surprise events (wildcards)

Migration should be considered when carrying out scenario exercises for DRR and CCA at different geographic levels, as it is very likely that it will shape and change ‘future worlds’. Migration trends will differ depending on the scenario we look at. Potential surprise events may include:

- changes in policy and governments, leading in turn to changes in migration
- migration taking place from or to places or zones where, under current conditions, it is considered highly unlikely
- changes in the way that countries manage their resources, with positive spill overs coming from countries that are more effective and efficient than others
- shrinking of Europe’s power, and hence of its potential geopolitical impact, resulting in turn in a shift in the focus on the continent alone

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Based on the identified trends, potential surprises, wildcards and non-linearities, the focus was then on their implications, as well as on the opportunities that might emerge from them; what they mean in terms of policies, international arrangements and capacities, and finally for budget priorities.

In a role play exercise of the three working groups based on the previously identified trends, potential surprises, wildcards and non-linearities, three different ministries, namely the Ministry of Economy and Spatial Planning, the Ministry of Environment and Health and the Ministry of Internal and External Affairs, had to:

a) Identify the implications and opportunities of megatrends/foresight information for each ministry when considering DRR and CCA responses

b) Allocate an investment budget for megatrends/foresight research for each ministry and set priorities

c) Describe the capacities and institutional arrangements that are missing

Ministry of Economy and Spatial Planning

a) implications and opportunities

• Prioritise the sectors which are impacted and concerned by CCA and DRR strategies
• Reduce dependencies
• Design strategic infrastructure, related to energy, water, built environment, etc.
• Frame spatial plans with DRR and CCA in mind, e.g. multifunctional spaces
• Support innovation, both technical and social
• Identify green and sustainable jobs and growth
• Increase the collaboration and linkages with other ministries, in particular with the Ministry of Environment and Health
b) investment budget
- Design of an innovative framework for the economy, which should favour climate-friendly investments and lead to a low-carbon but also attractive and competitive society
- Implement a CCA and DRR funding system, which favours research and information on CCA and DRR and enhances capacity building through cooperation
- Take short-term measures that are appealing to stakeholders and decision-makers within the ministry, aiming at creating jobs and reducing unemployment

c) capacities and institutional arrangements
- Strategic decisions
- Resilient infrastructure
- Cooperation with ministries and other inter-sectorial institutions
- Inclusion of external environmental costs
- Mainstreaming of CCA and DRR in financial and economic models/decisions

Ministry of Environment and Health

a) implications and opportunities
With regards to the discussed mega-trends, the ministry should consider the following vulnerabilities:
- Social isolation, connected to the ageing population
- Migration flux towards Europe, due to socioeconomic and environmental reasons, but also enhanced by climate change
- Increased mortality and to sanitation hazards due to urbanization, along with increase of water consumption and decrease of water quality
- Breaking of food supply chains, which could lead to food insecurity

Also a number of opportunities could arise from the megatrends and foresight information in the near future, e.g.:
- New technologies, mainly oriented towards the development of more sustainable solutions, and the improvement of communication could be developed
- New sustainable consumption patterns may appear, particularly following community-based solutions
- Migrants who enter Europe might be highly skilled and motivated, and may bring innovative and sustainable best practices
- Linkages between different sectors, generations and cultures could be promoted using foresight exercises

b) investment budget
The main areas of research and priorities are ranked as follows:
- Horizon-scanning exercises incorporating megatrends analysis, disruptions, and retrospective disaster analysis are very useful for integrated CCA and DRR planning and should be funded. These type of visioning (and back casting) exercises could help understanding how different systems are interlinked, how stakeholders interact, which are the most vulnerable groups, what are the potential solutions and their feasibility. It would help to explore in more detail the main hazards such as food supply disruption, heat waves and flooding.
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- Monitoring of trends related to extreme climatic events and health and environment could be improved.
- A high priority should also be given to the question of scalability and the design of methodologies to scale up good examples.
- Research on the question ‘How will the health system be impacted by vulnerabilities?’ should be funded. This would allow defining the role of social structures, identifying emerging actors, designing win-win solutions such as ecosystems-based solutions, etc.
- Finally, a budget should be allocated to understand the risk for policy goals, in order to gain political interest.

c) capacities and institutional arrangements
- A high-level foresight committee, set up across the ministries with high political sponsorship, to assess the validity of current hazards plans and their use for the near future
- Design and maintenance of effective engagement mechanisms for key stakeholders
- Promotion of nature-based solutions and green jobs
- Strict implementation of EU air quality policies, particularly in case of heat waves.
- Integration of DRR/CCA knowledge at least in secondary-level education (high-school) as well as in companies, government offices, etc.
- Set up of a universal basic income to improve access to health care
- Design of plans to support migrants in being productive members of the European community and being involved in activities to improve their well-being

Ministry of Internal and External Affairs

a) implications and opportunities
- Migration may change capital distribution and hence impact on the coping capacity of different societies and geographical regions.
- There is a need for full integration of development policy, including civil protection and safety, and consideration of capital allocation beyond national borders.
- There is a need for a broader perspective on assuring provision of materials and consider food security issues, energy and the development and diffusion of technological innovations.
- Raising income levels in other countries will increase their coping capacities and decrease vulnerabilities. Transfer of technological innovations can also contribute to the achievement of this goal. International organisations (e.g. World Bank) can play an important role in relevant efforts.

b) investment budget
- Discussions emphasised that the resilience of a country can be improved by making investments now somewhere else (beyond a country’s national borders). Climate change impacts beyond Europe, for example, can affect European countries e.g., by impacting food prices or influencing food security. This is a difficult message to communicate and to convince people to support it.
- Allocation of resources to respond to hazards should be aligned with the prioritisation of the goals to be achieved. When it comes to research, some areas were identified that need to be further explored. These include (in an order of importance, according to the budget that workshop participants would allocate to them (%)): 
PLACARD Foresight Workshop summary: How can foresight help to reduce vulnerability to climate-related hazards?

- integrated risk/vulnerabilities mapping, visualizing why we need to address certain issues and how measures can be prioritised (50%)
- building human capital and reforming the education system to promote awareness raising and skills’ development (30%)
- improving the understanding of the ways that societies evolve, considering in particular vulnerable groups during the recovery period (e.g., post-Katrina period); technological and cultural measures (20%)

c) capacities and institutional arrangements

- Ensure diversification of supplies and suppliers to reduce vulnerability;
- Consider safety and security also in terms of supply chains, provision of raw materials and manufactured goods
- Strive for financial and institutional coherence at multiple levels (focus on the national level but consider also the EU and global level)
- Establish or assign an ‘umbrella’ ministry in all countries that have signed the SDGs which will be in charge of ensuring that decisions will be made towards their achievement
- Support long-term CCA and DRR policies and global frameworks
- Develop strategies and plans to support people’s integration in the countries to which they migrate. In this context, people’s psychology has to be considered (i.e. ways to help people overcome the traumas of migration); use social networks (i.e. social networks, especially connections to friends and relatives, can play an important role not only when it comes to people’s resilience (before migration) but also for facilitating their integration in a new environment (after migration); environmental conditions (i.e. acclimatisation is an important issue linked to migration and the length of residence time in the host country, as people often have to migrate to countries that have very different conditions compared to their home countries)
- Promote the concept of people as ‘global citizens’
- Sensitize people in order to convince them of the importance of their support

The possible role and use of foresight in CCA/DRR

In a plenary discussion the possible roles and use of foresight in CCA/DRR were discussed. The main points are summarised below:

- A multi-method foresight approach (toolbox) is required (mega-trends, wildcards, disruptors, qualitative and quantitative analytical tools, participatory methods) linked to the scenarios already used in CCA and DRR (if any);
- Foresight delivers tools for strategic thinking and prioritization and many other purposes;
- Overviews of different foresight methods already exist but examples of their use (case-studies) applied to CCA/DRR are not widely available. Thus, this could be explored;
- A European foresight platform existed, but was project based and has ended – integrating CCA and DRR in other existing foresight initiatives/programmes would be useful;
- Close collaboration was recommended with foresight units at JRC Brussels, EC (multiple DGs, mainly RTD), STOA/EPRS (EP= Global Trends Unit and Scientific Foresight Unit);
- Potential frameworks that could be used to further develop foresight in CCA and DRR analyses could use megatrends as baselines and vulnerability as the main focus;
- Horizon-scanning could be an interesting exercise for agenda setting in PLACARD;
PLACARD Foresight Workshop summary: How can foresight help to reduce vulnerability to climate-related hazards?

- DRR is very much focusing on past and present (and participatory), while CCA is very much forward looking using quantitative modelling output – it could be interesting to explore potential connections across CCA and DRR communities using foresight methods;
- The participatory (transdisciplinary) nature of foresight is one of its biggest strengths;

Methodologies:
- Foresight uses methods from across disciplines, although some are endogenous to a more narrow “foresight” community, several can be combined depending on the objective;
- It is important to clearly define the strategic objective of a foresight exercise (e.g. CCA/DRR);
- Selection of methods in foresight should be open-minded and very much oriented on the target and time-horizons of the stakeholders and of climate change;
- Scenarios (both qualitative and quantitative) can sketch the future context of action and help shaping response strategies;
- Some exercises start with quantitative modelling, but then move on to develop a common understanding with stakeholders about next steps regarding which other methods to use.

Agenda setting points for PLACARD

- Foresight and scenarios could be used to explore the acceptability of CCA measures, governance and institutional changes.
- Since the actual implementation of foresight exercises is beyond the scope and budget of PLACARD, which focuses on promoting new research angles, the project can explore opportunities to tap into existing networks which can do actual foresight work with PLACARD expert support.
- Linking up with JPIs, such as the JPI Climate, and their research agenda might be a good opportunity.
- Links with the transformational research communities can be explored as follow-up work.

Outlook – follow up after the workshop

The project team has prepared this workshop summary and a separate policy brief, involving the workshop participants and contributors in early 2017. The list of workshop participants is added in Annex 2.

The workshop participants will be invited to the PLACARD Foresight Session at the ECCA 2017 in Glasgow in June 2017. A webinar on more concrete examples of successful and failure in the user of foresight in CCA/DRR is envisaged for 2017.

A follow-up workshop is planned for 2018 with a context and structure that will go far beyond the explorative character of the 2016 workshop.

Other possible follow-ups can be in new research projects, in funding programmes such as the Horizon 2020 or JPI Climate.

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PLACARD Foresight Workshop summary: How can foresight help to reduce vulnerability to climate-related hazards?

The following events were identified as potentially relevant for further exploring the development and implementation of foresight to enhance CCA and DRR integration:

- ESPAS (European Strategy and Policy Analysis System) Conference in 2019
- ECCA 3 in Glasgow, 2017 – session on Foresight organized by PLACARD
- Webinar in Spring 2017
- ECCA4 in Lisbon, 2019

Participant’s recommendations to improve the use of foresight in CCA/DRR

- **Support a better understanding of the needs and barriers to the integration of the “future” dimension in current decision-making** – more long-term thinking in policy and practice and identifying emerging issues
- **Understand the differences and similarities in perspectives and expectations** between CCA, DRR and foresight
- **Bring the two communities together** in concrete activities with a clearly defined goal and apply foresight methods
- **Develop concrete and achievable outputs from foresight thinking**, defining framing and context. For example, clear trends, quantitative outputs, sets of scenarios and narratives, to smooth integration within CCA and DRR activities
- **Understand people’s perceptions and if needed, try to change them** – for example, researchers, practitioners, decision-makers and NGOs. CCA and DRR practitioners can have different views on the same issues.

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PLACARD Foresight Workshop summary: How can foresight help to reduce vulnerability to climate-related hazards?

- **Identify specific opportunities** for connecting CCA and DRR, for example through research programming and projects
- **Conduct research and improve capacity** building to integrate DRR and CCA. CCA actors could benefit from a clearer understanding of the importance of a DRR or extreme event focus, while DRR practitioners may benefit from grasping the relevance of a long-term climate change perspective for prevention
- **Define research questions and time-horizons** early in the project planning or proposal stage to select and **apply the most suitable foresight methods** and deliver knowledge, for example, research needs, future visions and action plans
- **Promote and communicate foresight examples** – good practice on different levels, contexts and settings. For example, forward-looking co-operation to implement measures with appropriate institutions, authorities and stakeholders
- **Provide evidence** of the immediate benefits of foresight – and the risks of not using it!
- **Design appropriate foresight processes** that scope the problems at hand, explore scenarios, develop a vision, back-cast, evaluate learning and iteration, and then carry out a series of practical foresight exercises at different levels to see how they work. **Do it – don’t just talk about it!**
- **Apply foresight methods to existing practices**. Foresight methods are already partly used in adaptation pathways, climate scenarios, impact and vulnerability assessments, and in development of climate change adaptation and disaster risk reduction strategies and action plans.
- **Avoid ivory-tower research** which is unattractive at a regional or local authority level where decisions are made.
PLACARD Foresight Workshop summary: How can foresight help to reduce vulnerability to climate-related hazards?

Annex 1 - Draft Agenda

Date: 24-25 October 2016
Venue: National Met Service, Hohe Warte 38, 1190 Vienna, Austria

Foresight Workshop - How can foresight help to reduce vulnerability to climate-related hazards?

Day 1 - Date: 24 October

<table>
<thead>
<tr>
<th>Timing</th>
<th>Session</th>
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<tbody>
<tr>
<td>12:00 – 13:00</td>
<td>Registration, light snacks available</td>
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<tr>
<td>13:00 – 14:45</td>
<td><strong>Session 1: Setting the scene</strong></td>
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<td></td>
<td>• Welcoming (Director ZAMG and EAA)</td>
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<td></td>
<td>• A introduction to PLACARD and the objectives of the workshop (Markus Leitner, EAA) and who is who?</td>
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<td>Three short presentations on the current CCA-DRR context and the foresight component based on megatrends.</td>
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<td>• Global and European megatrends relevant for DRR/CCA (Anita Pirc Velkavrh EEA)</td>
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<td>• Scenarios as a foresight tool in CCA (Simona Pedde, WUR)</td>
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<td>• Use of climate data for risk reduction – CCA and DRR perspective (Barbara Chimani, ZAMG)</td>
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<tr>
<td>14:45 – 15:15</td>
<td>Coffee</td>
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<tr>
<td>15:15 – 17:00</td>
<td><strong>Session 2: Future trends and their relevance for DRR and CCA research</strong></td>
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<td></td>
<td>This session explores the possible implications of key drivers (Megatrends) on CCA and DRR research. Three pitches (in plenary) for each cluster of megatrends will serve as intro for three parallel working groups. These will identify key drivers and trends and serve as a common understanding of major impacts and risks, namely on:</td>
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<tr>
<td></td>
<td>a) Living and working (pitch: Andreas Peer and Johannes Göllner, National Defence Academy, Austria)</td>
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<td>• Urbanization</td>
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<td>• Technological change</td>
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<td>• Economic growth and inequalities</td>
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<td>b) Health and wellbeing (pitch: Martin Mayer, Youmeo)</td>
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<td>• Demography</td>
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<td>• Changing disease burden and pandemics</td>
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<td>• Environmental degradation, pollution and resources on ecosystems</td>
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<td>c) Safe and secure (pitch: Tobias Lung, EEA)</td>
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<td></td>
<td>• Migration</td>
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<td>• Global competition for resources</td>
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**PLACARD Foresight Workshop summary: How can foresight help to reduce vulnerability to climate-related hazards?**

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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>17:00 – 17:45</td>
<td>Wrap up and inspirational reflection</td>
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**Day 2 - Date: 25 October**

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<tr>
<th>Timings</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:30 – 09:00</td>
<td><strong>Arrival, tea &amp; coffee available</strong></td>
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<tr>
<td>09:00 – 09:15</td>
<td>Quick recap from Day One (plenary)</td>
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</table>
| 09:15 – 11:15  | **Session 3: How can foresight be used in reducing future risks of extreme weather and climate change?**  
This session explores possible responses to the risks and opportunities identified in the previous day, for each cluster of Megatrends.  
This session aims to focus on how foresight help to improve the effectiveness of climate related responses by anticipating future needs, gaps and emerging issues in CCA and DRR research.  
Three break-out groups (one per cluster) will consider the following questions:  
• How can these global and regional megatrends and surprises enhance or hinder the capacity to respond to climate change and extreme weather events?  
• What may be the implications for current sectoral policies and institutional arrangements?  
• How can foresight support the identification of future needs and priorities in DRR and CCA research? |
| 11:15 – 11:45  | **Coffee**                                                               |
# PLACARD Foresight Workshop summary: How can foresight help to reduce vulnerability to climate-related hazards?

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>11:45 – 12:45</td>
<td>Highlights of the group discussions (plenary)</td>
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<td>12:45 – 14:00</td>
<td>Lunch</td>
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<td>14:00 – 15:30</td>
<td><strong>Roundtable Session: Foresight and European CCA and DRR research integration:</strong> How to identify key research needs and link them with ongoing or planned research on foresight</td>
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<td><strong>Questions</strong></td>
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<td></td>
<td>• How can we ensure that foresight findings are legitimate and can be properly used to promote DRR and CCA action?</td>
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<td>• What are the major areas of future work that we should be considering?</td>
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<td>• How can foresight be used to bring a fresh look into long-term system thinking and dealing with complexity in CCA and DRR research?</td>
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<tr>
<td>15:30 – 16:00</td>
<td><strong>Closing Session</strong></td>
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<td>Summary and outlook by workshop chair</td>
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<td>Closing of Workshop (ZAMG and EAA)</td>
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February 2017
Annex 2 - List of workshop participants

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<th>Last name</th>
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PLACARD Foresight Workshop summary: How can foresight help to reduce vulnerability to climate-related hazards?

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