



The future of Europe depends on how it manages the risks of climate extremes

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Foresight: December 2018 Workshop summary

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About this summary

This report is partly based on the [The future of Europe and the future of climate action: reflections and scenarios for the EU27](#) by Jonathan Gaventa and Manon Dufour, E3G; Martin Nesbit and Kamila Paquel, IEEP and Radostina Primova, [HBS EU](#) and mostly on the PLACARD Foresight workshop: facing the future of Europe's climate – EU governance and climate risks at a crossroads

One of the working streams of PLACARD is to promote foresight. Foresight is a method to try out a set of forward-looking approaches that help decision-makers explore and anticipate what might happen. This allows decision-makers to prepare for a range of possible futures, and influence and shape those futures.

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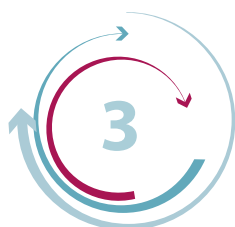
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Front cover image: Mosaic of satellite images of Europe in 2018, taken by Sentinel-3, ©ESA



Contents

Foresight workshop aim	4
Summary	4
Workshop agenda	5
Main conclusions of the workshop	6
Scenarios for the future – as outlined in Juncker’s Future of Europe	6
Limitations of the Juncker scenarios with regard to foresight	7
1 Drivers for change	8
The future of Europe and climate change	8
Scenarios for the future – as outlined in Juncker’s Future of Europe	9
Downsides and upsides for CCA and DRR in the scenarios	11
What are the upsides of a pure focus on the single market for CCA and DRR?	12
What downsides are there for a coalition of the willing scenario for CCA and DRR?	13
What are the upsides of a coalition of the willing scenario for CCA and DRR?	14
What are the downsides of an enhanced cooperation scenario for CCA and DRR?	15
Which upsides does an enhanced cooperation scenario have for CCA and DRR?	15
2 What are the challenges for vulnerability (risks) and resilience (responses) for each scenario?	17
3 What are the actions needed to be taken to avoid challenges and seize opportunities?	20
4 How can the findings be translated into CCA and DRR policies and practice in the EU, and how can they be implemented?	22
Main conclusions of the workshop	23
About PLACARD	25
Annex	26



Foresight workshop aim

Previous discussions about the future of the EU have underestimated the risks posed by climate change to the stability and sustainable growth of the EU. By applying foresight methods, the PLACARD foresight workshop explored how Juncker's [5 futures of Europe](#) can be used for assessing climate and disaster risks in Europe, and for designing and characterising effective response strategies, for three cases: heat and drought, fluvial flooding, coastal impacts. The PLACARD workshop was held in December 2018, in Brussels.

Workshop summary aim

The aim of this PLACARD Foresight summary is to add another layer to Juncker's 5 futures of Europe and the Climate futures report by considering implications of different EU future directions for climate and disaster risks and responses to the overall EU governance and climate mitigation focus of these earlier reports.

Summary

This summary originates from a workshop on the future of climate change adaptation and disaster risk reduction in the context of the Future of Europe scenarios. In this workshop, foresight methods were used to explore possible futures for Europe and the consequences of dealing with climate change and disaster risks. This required reflections on Europe's long-term climate risks and policy objectives, the international context, and the integration of climate into economic, social and financial policies.

European leaders and the European Commission have kicked off a debate on the Future of Europe to consider the Union's future focus, governance and operations. It is a time for innovation of EU governance more broadly, as well as for the governance of climate risks and responses.

Arguably, the EU has achieved considerable progress on climate change. EU GHG emissions have fallen by 23% since 1990, while GDP has more than doubled in that time. The Paris Agreement was a victory for EU diplomacy and an important step towards limiting global emissions. Member States have agreed on ambitious goals and have submitted Nationally Determined Contributions (NDCs) to try and reach these goals.



The EU's efforts to deal with climate change suffer from the same challenges facing the European project as a whole. Member States face serious difficulties implementing the agreed targets, and in several countries, populist movements question the EU goals. At the same time, Europe depends on international action for climate security, but represents a declining share of global emissions and economic output. NDCs are voluntary so there is no recourse if the goals are not met: Member States not only have to step up their climate mitigation actions, but also prepare for the potential impacts of high-end climate change in case the Paris Agreement aim of keeping temperature increase to 1.5-2°C is not met.

The radical changes in economic structures and technologies associated with what has been called the 4th industrial revolution blur the lines between the physical, digital, and biological spheres, offering new opportunities. However, they also present real transitional challenges for the workers and communities affected. Migration and security issues – exacerbated by climate impacts – increasingly dominate European politics.

Meanwhile, the context for what European climate governance must deliver is also changing. The White Paper on the Future of Europe provides broad sketches of very different political, economic and institutional directions in which the EU may move, but only addresses climate change in the margin. However, the EU must get to grips with the need to rapidly realise a fundamental transition to a fully decarbonised economy within decades, as required by the Paris Agreement. And because the success of the Agreement depends on governmental decisions in individual countries, implementation is very uncertain. An effective regime to manage increasing and unequally distributed climate risks needs to be developed, that aligns governmental efforts with those of non-state actors such as cities and businesses.

High ambitions for changing the energy system and responding to rapidly increasing climate risks pose a key test for European governance: if the direction of travel emerging from the Future of Europe process does not work for Europe's energy transition and climate risk management, the European project will have failed to meet one of the continent's biggest societal challenges. Over the longer term, Europe's security and prosperity depend on successful adaptation to climate change and a speedy but orderly transition to a decarbonised economy. As to the latter, an earlier report considered reaching mitigation targets for different futures of Europe – the Climate futures report – but does not yet consider climate change adaptation and disaster risk reduction. This was the aim of this Foresight workshop and the focus of this summary.

Workshop agenda

The workshop focused on three of the Juncker scenarios (Scenario 2: Nothing but the Single Market; Scenario 3: Those who want more do more and Scenario 5: Doing much more together). In addition, three case studies were provided as more concrete examples to work with: Case 1: Heat and drought – heat, hardship and horrible harvests; Case 2: Floods – Paris, Hamburg and Prague are mopping up, but more floods to come; Case 3: Coastal impacts – storm surges along the European coasts cause loss of life and damage. This was followed by an exercise to identify the upsides and downsides of the scenarios for climate change adaptation (CCA) and disaster risk reduction (DRR) for each case study.



As a next step, the challenges for vulnerability (risk) and resilience (response) for each scenario were explored, followed by a joint exercise to identify the actions needed to be taken to avoid challenges and seize opportunities for CCA and DRR. Finally, the findings of the previous exercises were translated into CCA and DRR policies and practice in Europe, including ways to put the outcomes into practice.

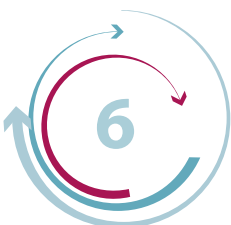
Main conclusions of the workshop

- The current EU strategy on adaptation to climate change and the Union Civil Protection Mechanism require strengthening in order to effectively address the increasing risks posed by different possible EU futures.
- Not only from a governance, but also from a climate perspective, the EU will look completely differently in a few decades. It is recommended that DG CLIMA guidance on developing adaptation strategies and DG ECHO advice on Risk Assessment are updated, taking into account the results of foresight work, including, but not limited to, this report.
- The forward-looking approaches used in foresight should be showcased for all relevant actors, in order to help them to prepare for the range of possible futures across Europe.
- Important advances have been made in sharing of data, knowledge and good practice, both at the EU level and between Member States. Depending on the direction the EU takes, these advances can be sustained, but also weakened or even nullified.
- There is a need for the continued building of a CCA and DRR expert community that should be at least partially independent from EU funding (e.g., European Climate Change Adaptation Conference 2019 – ECCA2019)
- Stronger collaboration and cooperation between actors across administrative borders e.g.
 - » coalitions and groups mechanisms, reflecting the heterogeneity of the communities and cross-cutting nature of CCA and DRR
 - » find agreement on logistics, legislation, distribution of resources and funding (investment priority plan) between the EU and MS actors

Scenarios for the Future – as outlined in Juncker’s Future of Europe

[Juncker’s Future of Europe report](#) presents five different future scenarios for the EU that also provides a basis for the workshop:

- **Scenario 1: Carrying on**
The EU27 focuses on delivering its positive reform agenda
- **Scenario 2: Nothing but the single market**
The EU27 is gradually re-centred on the single market
- **Scenario 3: Those who want more do more**
The EU27 allows willing Member States to do more together in specific areas



- **Scenario 4: Doing less more efficiently**

The EU27 focuses on delivering more and faster in selected policy areas, while doing less elsewhere

- **Scenario 5: Doing much more together**

Member States decide to do much more together across all policy areas

Limitations of the Juncker scenarios with regard to climate change



There are limitations to the Juncker Scenarios when using them in the context of CCA and DRR. First of all, some of the Juncker scenarios may be different from a political point of view, but not very much different in a CCA and DRR context, and therefore are not considered separately. The workshop focused on the **scenarios 2, 3 and 5**, since on the one hand the differences between these scenarios largely span the options from a CCA and DRR perspective, and on the other hand 3 is a workable number of scenarios to deal

with in a 1.5 day workshop. Secondly, there is a lack of scenario information with regard to a number of elements:

1. All the scenarios have large uncertainties. The participants of the workshop identified, for example, Scenario 2 to be more open to interpretation in the context of CCA and DRR.
2. The scenarios were also limited with regard to their scale (European, transnational, national, and sub-national): How do scenarios play out at different scales? This type of information is required to explore the meaning of these scenarios with regard to CCA and DRR.
3. The workshop confronted some limitations in terms of timelines, and agreed to discuss 2030 and 2050+ timelines.
4. Another limitation is the role of indirect impacts, the distribution of impacts and the response. Currently unknown are impacts outside of Europe impacting Europe (e.g. disruption of supply chains), as well as efficiency and solidarity issues and cross-border and public-private collaboration activities.

The lack of scenario information resulted in different interpretation of the scenarios (e.g. single market) among the workshop participants.

It was agreed that more details are needed for the scenarios such as a more concrete context for CCA and DRR. However, detailing these scenarios would have hindered thinking “outside of the box”. The three presented cases functioned as inspiration to enable the participants to translate the Juncker Scenarios in a more specific context.

It was also a challenge that the five scenarios implicitly have some values and worldviews that were more favoured or more opposed by the workshop participants. There was a tendency to favour scenario #5, because of a shared interpretation and a clearer role of MS in CCA and DRR, and because this scenario was most in line with the values of our participants.



1 Drivers for change

The first part of the workshop explored the drivers for change. EU leaders have embarked on a 5 Futures of Europe discussion on the future form, capacity and focus of the EU. Scenarios have been used to describe the potential 5 futures of Europe. Climate change and disasters are expected to be part of each of these scenarios. No matter how Europe's future evolves, climate change and disaster risks will be present. However, Europe's prosperity depends on successfully managing these climate and disaster risks, and an orderly transition to a net-zero carbon economy.

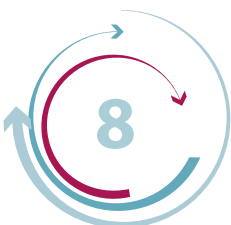
The future form and capacity of the European Union will fundamentally shape Europe's ability to respond effectively to climate and disaster risks and impacts, and to guide the transition.

The following sections outline scenarios for the Future of Europe and explore their implications for European climate governance based on the workshop findings.

The future of Europe and climate change

The challenges of managing climate and disaster risks and transitioning to a climate neutral economy intersect with existing governance challenges facing the EU. These, amongst others, include the following challenges that served as input to the workshop:

- Differential climate impacts and disaster risks exacerbate existing inequalities in the EU: North vs. South, rich vs poor, insured vs uninsured.
- As the scale and frequency of weather-related extremes is projected to increase, the impacts will increasingly exceed national boundaries and overwhelm national coping mechanisms.
- The need to move to a fully climate neutral EU requires transformation in every sector of the economy; traditional policy approaches relying on effort sharing and marginal abatement costs may be less suitable. Yet strategies may vary between EU, national and local levels.
- Within European economic governance, investment needs for resilience and decarbonisation are likely to conflict with pressures for other societal and political goals, such as fiscal discipline.



Scenarios for the future – as outlined in Juncker’s Future of Europe

Juncker’s Future of Europe report presents five different future scenarios for the EU and three provided a basis for the workshop:

- **Scenario 1: Carrying on**
The EU27 focuses on delivering its positive reform agenda
- **Scenario 2: Nothing but the single market**
The EU27 is gradually re-centred on the single market
- **Scenario 3: Those who want more do more**
The EU27 allows willing Member States to do more together in specific areas
- **Scenario 4: Doing less more efficiently**
The EU27 focuses on delivering more and faster in selected policy areas, while doing less elsewhere
- **Scenario 5: Doing much more together**
Member States decide to do much more together across all policy areas

The workshop focused on the scenarios 2, 3 and 5, since on the one hand the differences between these scenarios largely span the options from a CCA and DRR perspective, and on the other hand, three is a workable number of scenarios to deal with in a 1.5 day workshop. Scenario 1 is a middle-of-the-road, muddling-through scenario that falls within the range of the others. Scenario 4 focuses on delivering more and faster in selected policy areas without specifying which. For the practical purpose of the workshop it was assumed that in scenario 3, Member States would do more together in specific areas, including climate policy, which would not lead to much difference in results compared to scenario 4, if climate change was selected as one of the focus areas.

Thus Scenario 1 (EU-27 stick to their current course; efforts focus on strengthening the single market and increasing investment, including in areas such as energy infrastructure and digital; No major change of direction in terms of governance or focus), and Scenario 4 (EU scales back its focus to a limited number of policy areas, but it becomes more effective at reaching agreement and delivering on stated goals; EU steps away from areas in which its added value or competencies are limited (regional development, public health, social policy and state aid listed as examples)) were not assessed and discussed in detail.

To get a grasp of the scenarios 2, 3 and 5 and what they mean in the context of CCA and DRR, the workshop participants worked on the above-mentioned three scenarios from the perspective of three case studies for the year 2030, which are described below and illustrated in Figure 1 (Illustration of the five futures and three case studies).



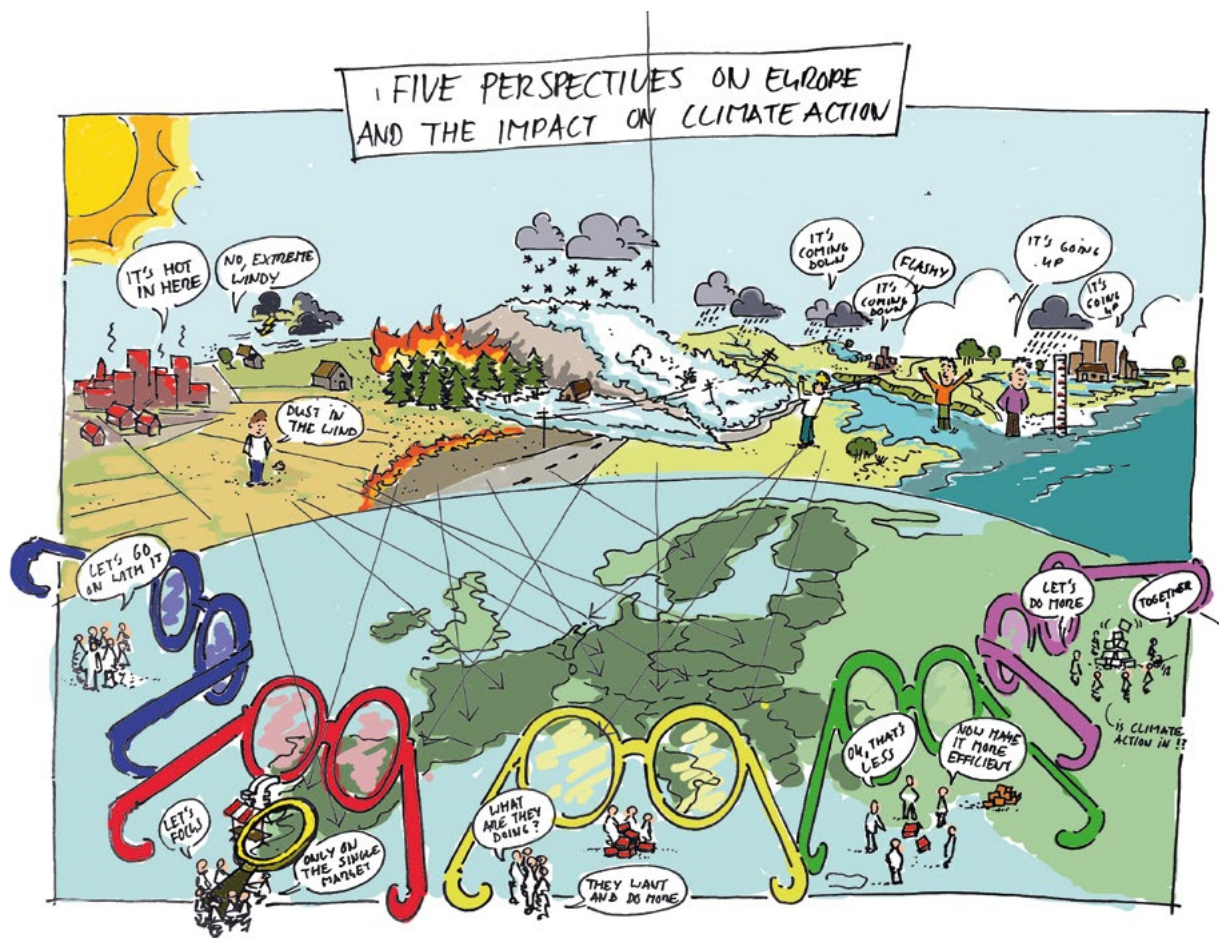


Figure 1: Five perspectives on the future of Europe and climate risks (three cases). Illustration by Bertram de Rooij.

Case 1: Heat and drought – heat, hardship and horrible harvests

- A scorching summer without rain in large parts of Europe.
- Temperatures soar to 45°C in the Mediterranean, and above 35°C at the Arctic Circle.
- Impacts include severe forest fires from the Mediterranean up to the Baltic and Scandinavia, harvest failures, and heat stress victims.
- Experts estimate that more than half of the EU population is affected.

Case 2: Floods – Paris, Hamburg and Prague are mopping up, but more floods to come

- Countries across Europe have been hit by severe floods and flash floods.
- Heavy rainfall combined with spring snow-melt caused the Seine, Danube, Elbe and Rhine and their tributaries to overtop their banks.
- Hundreds of people have been killed, more are missing, and many homes have become inhabitable.
- More rain predicted: Floods exceed not only the local but also the national response capabilities.

Case 3: Coastal impacts – Storm surges along the European coasts cause death and damage

- Storm surges and heavy rainfall as a result of hurricane Ingrid caused dozens of fatalities and extreme damage along the coasts of Portugal, France, Ireland, United Kingdom.
- Schools and hospitals are closed, many public transport and aviation services have ceased operations, and the army and other disaster response services are shoring-up flood defences.
- Damage estimates of this week's events amount to tens of billions of Euros. Many have died, more are missing.
- Along many coasts, the floods exceed not only the local but also the national response capabilities.

Downsides and upsides for CCA and DRR in the scenarios

To explore what the three scenarios mean for climate change and disaster risk in the three cases, workshop participants explored the downsides and upsides of these 3 scenarios. The main conclusions combining all three cases are described for each scenario below:

Scenario 2: Nothing but the Single Market – the EU27 is gradually re-centred on the single market

Key characteristics of this scenario are:

- The EU scales back its ambitions to only focusing on the single market;
- There is a strong focus on reducing regulation at EU level;
- There is little appetite to expand policy into new areas.

What are the downsides of a pure focus on the single market for CCA and DRR?

- * Much less coordination and cooperation in prevention, preparedness, response and recovery

There might be lower public investments in a collective response, thus less or no instruments for EU solidarity in case of serious and unequal climate impacts would be available. Coordinated crisis response will be scaled back with a more “everyone on their own approach” (MS must do it alone based on individual capabilities, which might be less effective and more costly). The EU Civil Protection Mechanism (EUCPM) may be weakened or abandoned. There will be no more joint exercises, increasing differences in capacities across Europe to address specific disasters, leading to less support being available for vulnerable or affected MS. Also the EU strategy on adaptation to climate change may be weakened or abandoned, and there will be less coordinated transnational exchange to support prevention, preparedness, response and recovery. There will be less or no coordination and cooperation or joint targets on CCA and DRR issues and no collective response mechanisms.



In other words, there will be less coordinated prevention, preparedness, response and recovery and more focus on individual, ad-hoc response at local level (countries, regions, communes). As a result, it is likely that in this scenario, disaster response will be less effective as countries may not be able to respond to increasingly severe events on their own.

*** Focus on economic returns and increasing divergence across MS**

Short-term profits are expected to dominate investing in long-term resilience. Vulnerabilities and response capabilities across MS will diverge in this scenario, with different MS choosing different, often market-driven approaches, which might lead to a decrease in the sharing of CCA and DRR knowledge and tools, response capacities and funds. Responses will be prioritised mainly on the basis of economic interests of each MS, leading to less or no coordinated public preventive or response capabilities of CCA and DRR at EU level.

Also, it is expected that in this scenario, there will be a reduction of available funds for CCA and DRR and less willingness to share Research and Technology Development (RTD) and knowledge results without financial compensation.

*** Increased social inequality, little compensation, and more social unrest**

There will be little compensation for damages to people and uninsured assets with increased inequality between vulnerable and less vulnerable people likely, due to an uneven distribution of vulnerabilities, impacts and response capabilities. These inequalities might exacerbate any vulnerability and so stress European and national capacities and resources. Climate impacts are projected to increasingly exceed the scale of individual MS (e.g. flooding in transnational river basins, agricultural and health impacts of heat and drought at the scale of European subregions or Europe as a whole, as in 2018). As a result, the governance structures, laws and institutions may not be fit for purpose to manage the scale of the threat, which might potentially lead to political and social unrest. Today, CCA and DRR considerations are mainstreamed in many (environmental) policies, but not in economic and financial policies. In this scenario, this gets worse rather than better, possibly leading to a scaling down of CCA and DRR efforts by MS. Increasing divergence across MS, influenced by disparate market-driven approaches, may result and lead to a lowering of CCA-DRR resilience.

What are the upsides of a pure focus on the single market for CCA and DRR?

At the same time as poor MS becoming more vulnerable as described above, economically strong MS might be able to prevent, respond to and/or recover from disasters by drawing resources from other MS, if paid for (buying their way out). Another upside is that a more business-oriented approach might lead to faster action and more efficient market solutions. A market mechanism might be in place to control prices of e.g. (agriculture) commodities. Exposure to the challenges of disaster/climate risk for the financial system might lead to a reform of EU private insurance markets on disaster risk with potentially positive effects on resilience and investments. The ownership of MS to deal with DRR and CCA might increase due to a better focus on the national and sub-national situation/circumstances.



The following upsides need to be seen as overlapping with scenario 3. Those who are willing to invest in DRR may invest more in this scenario than in others, since they cannot rely on international assistance (neither for pre- nor for post-disaster action) anymore. For several activities, the private sector, (e.g. commercial climate services (CS)) might step in. There might be a greater interest by MS for cross-border cooperation (when done voluntarily there is likely to be greater ownership). MS may see more opportunities to pursue their own regional-to-local interests and concerns independent of EU priorities, which may lead to increasing concentration of CCA and DRR action in vulnerable or affected MS.

Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas

Key characteristics of this scenario according to Juncker:

- A 'multi-speed' Europe where one or several "coalitions of the willing" emerge to work together in specific policy areas.
- This includes instituting legal or budgetary arrangements in these domains (cf Schengen and the Eurozone). Other Member States have the opportunity of joining over time.

What downsides are there for a coalition of the willing scenario for CCA and DRR?

* Less comprehensive EU coordination of prevention, preparedness, response and recovery

Some downsides overlap with the previous scenario 2, namely e.g. river flood management is a cross-border issue, but there may be less money for prevention in MS who are not part of the 'coalition of the willing'. This may lead to a roll-back in cross-boarder river (flood) management practice given that a lack of coordination can create new risks.

* Europe at different speeds. Less solidarity

There will be a greater disparity in the rate of development between Member States with regards to science, economy and security. Since climate impacts will be different, there will also be differences in the willingness for action. There might be a lack of consistency between MS and the less willing will do less on CCA and DRR, but all MS bear costs of inaction through the EU budget. The consequence might be a lack of solidarity – why should those who have done more, help those who have not done anything? Some MS will be left behind and there might be political pressure not to help the neighbours. Thus the EU will drift in different directions in CCA and DRR leading to a lack of convergence and less/no transboundary actions. Some MS are left out of enhanced cooperation or choose not to participate, but their actions still have impacts across borders (drought accompanied with ground water extraction and irrigation, river basin management, coastal flood protection, food supply, transport- and energy-networks).



* Unequal preparedness and indirect effects

Some MS might work together, such as pool capacities and undertaking joint exercises, while others don't, which will lead to an imbalance in preparedness and a lack of cohesive planning and implementation pooling across Europe. Inefficiency may increase due to different capacity. The consequences might be a reduction of funds for CCA-DRR and decreasing effectiveness of distributional mechanisms. An example is the migration away from the coastlines due to sea-level rise and storm surge.

Another problem might be related to the connectivity between countries, e.g. where a MS has no coasts and therefore no harbours (where goods such as medical supplies and chemicals are imported) and the related distribution infrastructures (e.g. energy grids and other critical infrastructures).

What are the upsides of a coalition of the willing scenario for CCA and DRR?

* Focus on priority vulnerabilities, faster action and tailored solutions

MS with similar risks can focus on their own regional-to-local interests more effectively, by collaborating only with countries and regions with the same climate risks. Regions facing similar issues can move faster in developing solutions without waiting for all EU (MS) to move at the same speed. This can lead to a tailored MS specific approach, with efficient and prompt response capabilities related to specific needs and innovations. The ambitions are not determined by the lowest level agreeable to all MS, and ad hoc mechanisms to cope with specific regional issues can be implemented faster. Some MS might develop state-of-the-art responses that can serve as good examples (e.g. river-basin specific cooperation, cross-border flood management) and inspire other MS to do the same. This can motivate other MS through peer pressure and organise cooperation in areas such as protection of EU citizens. One overlap to scenario 5 is the development of better relationships within the EU and knowing who your friends are.

Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas

Key characteristics of this scenario according to Juncker:

- Considerable expansion in EU capacities and remit.
- There is consensus that neither the EU27 as it is, nor European countries on their own, are well-equipped enough to face the challenges of the day.
- Cooperation between all Member States goes further than ever before in all domains.



What are the downsides of an enhanced cooperation scenario for CCA and DRR?

* Over-regulation and slow cooperation

Over-regulation may lead to excessive burdening of MS with slow policy negotiation processes, diverting their attention from their own urgent (climate) risks. There might be slow developments in preparedness determined by the lowest common denominator, or the slowest or least interested MS. Thus the richer and more advanced MS have to assist the poorer MS, or those MS with lower capacities. Coordination challenges may arise, leading to the need for a stronger leadership role at EU level that facilitates coordination across national and sub-national stakeholders. There might be a mismatch between the slow development of formal guidelines and frameworks on the EU level versus the needs of fast decision-making to address urgent climate risks on the regional level. Expansion of the EU may further dilute or slow down CCA and DRR response capabilities.

* No attention to context specific needs

The tendency to go for a one-size-fits-all approach, may disregard any regional differences. The EU-level focus on adaptation and disaster response then misses local sensitivities and knowledge, reducing the effectiveness of responses.

* Subsidiarity issues

There might be the need for new financing mechanisms at EU level, which could create conflicts between traditionally well protected and less exposed MS versus those with higher climate and disaster impacts. This might lead to sovereignty/subsidiarity concerns for some MS relating to issues such as protection.

Which upsides does an enhanced cooperation scenario have for CCA and DRR?

* More prevention, pooled resources

Cooperation in DRR responses might go beyond national remits and capabilities to deal with climate risks may be better secured. The EU Civil Protection Mechanism (EUCPM) and the EU Adaptation Strategy are likely not only to be sustained but also strengthened over time with implementation facilitated by (strengthened) existing institutions, knowledge centres and funds. Resources will be pooled, best knowledge and practice will be shared with all MS and opportunities for coordinated cross-sector collaboration will be seized. There is a possibility to share response capacities across the EU, which individual MS may not be able to afford (e.g. planned forest fires).

* CCA and DRR at core of EU

Potentially climate/disaster resilience might become a core EU priority, leading to increased resources and policy tools becoming available, with a snowballing effect leading to a greater level of resilience and response actions. Increased ambition around CCA and DRR, strengthened through other policy areas, is likely to lead to a faster development of knowledge and sharing of knowledge, along with the sharing of costs through existing and new mechanisms and institutions.



* **Strong international voice**

A stronger EU voice in international negotiations using successes from the EU as good examples for global actions is likely in this scenario.

* **Economies of scale**

There are likely to be larger budgets for CCA and DRR, which are underpinned by clear financing, cost-sharing arrangements and economies of scale (sharing of costs and joint purchasing, standardisation). Support for impacted local and regional communities will also be likely.

More systemic thinking about a crisis event that looks at reasons behind the crisis might ensure a balanced level of preparedness and prevention in terms of efficiency and cohesiveness. Also, the limits to CCA may be better accounted for, e.g. dealing with indirect impacts.



2 What are the challenges for vulnerability (risks) and resilience (responses) for each scenario?

When translating these elaborated scenarios to specific cases, the workshop explored the challenges for vulnerability and resilience.

Scenario 2: Nothing but the Single Market – the EU27 is gradually re-centred on the single market

* Increasing vulnerability of people and the environment. Focus on economic assets.

The vulnerability to climate risks by 2030 will increase, and these will continue to rise to the end of the century. Economics is expected to rule which means that those who are able and willing to pay for prevention will be protected. The expectation is that there will be a more reactive response to weather-related events rather than preventive and preparedness actions, with no convergence of capacities between rich and poor MS. Especially vulnerable groups like the poor, elderly and disabled will be more exposed as a result. In this market-oriented scenario, the social dimension of vulnerability is not well recognised. This will also be the case for Europe's ecology (e.g. natural capital). Economic assets will be prioritised, but values vary within the EU (no common level). Existing inequalities will be widened and it will be more difficult to take critical decisions beyond short-term economic priorities.

* Increasing vulnerability of transboundary assets

Emergency services will focus on short-term economic interests during and after an event or crisis. MS will concentrate on areas of economic interest and focus on their own area/territory. There will be no solidarity with regard to other MS, unless they pay for support and resources. This might lead to higher vulnerability of transboundary infrastructures.

* Market-driven resilience

Emergency response will be organised more at the MS level and stronger market involvement can be expected, such as the insurance industry for insurable assets or for actors that can cover their insurance premium.



The pushing of responsibilities from the MS to other actors from the private sector like insurance, climate services, and risk prevention might become a problem depending on the market uptake and willingness to pay for the services. A strong dependence on individual action and the market will develop, since there will be no effective governmental coordination mechanism across MS. Early Warning Systems (EWS) will be strongly dictated by the market, and in terms of public private partnerships (PPP) the question of who is paying for which share of the costs might be a problem, especially if the systems used are not covering cross-border damages.

In this scenario there is likely to be less funding available for Research and Technology Development (RTD) and Information and Knowledge Management (IKM) as research funders are expected to focus on knowledge developments with immediate return.

Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas

* Increased but diverging vulnerabilities between MS

In this scenario, the vulnerability would increase very differently between MS. As such, no general conclusions or assessments are possible. The assumption is that already advanced MS will become more resilient and others MS less resilient, depending on if they are part, or not, of the regional collaboration (e.g. regional structures and infrastructures like AirCentre). There might be a greater polarisation of common interests and a more reactive crisis response. Transboundary strategies will mostly have a trans-regional focus.

* More efficient resilience because of focused approach

Emergency services might become more efficient because they are considering a more regional context. However, risk might become messier between the coalitions, depending on the circumstances and the fragmentation of responsibilities and resources allocated. It may become unclear what support can be relied upon in case a disaster strikes.

In terms of RTD and IKM, there would likely be an increase with a regional focus. The coordination and capabilities between MS will be regionally focused, so will EWS. The role of PPP is unclear.

Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas

* Uncertainty about vulnerability

In this scenario, the vulnerability will depend on the general level of preparedness and solidarity between MS, both of which will increase. Thus, there will be a decrease in vulnerability across MS. The existing mechanisms in place for disaster response and climate adaptation will be further strengthened and improved.

* Standardised resilience approach

In this scenario, response practices and knowledge sharing will be standardised (e.g. data) and resources pooled. There will be a stronger focus on the impacted communities.



* Europe wide resilience and pooled resources and funds

In this scenario, a body would be established that takes care of pan-European structures and infrastructure as well as transboundary issues with an EU-wide focus, beyond the current CCA and DRR policies and EU institutions and knowledge centres. This includes an EU-wide common pot for financing (preparedness and prevention). The available funding for RTD and IKM and the coordination mechanism across MS will increase. EWS will be jointly developed and shared.

Emergency services will be better pooled and resilience will be increased due to EU collaboration. Thus the trust between actors will be high and the capacities available when needed.



3 What are the actions needed to be taken to avoid challenges and seize opportunities?

In this chapter, the above findings are translated into proposals for CCA and DRR actions that can be taken to address challenges and seize opportunities for CCA and DRR.

Scenario 2: Nothing but the single market

- Opportunities for action are in market solutions and innovations for CCA and DRR.
- There is potential for the insurance industry to support dealing with the risks.
- The enhanced awareness of climate risks by the financial sector will play an important role and support the public sector to improving resilience.
- The lack of solidarity needs to be overcome, which might lead to less effective and efficient responses and thus higher costs after a crisis. Also the low willingness to share knowledge and good practices, if not paid for, might become a challenge.

Scenario 3: Those who want more do more

- The regional focus on aspects that matter to different groupings of MS, which face similar risks (possibility to specialise in “coalitions of the willing”) brings greater opportunity to connect CCA and DRR efforts to the lowest scale (sub-national collaboration).
- Cross-border innovation can be designed and implemented for neighbouring regions and MS with similar challenges.
- The challenge to overcome is limited cooperation and collaboration between the coalitions due to a lack of coordination.
- Also a lack of coherence and collaboration between MS in the absence of effective EU coordination needs to be overcome.

Scenario 5: Doing much more together

- Dealing with challenges like indirect impacts and connectivity issues will be easier within the EU.



- A stronger European voice in the world can be seen as an opportunity.
- Strengthening existing and establishing new institutions, mechanisms, knowledge centres and funds will strengthen the overall resilience across the EU.
- Challenges to overcome are the envisaged slow decision-making in an expanded EU and the competition for resources and funding between MS.

Details for each group are available in the Annex.



4 How can the findings be translated into CCA and DRR policies and practice in the EU, and how can they be implemented?

To answer this question, teaser presentations were provided by: DG CLIMA (EU Adaptation Strategy Evaluation); DG ECHO (EU Civil Protection Mechanism and Risk Assessment) and DG RESEARCH and INNOVATION. These presentations referred to the ongoing efforts and ways forward for policy processes in CCA (climate adaptation policy), DRR (civil protection policy) and Horizon Europe.

DG CLIMA raised the issue that there is only a strategy at the moment and no directive or regulation. Presently, the EU Adaptation Strategy is very much Europe focused and lacks a wider international lens. Also, high-end scenarios and spill-over effects have not yet been integrated. The focus will soon be on implementation.

To further increase the coherence between CCA and DRR (also including health and biodiversity), further climate proofing of infrastructure and the review/revision of the Strategy after 2019 are seen as the next steps.

The following recommendations were provided:

- To cluster Member States according to specific climate risks and comparable regional circumstances to ensure progress and effective approaches, according to the regional needs.
- To identify innovation gaps and work with the private sector to develop complementary solutions to support public response mechanisms.
- To check if the NAS/NAP are sufficiently in accordance with the local level. Most of the time, this is not completely the case.
- To integrate the planning of response capabilities in climate change adaptation.
- To better institutionalise the science-policy interface, which is currently not systematic.



DG ECHO highlighted the important and relevant role of (National) Risk Assessments, which mostly only look 3-5 years ahead and the potential of using foresight in that effort. Also, the current new proposal of [RESCEU](#) was showcased.

The following recommendation was provided:

- Diverse actors shall be encouraged to take a longer term and apply foresight methods. This requires the promotion of a forward looking risk assessment (applying foresight for 2030/2050 and beyond, and the implications for the short to medium-term) and an associated update of the current EU Risk Assessment and Mapping Guidelines for Disaster Management to help to institutionalise this approach.

DG R&I highlighted that one of the climate change challenges is that we may look at high impact scenarios, but not always at the probability of such scenarios.

The following recommendations were provided:

- An area that is important, but currently not well researched, is climate change and health. The EU can learn a lot [from the US](#).
- A clear focus of the years to come is to further characterise “dangerous” climate change and invest more in the big research gaps.

Main conclusions of the workshop

- An EU strategy on adaptation to climate change and a Civil Protection Mechanism do already exist. But their implementation, and most probably, their required strengthening to address increasing risks, depends on an implementation strategy for prevention, preparedness and response action that accounts for different possible EU futures.
- Not only from governance, but also from a climate perspective, the EU will look completely different in a few decades. As a result, it is recommended that both guidance documents from DG CLIMA on developing adaptation strategies and DG ECHO on Risk Assessment are updated, making use of foresight work, including, but not limited to, this report.
- Strengthen the resilience of the EU and its Member States to changing climate extremes needs to be showcased to all relevant actors.
- Important advances have been made in sharing data, knowledge and good practice, both at the EU level and between Member States. Dependent on the direction the EU will take these advances can be sustained, but also weakened or even nullified.
- There is a need for the continued building of a CCA and DRR expert community that should be, at least, partially independent of uncertain EU funding (e.g. via the European Climate Change Adaptation Conference 2019 – ECCA2019).
- Stronger collaboration and cooperation between actors across administrative borders is recommended, for example:



- » organise along coalitions/blocks of instruments depending on the impacts, reflecting the heterogeneity of the communities and cross-cutting nature of CCA and DRR;
- » find agreement on logistics, legislation, distribution of resources and funding (investment priority plan) between the EU and MS actors.



About PLACARD

PLACARD's (PLAtform for Climate Adaptation and Risk reDuction) mission is to be the recognised platform for dialogue, knowledge exchange and collaboration between the Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) communities. In the large and complex landscape of stakeholder networks, research, policy initiatives and information sources, the PLACARD interchange will enhance the coherence of and give direction to CCA and DRR research, policy and practices, strengthening cooperation and countering fragmentation between the domains.

PLACARD is establishing a comprehensive coordination and knowledge exchange platform for multi-stakeholder dialogue and consultation to address gaps and fragmentation challenges, and support the development and implementation of an evidence base for research and innovation policies.

Specifically, we aim to:

- Establish a network of networks of CCA and DRR stakeholder groups and initiatives at the international, European, national and sub-national scales.
- Create a common 'space' to facilitate dialogue and consultation among stakeholders and initiatives.
- Design effective science, policy and practice dialogues.
- Take stock of the CCA and DRR decision-making context.
- Facilitate and guide knowledge exchange and mobilisation between CCA and DRR.
- Strengthen CCA and DRR institutions and give direction to policy-practice agendas.
- Streamline the dissemination and implementation of ongoing and evolving research and innovation activities on CCA and DRR across scales.



Annex

Case 1: Heat and drought – heat, hardship and horrible harvests

What are the downsides for CCA and DRR?

Scenario 2: Nothing but the single market – the EU27 is gradually re-centred on the single market

- The EU scales back its ambition to only focusing on the single market.
- There is a strong focus on reducing regulation at EU level.
- There is little appetite to expand policy into new areas.

- Too little public investments in collective response
- Responses prioritised on economic grounds
- Focus on the short-term
- Inequality between vulnerable and less vulnerable people – uneven distribution of impacts
- Little compensation for uninsured
- No joint cooperation or joint targets on CCA and DRR issues and limited EU solidarity
- Instruments for solidarity and crisis response have been scaled back – countries must do it alone
- NO UCPM
- Declining negotiation power and no collective force/voice
- Individual leadership
- Governance structures, laws and institutions not fit for purpose to manage the scale of the threat
- Political and social unrest

Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas

- A 'multi-speed' Europe where one or several "coalitions of the willing" emerge to work together in specific policy areas.
- This includes instituting legal or budgetary arrangements in these domains (cf Schengen and the Eurozone). Other member states have the opportunity of joining over time.

- Lack of consistency between Member States
- The less willing will do less
- Possible freeriding
- Lack of solidarity: why those who have done more, would help those who have not done anything. Some will be left behind and political pressure not to help neighbours
- Lack of convergence
- EU in different directions
- No transboundary actions on CCA and DRR
- Some countries are left out of enhanced cooperation or choose not to participate – but their actions still have impacts across borders (ground water extraction, food supply, transport and energy networks)

Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas

- Considerable expansion in EU capacities and remit.
- There is consensus that neither the EU27 as it is, nor European countries on their own, are well-equipped enough to face the challenges of the day.
- Cooperation between all Member States goes further than ever before in all domains.

- One size fits all but less attention for regional differences. The EU-level focus on adaptation and disaster response misses local sensitivities and local knowledge – reducing the effectiveness of some actions.
- Slow development of preparedness
- Lowest common denominators

What are the upsides for CCA and DRR?

Scenario 2: Nothing but the single market – the EU27 is gradually re-centred on the single market

- Business oriented – faster action
- Possibility to draw resources from other MS if one pays
- Market mechanisms in place to control prices of agriculture commodities
- From only economic point of view
- Short term profit prevails over long term
- Reform of EU insurance market on disaster risk. Exposes challenges of disaster/climate risk for the financial system
- More efficient market solutions

Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas

- Collateral positive victims further to cross border initiatives
- Tailored country specific approach, innovations
- Regions facing similar issues can move faster in developing solutions without waiting for all EU to move at the same speed
- Efficient and prompt reactions
- Ad hoc mechanisms to cope with specific regional issues
- Most ambitions not held back to lowest agreeable level
- Willing MS as good examples for others
- Some can develop state of the art responses
- Relatively fast moves/no waiting for laggards
- Possibility to specialise depending on needs
- Possibility to get results at least in some areas

Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas

- Pro-active actions and collaborative + coordinated actions
- Pooling of resources
- Best knowledge/practice shared with all
- Economies of scale (sharing of costs and joint purchasing)/ standardisation
- Opportunities for coordinated cross-sector
- Potential for climate resilience to become a core EU priority – increases resources and policy tools available
- Stronger voice in international negotiations
- EU as good example for global actions
- Disaster resilience – a stronger political priority – snowballs greater action
- More (real) support for impacted communities/deeper involvement/ regional flavours
- CCA and DRR will be tackled in 2 coordinated way
- Possibility to have capabilities what individual county cannot have (example planes for fires)



In 2030, what are the challenges for vulnerability (risks) and resilience (responses)

<p>Scenario 2: Nothing but the single market – the EU27 is gradually re-centred on the single market</p>	<p>Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas</p>	<p>Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas</p>
<ul style="list-style-type: none"> • People are pretty vulnerable – poor, farmers, elderly, disabled • Ecology will be vulnerable • Economic assets will be prioritised • Varies within the EU – no common level • Previously exposed member states will be less vulnerable • No convergence • Fragmented and diversified • Natural capital more exposed • Ecology not explicitly prioritised – faces high vulnerability • Social dimension not recognised • Wider existing inequalities • Protection of economic assets by the able to pay • Transboundary infrastructure will be more vulnerable • Difficulties to take critical decision • Economic assets will rule • Reactive crisis response <p>Emergency services</p> <ul style="list-style-type: none"> • Short term economic interest • Concentrate on a few points of interest • Countries focused on own area – no solidarity • Insurances present • Market organised emergency responses • Nationally organised emergency responses • Border response 	<ul style="list-style-type: none"> • It depends on the circumstances • Fragmented discussions • Vulnerability will be very different in different member states • No general conclusion or assessment possible • Good will become better and bad will become worse • Many coalitions, but greater polarisation of interests • Reactive crisis response <p>Emergency services</p> <ul style="list-style-type: none"> • Dealing with uncertainty • Efficient • Messy 	<ul style="list-style-type: none"> • It depends • Vulnerability: depends on general level of preparedness – more solidarity 50 (via mitigation) • Opportunities – that there are some mechanisms in place for disaster response and climate adaptation • Coherence: standardised response practice + knowledge sharing. Shared data – pull resources together • More focus on impacted communities • Regional view is absent – risk for mismatch <p>Emergency services</p> <ul style="list-style-type: none"> • Most resilient scenario – EU collaboration. • More pooled emergency services • Trust will be high – to have capability when you need it



What are the actions needed to be taken to avoid challenges / seize opportunities? – lack of solidarity

	Public	Private
Who – actors?	<ul style="list-style-type: none"> • Civil protection at national, regional and local level like fire brigade • Risk authorities • Land use planning • Environmental agencies, including CCA • Agriculture department • Water management • Forest department • Health department • Universities and knowledge institutes • NGOs • Volunteer 	<ul style="list-style-type: none"> • Energy sector – play role at regional and national level • Health sector • Farmers • Forest owners • Water companies • Hospitality sector • Insurance companies
Where – scale?	<ul style="list-style-type: none"> • The strategy has to be made at the level of the region/coalition and consolidated at national and local level • Logistics at regional and cross boundary level • Legislation at national and multinational level • Distribution of resources at national and multinational level • Funding at local, national and multi-national level • In case too costly – go to the United Nations 	
How – institutional arrangements?	<ul style="list-style-type: none"> • The role of the EU is to set up basis for solidarity – so there is still a role for the EU in Scenario 3. • Clear entry procedure • Going out procedure as well <p>Playing rules:</p> <ul style="list-style-type: none"> • EU has a fund for solidarity when costs becomes too expensive for the coalition • When country outside of the coalition needs help from the coalition, it will be more expensive in order to get the help <p>Role of private sector:</p> <ul style="list-style-type: none"> • Urgency and resources – contribution vs. what they get from it • Contract/procedure to involve the private sector • They play a role in capability planning – what is needed – based on this – contracts with private sector can be made and what does not exist yet can be innovated by private sector – therefore, R&D for innovation. 	
Missing elements (e.g. funding)	<ul style="list-style-type: none"> • Awareness/education on societal resilience- there is a need for knowledge mechanisms • What between the different coalitions can exist? Forecasting tools, forecasting open network. The EU can facilitate benefits of scale between the coalitions • How to deal with indirect impacts 	

Case 2: Floods – Paris, Hamburg and Prague are mopping up, but more floods to come

What are the downsides for CCA and DRR?

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- There is little appetite to expand policy into new areas.

Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas

- A 'multi-speed' Europe where one or several "coalitions of the willing" emerge to work together in specific policy areas.
- This includes instituting legal or budgetary arrangements in these domains (cf Schengen and the Eurozone). Other member states have the opportunity of joining over time.

Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas

- Considerable expansion in EU capacities and remit.
- There is consensus that neither the EU27 as it is, nor European countries on their own, are well-equipped enough to face the challenges of the day.
- Cooperation between all Member States goes further than ever before in all domains.

More certainty on this side

Everyone on their own

- No more EUCPM?
- No more joint exercises
→ different, incompatible capacities

CC-Flooding takes a (DRR) backseat (low relevance)

No overview of EU on CCA and DRR

Less prevention at local and EU level vs. more response at local level (countries, regions, communes)

More costly

CCA/DRR usually considered as environmental policies – still separate from economic considerations – therefore probable scale down of ambition

More migration (inside the EU and outside (safer countries))

Less EU funds for CCA and DRR and capacity for EU aid during and after emergencies

Overlap with Scenario 2:

Flood management is cross boarder (paradoxical)

Less money for the correct prevention

Roll-back in cross boarder river flood management

→ Lack of coordination creates new risks

Less river management across countries

Different countries are at different speeds

- Scientific
- Economic
- Security

Impact differences – differences in willingness

Inequalities exacerbate vulnerabilities – stress on EU and national resources

For Scenario 3:

Excuse for some to do even less on CCA and DRR, but all MS bear costs through EU budget

Some work together, pooling capacities, doing exercise, others don't → unbalanced preparedness

Lack of cohesive planning and implementation – regional inequality

Inefficient

Difference in capacity – one size fits all – rigidity vs. lack of flexibility

Less certainty on this side

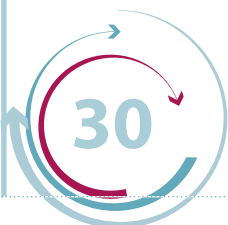
Richer countries have to assist poorer countries

Need for new financing mechanism at EU level (for DRR) – could create conflict between "traditionally" well protected and less exposed vs. those with higher DRR impact

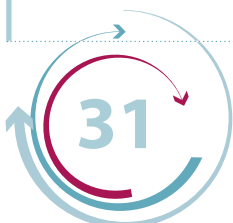
Sovereignty /subsidiarity concerns for some MS (protection, security)

Coordination challenges may arise: need for stronger leadership function at EU level that coordinate across the other national and local stakeholders

Guidelines and frameworks vs. fast decision making



What are the upsides for CCA and DRR?		
Scenario 2: Nothing but the single market – the EU27 is gradually re-centred on the single market	Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas	Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas
<p>More uncertainty on this side</p> <p>Stronger € – cost benefit</p> <p>More adapted to national/regional situation → ownership</p> <p>Overlap to 3:</p> <p>Those willing to invest in DRM may invest more as no one else remains to do it</p> <p>Private sector /CS (climate service) step in</p> <p>Great ownership for cross-border cooperation (when done voluntarily, has greater ownership)</p>	<p>Peer pressure and good examples (e.g. cross border flood well managed in one country but not in the next country) create slow incentive to do the same</p> <p>Some capacities able to cooperate → may create incentives for others to do the same (peer pressure)</p> <p>One of the areas for more ambition could be security / protection of EU citizens</p> <p>River basin specific cooperation → best practice</p> <p>Overlap to 5:</p> <p>Better relationships within the EU – we better know who our friends are</p>	<p>More certainty on that side</p> <p>Increased ambition around CCA and DRR strengthened also through other policy areas</p> <p>Sharing costs and knowledge</p> <p>Faster development of knowledge</p> <p>Learn more about systemic thinking of crisis looking at reasons behind the crisis</p> <p>Balanced level of preparedness and prevention</p> <p>Response capacities able to cooperate and useable across EU</p> <p>Larger budgets for DRM underpinned by clear financing and cost-sharing arrangements</p> <p>Efficient and cohesive</p>
In 2030, what are the challenges for vulnerability (risks) and resilience (responses)		
Scenario 2: Nothing but the single market – the EU27 is gradually re-centred on the single market	Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas	Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas
<p>Prevention:</p> <p>Low</p> <ul style="list-style-type: none"> • High vulnerabilities may persist (e.g. in less developed areas) <p>Preparedness:</p> <p>High</p>	<p>Fragmented</p> <p>Fragmented</p>	<p>High</p> <ul style="list-style-type: none"> • Vulnerabilities are reduced across countries – balanced level of vulnerabilities <p>Low</p>
What are the actions needed to be taken to avoid challenges / seize opportunities? – Lack of solidarity		
Who – actors?	Public	Private
	<ul style="list-style-type: none"> • Civil protection force • European “army” • Centralised European authority 	<ul style="list-style-type: none"> • Local community • Supplies and logistics • Company (contingency planning) • Offer shelter (e.g. hospitality) • Provider of critical infrastructure (e.g. water supply, electricity, ICT)



Where – scale?	<ul style="list-style-type: none"> • Most vulnerable region / country • Local capacity – regional – national – transnational • Cross-border cooperation 	
How – institutional arrangements?	<ul style="list-style-type: none"> • Structural and non-structural prevention • Prevention mandatory via regulation • Coordination support services • Institutional arrangements to safeguard resources for prevention and preparedness / response and recovery 	
Missing elements (e.g. funding)	<ul style="list-style-type: none"> • Resilient critical infrastructure • Prioritising funding for preparedness and response • Policy framework and its updates 	
What are the actions needed to be taken to avoid challenges / seize opportunities? – Cross-border innovations		
	Public	Private
Who – actors?	<ul style="list-style-type: none"> • Seed funding • R&D (e.g. universities, innovation centres) • Public authorities 	<ul style="list-style-type: none"> R&D Actors in the basin/catchment area
Where – scale?	<ul style="list-style-type: none"> • Regional / transnational • Flood forecast systems 	
How – institutional arrangements?	<ul style="list-style-type: none"> • Exchange with relevant and advanced actors • River management bodies (Rheine, Danube) – backed with funding • Satellite information for services • Joint strategy / framework – mandate to take action 	
Missing elements (e.g. funding)	<ul style="list-style-type: none"> • Potential for artificial intelligence (robots) – e.g. for firefighting or flood management • Adequate infrastructure – logistic updates 	

Case 3: Coastal impacts – storm surges along the European coasts cause death and damage

What are the downsides for CCA and DRR?

Scenario 2: Nothing but the single market – the EU27 is gradually re-centred on the single market

- The EU scales back its ambition to only focusing on the single market.
- There is a strong focus on reducing regulation at EU level.
- There is little appetite to expand policy into new areas.

Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas

- A multi-speed Europe where one or several “coalitions of the willing” emerge to work together in specific policy areas.
- This includes instituting legal or budgetary arrangements in these domains (cf Schengen and the Eurozone). Other member states have the opportunity of joining over time.

Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas

- Considerable expansion in EU capacities and remit.
- There is consensus that neither the EU27 as it is, nor European countries on their own, are well-equipped enough to face the challenges of the day.
- Cooperation between all Member States goes further than ever before in all domains.

Dropping of the EU Adapt Strategy – no longer makes sense as it pursues may other areas

Dropping of the EU Civil Protection Mechanism – not market driven

Increasing divergence across MS as they notion of market driven approaches may be different; this may lead to a lowering of the baseline to common CCA-DRR approaches

Potential reduction of available funds for CCA-DRR

Potential failures in cooperation mechanisms and distribution of resources across MS

Reduction of the wiliness to share RTD and knowledge results without financial compensation

Connectivity issues may arise, including indirect impacts in countries with no coasts but that have dependency on others (e.g. medical supplies, chemicals, energy grids and other critical infrastructures)

Potential reduction of available funds for CCA-DRR with increasing changes in distributional mechanism for CCA-DRR

Limits to CCA become more visible, e.g. forced migration from coastlines

Connectivity issues may arise, including indirect impacts in countries with no coasts but that have dependency on others (e.g. medical supplies, chemicals, energy grids and other critical infrastructures)

Over-regulation may lead to excessive burdening of countries with no coastlines, diverting their attention from their own key risks



What are the upsides for CCA and DRR?		
Scenario 2: Nothing but the single market – the EU27 is gradually re-centred on the single market	Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas	Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas
MS may see more openness from EU to pursue their own regional-to-local interests and concerns; this may lead to increasing concentration of attention in coastal areas in those affected MS	MS with similar risks can focus and pursue their own regional-to-local interests more effectively	Limits to CCA may be better accounted for, e.g., dealing with indirect impacts Improved DRR response cooperation going beyond national remit and capabilities may be better secured
In 2030, what are the challenges for vulnerability (risks) and resilience (responses)		
Scenario 2: Nothing but the single market – the EU27 is gradually re-centred on the single market	Scenario 3: Those who want more do more – the EU27 allows willing Member States to do more together in specific areas	Scenario 5: Doing much more together – Member States decide to do much more together across all policy areas
<p>Vulnerability: 2030 ↑? 2050 ↑ (via mitigation)</p> <p>Resilience: 2030 = (market dependent) 2050?</p> <p>MS may be willing to take higher risks and allocate less budget to coastal protection, but will still need to deal with those risks</p> <p>Assuming responses vs pushing responsibilities to others may become a problem</p> <p>Transboundary strategies: ?</p> <p>Common-pots: Maybe but market dependent</p> <p>Available funds for RTD and IKM may ↓ as they will have to generate return</p> <p>Coordination mechanisms across MS: ?? (depending on market elements)</p> <p>Development of shared EWS: ↑? (strongly dictated by market elements)</p> <p>PPPs: ↑↑ (but who pays?)</p>	<p>Vulnerability: 2030 ↑? 2050 ↑ (via mitigation)</p> <p>Resilience: 2030 ? (regional drivers?) 2050 ? (regional drivers?)</p> <p>Creation of regional structures and infrastructures likely, e.g. Atlantic Hurricane Centre – AHC (see example of current AIRCENTRE development)</p> <p>Transboundary strategies: ↑↑ (but with regional focus only)</p> <p>Common-pots: No, excepts if regional pots are agreed directly between MS</p> <p>Available funds for RTD and IKM may ↑ but will be regional in their focus</p> <p>Coordination mechanisms across MS: ? (dictated by regional focus and capabilities)</p> <p>Development of shared EWS: ↑? (strongly dictated by regional focus and capabilities)</p> <p>PPPs: ??</p>	<p>Vulnerability: 2030 =? 2050 ↓ (via mitigation)</p> <p>Resilience: 2030 ↑ 2050 ↑↑</p> <p>Creation of pan-European structures and infrastructures likely, e.g. EU Climate Agency and expansion of ERCC (Coastal areas may be a sub-area of interest)</p> <p>Transboundary strategies: ↑↑ (with eu-wide focus)</p> <p>Common-pots: Yes</p> <p>Available funds for RTD and IKM may ↑↑</p> <p>Coordination mechanisms across MS: ↑</p> <p>Development of shared EWS: ↑</p> <p>PPPs: ↓</p>

PRACTICAL ACTION (suggestion): Take a look at current good case studies of coordinated knowledge development (e.g. NORDFORSK; PT+SP+FR met office cooperation) and responses (??) that could potentially be up-scaled for EU-level (scenario 5) or replicated (scenario 3)

- Development of a Knowledge Centre dealing with impact prevision (see current ECMWF for extreme event forecasting and DRMKC for DRR issues)

		relating		
		prevention	preparedness	response
K 2	knowledge	private sector at risk	private sector at risk	private charities
	services	consultants insurance	consultants insurance	NGOS
K 3	knowledge	EE	EE	EE
	services	AHC	AHC ⁺	regional response centres ad hoc
K 5	knowledge	EE ^{EU} EAST ECC	EE ^{EU} DRMKC	EE ^{EU} ERCC
	services	DRMKC CS	CS	ERCC

» Scenario 2: Could exist but would be market-based and not at EU-wide level; would be driven by economic sectors; would deal only (mainly?) with direct impacts

» Scenario 3: Creation of a AHC (Atlantic Hurricane Centre) with MS that want to join in; would deal only (mainly?) with direct impacts

» Scenario 5: Strengthen DRMKC but with EU-wide focus on forecasting impacts and response capabilities and not just the events; could (in principle) deal with both direct and indirect impacts

- Development of an Operational Hurricane Response Centre (EURO-Hurricane)

» Scenario 2: Would not happen at EU-wide level and would be difficult to develop at regional scale; would be driven by economic sectors; would deal only (mainly?) with direct impacts

» Scenario 3: Creation of multiple regional centres (e.g. Scandinavia + Atlantic + Iberian/ France?)

» Scenario 5: Centralised dispatch centre for coordinated response (e.g. European 'army' but for hurricane response and recovery)

- Both centres would have different characteristics (actors; scale issues from EU to local planning and zoning, funding, etc) accordingly to each scenario (see Figure 2 below):
- Changes of integration CCA-DRR across the 2 centres (care should be taken with the 'have nots, e.g. MS with less capacity but high risk)

» Scenario 2: ↓↓

» Scenario 3: ↑

» Scenario 5: ↓

- The creation of these centres could increase the visibility ('stronger EU voice') in international fora

- Missing elements: involvement of medical/health communities in these discussions





The future of Europe depends on how it manages the risks of climate extremes

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Foresight: Workshop summary

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PLACARD interchange – PLAtform for Climate Adaptation and Risk reDuction – is a hub for dialogue, knowledge exchange and collaboration between the climate change adaptation (CCA) and disaster risk reduction (DRR) communities.

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