EXPLORE OPPORTUNITIES FOR SUSTAINED USAGE OF FORESIGHT METHODS

SUPPORTING OF CCA & DRR POLICY & PRACTICE

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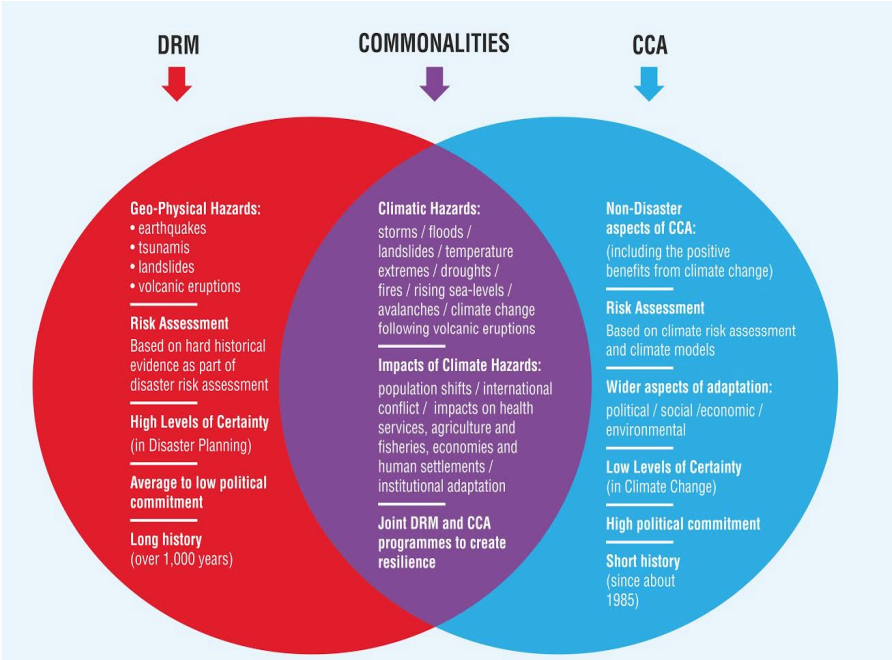
THE FRAGMENTED KNOWLEDGE, INSTITUTIONS AND POLICY



- **Overlap** between activities of CCA & DRR communities.
- Both reduce negative impacts of climate change and disasters, but through **different actors and institutions,** and with **different time horizons, research methodologies and policy frameworks**.
- **Lack of "actionable learning"** - Reduced effectiveness of CCA and DRR
- **Information overload**
- Existing information is:
  - Not well communicated – Inefficient and leads too misinterpretation/conflicts
  - Not standardized - Weak coherence and consistency
  - Replication of work and redundancy
- **Poor coordination**
- **Different purposes and perspectives**

→ Confusion for users of information!!

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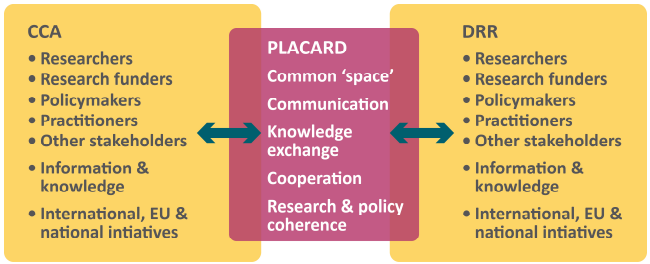
PLATFORM FOR CLIMATE ADAPTATION AND RISK REDUCTION

Main Goal:

Establish a coordination and knowledge exchange platform for multi-stakeholder dialogue and consultation between CCA and DRR research, policy and practice communities across scales



How PLACARD aims to achieve this:

- provide a common 'space' where CCA and DRR communities can come together, share experiences and create opportunities for **collaboration**;
- facilitate **communication** and knowledge exchange between both communities; and
- support the **coordination and coherence** of CCA and DRR research, policy and practice.

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WHY FORESIGHT?

- Increasing resilience goes beyond science, technology or economic considerations - political, institutional, social and psychological factors matter
- Foresight (beyond scenario modelling) can play a role in connecting the two communities
- Achievements:
  - 1st Workshop “How can foresight help to reduce vulnerability to climate-related hazards?” (Vienna, October 2016)
  - PLACARD report “Foresight for policy & decision-makers”
  - Policy brief, various blogs
  - Foresight Webinar, May 2018
  - 2nd Workshop “Facing the future of Europe’s climate EU governance and climate risks at a crossroads, Dec. 2018
  - PLACARD Foresight report – December 2019

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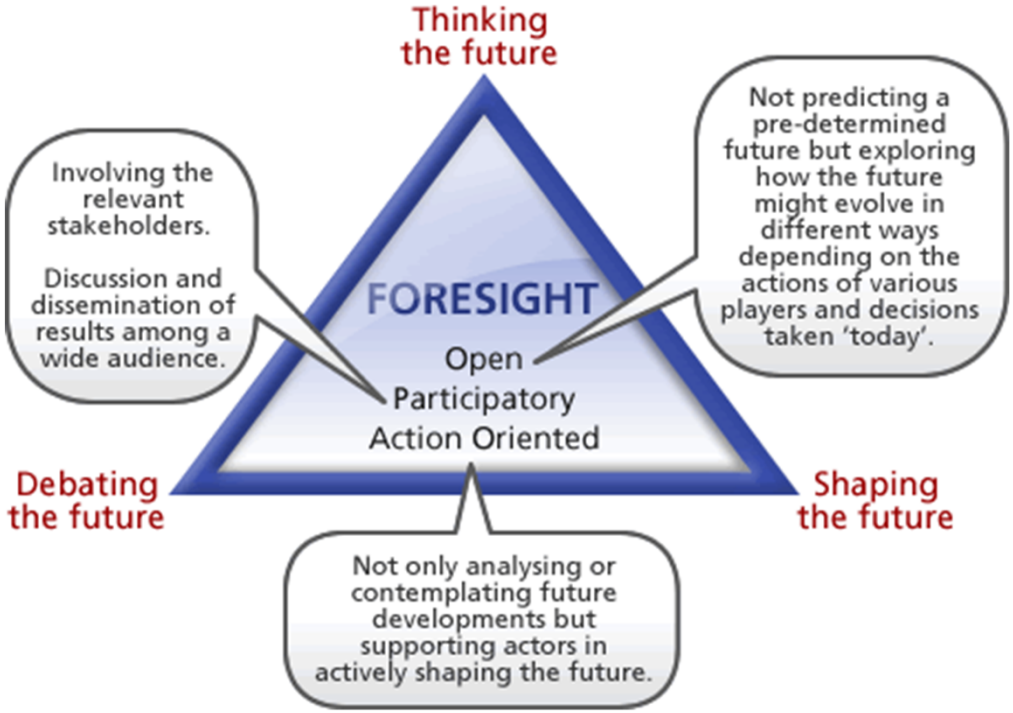
WHAT IS FORESIGHT?

Systematic, participatory, future-intelligence-gathering and medium-to-long-term vision-building process aimed at enabling present-day decisions and mobilizing joint actions.

It does not aim to predict the future – to unveil it as if it were predetermined – but to help us build it.

In Europe, it is used, inter alia, to plan funding of technology development and research.



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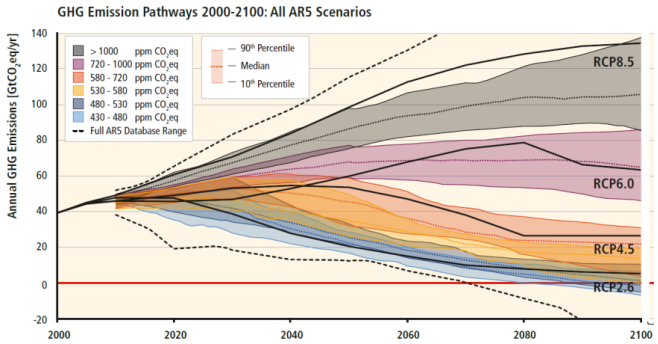
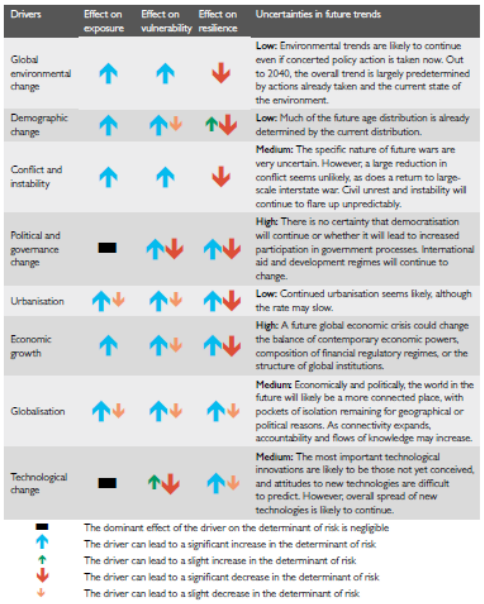
FORESIGHT IN DRR AND CCA



Foresight in **climate change policy and research** is dominated by the development and analysis of scenarios quantified with complex (integrated assessment, climate and economic) models

Foresight in Disaster Risk Reduction is still rare. When used (e.g., UK), a wider set of drivers is usually considered, often in a more qualitative sense.



Drivers	Effect on exposure	Effect on vulnerability	Effect on resilience	Uncertainties in future trends
Global environmental change	↑	↑	↓	**Low:** Environmental trends are likely to continue even if concerted policy action is taken now. Out to 2040, the overall trend is largely predetermined by actions already taken and the current state of the environment.
Demographic change	↑	↑↓	↑↓	**Low:** Much of the future age distribution is already determined by the current distribution.
Conflict and instability	↑	↑	↓	**Medium:** The specific nature of future wars are very uncertain. However, a large reduction in conflict seems unlikely, as does a return to large-scale interstate war. Civil unrest and instability will continue to flare up unpredictably.
Political and governance change	▬	↑↓	↑↓	**High:** There is no certainty that democratisation will continue or whether it will lead to increased participation in government processes. International aid and development regimes will continue to change.
Urbanisation	↑↓	↑↓	↑↓	**Low:** Continued urbanisation seems likely, although the rate may slow.
Economic growth	↑	↑↓	↑↓	**High:** A future global economic crisis could change the balance of contemporary economic powers, composition of financial regulatory regimes, or the structure of global institutions.
Globalisation	↑↓	↑↓	↑↓	**Medium:** Economically and politically, the world in the future will likely be a more connected place, with pockets of isolation remaining for geographical or political reasons. As connectivity expands, accountability and flows of knowledge may increase.
Technological change	▬	↑↓	↑↓	**Medium:** The most important technological innovations are likely to be those not yet conceived, and attitudes to new technologies are difficult to predict. However, overall spread of new technologies is likely to continue.

▬ The dominant effect of the driver on the determinant of risk is negligible
↑ The driver can lead to a significant increase in the determinant of risk
↑ The driver can lead to a slight increase in the determinant of risk
↓ The driver can lead to a significant decrease in the determinant of risk
↓ The driver can lead to a slight decrease in the determinant of risk

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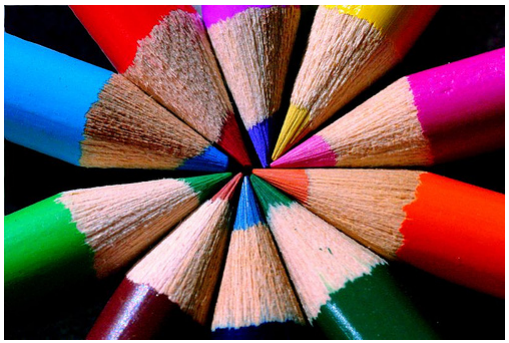
HYPOTHESES THAT PLACARD TESTED



(Qualitative) foresight methods can add diversity to the set of scenario/model-based tools dominant in the climate change adaptation debate.

Foresight can support a greater emphasis on forward looking prevention action in disaster risk reduction.

Foresight can offer opportunities for CCA and DRR communities to jointly work on solutions -> which methods and tools for which questions?

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FORESIGHT METHODS AND TOOLS

Foresight Report @
https://www.placard-network.eu/our-work/foresight-for-policymakers/

Foresight method	What does application of the method involve?	Known applications to CCA and/or DRR (examples)
Statistical/ simulation modelling	Modelling.	DRR: Global Assessment Report on Disaster Risk Reduction (UNISDR)
Structural analysis	Modelling.	CCA: Islam *et al.* 2016: Structural approaches to modeling the impact of climate change and adaptation technologies on crop yields and food security.
SWOT analysis	Expert or stakeholder judgments.	CCA: Wang & Hills: Climate change adaptation in China: national policy and regional practice; DRR: Caribbean Disaster Emergency Management Agency, 2011: A Guidance Tool: A Manual for Mainstreaming Climate Change Adaptation into the CDM Country Work Programme:
Systems perspective/ systems approach/ systems thinking	Participatory process. This method considers first the elements in isolation and then in combination one by one.	CCA: Australian National Climate Change Adaptation Research Facility: Decision-making for Climate Change Adaptation – A Systems-Thinking Approach; DRR: UNISDR Global Assessment Report on Disaster Risk Reduction 2015 – Preparing For Complex Interdependent Risks: A System of Systems Approach to Building Disaster Resilience.
Three horizons practice	Multiday stakeholders workshops or short exercises.	CCA: Climate change community action – Glasgow community and International Futures Forum (Sharpe *et al* 2016).
Vision/ Visioning	Facilitated participatory workshops.	DRR: Unicef Children´s Charter – an action plan for disaster risk reduction for children by children; CCA: SWAP – Scenario Workshop with Adaptation Pathways: Creating a common vision for coastal adaptation pathways in Portugal; Community Visioning in CBA (Community Based Adaptation); Participatory Scenario Development and Future Visioning in Adaptation Planning: Lessons from experience Part I.
Wildcards	Participatory stakeholder workshops.	CCA: Walsh *et al.* 2015: Infrastructure adaptation & resilience towards climate related disasters; DRR: Walsh *et al.* 2015: Infrastructure adaptation & resilience towards climate related disasters

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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. Funded by the European Commission's Horizon 2020 research & innovation programme.
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FORESIGHT METHODS AND TOOLS

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Table 3: Development and application approaches for each selected foresight method, as well as examples of known applications to CCA and/or DRR

Foresight method	What does application of the method involve?	Known applications to CCA and/or DRR (examples)
Adaptation Pathways	The Adaptation Pathways map, manually drawn based on model results or expert judgment, presents an overview of relevant pathways	CCA: Wise *et al.* 2015: Re-conceptualising adaptation to climate change as part of pathways of change and response; SWAP – Scenario Workshop with Adaptation Pathways: Creating a common vision for coastal adaptation pathways in Portugal;
Back-casting	Participatory work in complex situations with many stakeholders, where although there may be a desired common future vision, it is unclear how to reach it.	CCA: Carlsson-Kanyama *et al.* 2013: Barriers in municipal climate change adaptation: Results from case studies using back-casting; DRR: Asian Development Bank, 2013: Investing in resilience: ensuring a disaster-resistant future.
Causal Layered Analysis	A useful approach in workshops with individuals either of different cultures or different approaches to solving problems. It is best used prior to scenario building.	CCA: Gidley, J. Fien, J. Smith, J. Thomsen, D. and Smith, T. 2009: Participatory futures methods: towards adaptability and resilience in climate-vulnerable communities. *Environmental Policy and Governance*, 19(6): 427–440; DRR: Milojević, I., & Inayatullah, S. (2015). Narrative foresight. *Futures*, 73: 151–162.
Cross-impact analysis	Literature review and/or expert interviews); expert judgments/ questionnaires/ group meetings/ interviews; cross-impact matrix.	CCA: Velmeyer & Sahin, 2014: Modelling climate change adaptation using cross-impact analysis;
Decision modelling/ decision support tools	Modelling Quantitative description of the cause-effect relationship between sets of causative factors and the set of evaluative measures that the decision maker uses in order to judge the desirability of each alternative.	CCA: Observatório Clima Madeira; DRR: Michel-Kerjan *et al.* 2012: Catastrophe Risk Models for Evaluating Disaster Risk Reduction Investments in Developing Countries; Ley-Borrás & Fox: Using Probabilistic Models to Appraise and Decide on Sovereign Disaster Risk Financing and Insurance
Delphi method	Expert interviews Apply at the beginning of the project to gain views on the issue at hand and define early questions.	DRR: Commission Staff Working Paper: Risk Assessment and Mapping Guidelines for Disaster Management (SEC (2010) 1626 final). CCA: Ecocities: Carter, J. G. and Sherriff, G. (2011) Spatial planning for climate change adaptation: identifying cross cutting barriers and solutions, Centre for Urban and Regional Ecology, University of Manchester.

Foresight method	What does application of the method involve?	Known applications to CCA and/or DRR (examples)
Drivers/ Trend/ Megatrend Extrapolation	Ranging from participatory application analysing the perceived impact of megatrends to sophisticated models.	CCA: European Environmental Agency, 2014: Assessment of global megatrends – an update – Global megatrend 9: Increasingly severe consequences of climate change; DRR: Joint UNEP/OCHA Environment Unit 2012: Keeping up with megatrends: the implications of climate change and urbanisation for environmental emergency preparedness and response;
Gaming	Usage of available, or development of new computer, board or other serious games.	DRR: UNISDR: Let's learn to prevent disasters: educational kit and risk land game; International Federation of Red Cross and Red Crescent Societies South East Asia Regional Office, 2010: Children in disasters- Games and guidelines to engage youth in risk reduction; CCA: Federal Ministry of Economic Cooperation and Development, 2011: The Systems Thinking Playbook for Climate Change; CCA-DRR: Red Cross Red Crescent Climate Center (expert : Margot Steenbergen)
Horizon Scanning	Desk research with a wide variety of source of information, e.g. STEEPLE framework.	DRR: Disaster Risk Assessment and Risk Financing A G20 / OECD Methodological Framework; Business continuity Institute: Horizon Scan Report 2017; CCA: SAMI Consulting: Strategic Evidence of Future Change Horizon Scanning evidence and analysis report.
Morphological analysis/ Relevance Trees	Manually drawn map based on model results or expert judgment, presents an overview of relevant objectives and actions required to meet them.	CCA: Ritchey 2011: Modeling Alternative Futures with General Morphological Analysis; DRR: Fernandez, Britton, and Ritchey: Application of a Prototype Morphological Model for Earthquake Disaster Risk Management;
Narratives	Semi-structured or open interviews or group work of stakeholders	DRR: Milojević, I., & Inayatullah, S. (2015). Narrative foresight. *Futures*, 73: 151–162; CCA: 6 Narratives of Climate Change at the Paris Summit; Huffington Post.
Road mapping	Collecting, synthesising and validating knowledge, and representing the trends (imagination – extended look at the future for a chosen field) within graphical displays associated with support documents.	CCA: US Department of Defence 2014: Climate Change Adaptation Roadmap; Eastern Alliance for Greenhouse Action: Climate Change Adaptation Roadmap For Melbourne's East; DRR: World Meteorological Organization 2016: A Disaster Risk Reduction Roadmap for the World Meteorological Organization; European Forum for Disaster Risk Reduction: Roadmap for the Implementation of the Sendai Framework; FAO-WFP Joint Roadmap on Disaster Risk Reduction/Management (DRR/M) in West Africa and the Sahel.
Scenarios/ scenario planning	Modelling.	CCA: Socioeconomic scenarios, emissions scenarios, atmosphere and climate scenarios, impact scenarios. Examples: The IPCC Special Report on Emissions Scenarios (SRES): A1B, A1T, A1FI, A2, B1, B2; Representative Concentration Pathways (RCPs); Shared Socioeconomic Pathways (SSPs).

5 SCENARIOS FOR THE FUTURE OF EUROPE

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"

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FUTURE OF EUROPE AND IMPACTS

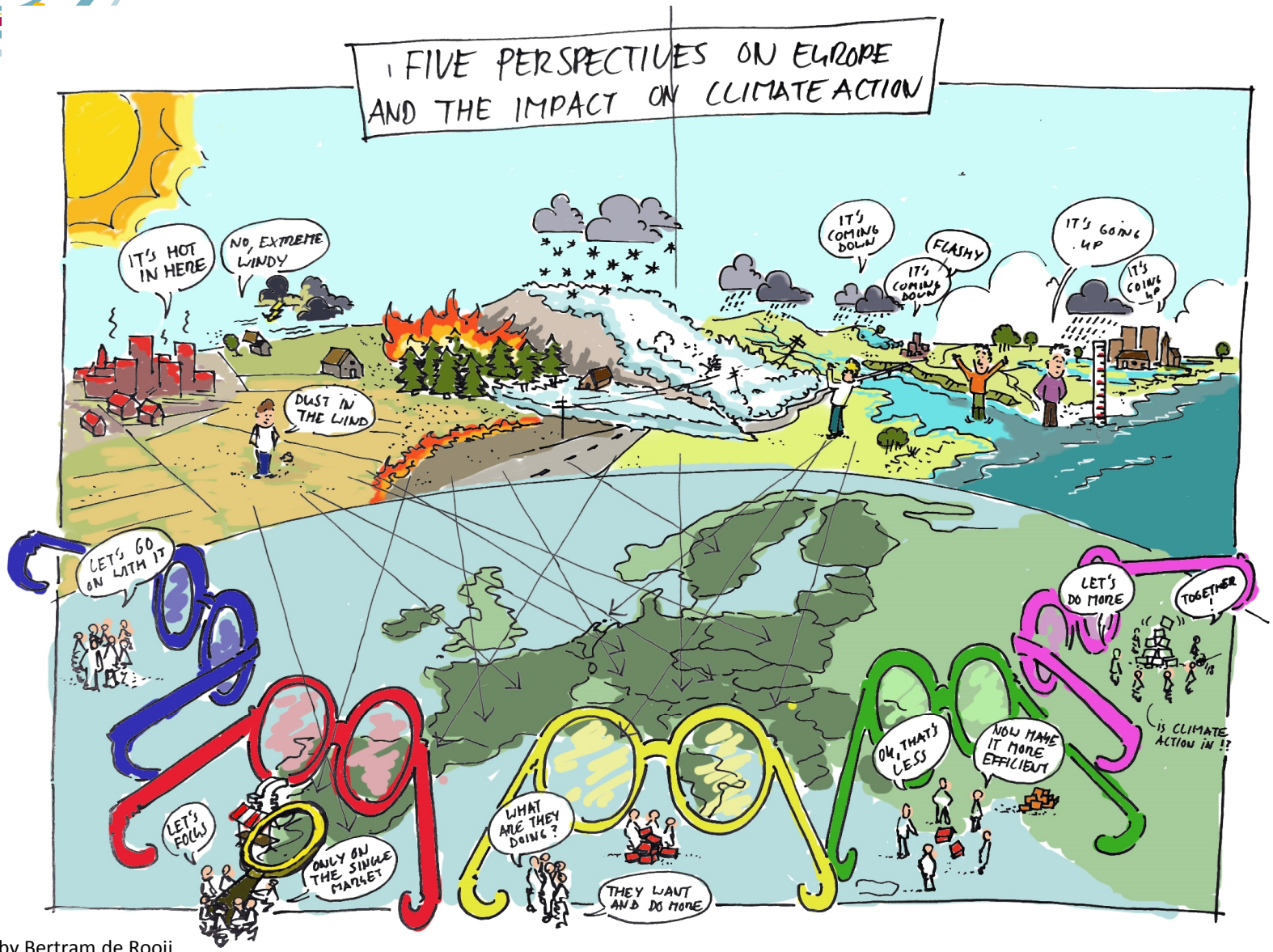

Illustration by Bertram de Rooij

FUTURE OF EUROPE – CCA AND DRR

- **Foresight methods** were **used** to explore **possible futures for Europe** and the **consequences of dealing with climate change and disaster risks**. ➔ required reflections on Europe's long-term climate risks and policy objectives
- Important questions: **future EU capacity** both to **guide the low carbon transition** and **respond to climate risk** ➔ Green deal as an opportunity
- Climate change is central to Future of Europe discussions ➔ needs a **high priority in the Green deal**
- Future governance models cannot be assumed to be fixed. ➔ Governance capacity will be a key element in future climate resilience capabilities.

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CONCLUSIONS

- **Strengthening** of current EU strategy on adaptation to climate change and the Union Civil Protection Mechanism ➔ **to effectively address the increasing risks** posed by different possible EU futures
- **Not only from a governance – also from climate perspective** – the **EU will look completely differently in a few decades**. ➔ Recommendation: Support MS with guidance on developing adaptation strategies (DG CLIMA) and advice on Risk Assessment and risk reduction capabilities (DG ECHO) – **taking into account results of foresight work**
- Foresight approaches should be showcased for all relevant actors ➔ **help to prepare for the range of possible futures across Europe**

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CONCLUSIONS

- **Advances made in sharing of data, knowledge and good practice** (@ EU level and between MS). Depending on the direction the EU takes, these advances can be sustained / weakened or even nullified
- **Continued building of a CCA and DRR expert community needed** ➔ at least partially independent from EU funding (e.g., ECCA2019 and towards ECCA2021 in Ljubljana, Slovenia)
- **Stronger collaboration and cooperation between actors across administrative borders** e.g.
  - coalitions and group 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 ➔ rescEU started providing that

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