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Local and regional responses to natural disasters and climate hazards: from risk preparedness to resilience

Current Affairs Committee

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Summary

Most European countries are affected by natural disasters and climate hazards to some extent, and local and regional authorities are amongst the first expected to provide specific responses, as no crisis is identical to another. Effective crisis management is a complex matter, as it takes place in successive "temporal horizons" – before, during, just after and well after a disaster – and short-term and long-term action often needs to be taken in parallel, while ensuring smooth horizontal co-operation within a territory and vertical co-ordination between different levels of governance.

Based on three case studies examined in Belgium, Spain and Türkiye, the report shows that crisis-preparedness, the provision of effective emergency and post-crisis responses and resilience-building involves territorial solidarity, the development of risk cultures and a willingness to induce economic, ecological, and social transitions in local and regional communities.

In its resolution, the Congress invites local and regional authorities to follow a comprehensive approach in addressing natural disasters and climate hazards. In its recommendation it calls upon governments of member States to support local and regional governments facing crises in any possible way from adequate funding mechanisms to exchanges of good practice, data collection and training programmes.

[1] L: Chamber of Local Authorities / R: Chamber of Regions
EPP/CCE: European People's Party Group in the Congress
SOC/G/PD: Group of Socialists, Greens and Progressive Democrats
ILDG: Independent Liberal and Democratic Group
ECR: European Conservatives and Reformists Group
NR: Members not belonging to a political group of the Congress

RESOLUTION 500 (2024)[2]

1. The Congress of Local and Regional Authorities of the Council of Europe refers to:

a. its Resolution 455 (2020) "Local and regional elections in major crisis situations" which addresses some of the key challenges of upholding human rights, democracy and the rule of law in times of crisis;

b. the explanatory memorandum on "Local and regional responses to natural disasters and climate hazards: from crisis preparedness to resilience" (CG(2024)46-17) which is based on three case studies in Belgium, Spain and Türkiye and study visits to the two latter countries that took place respectively on 6-8 September 2023 and 18-20 December 2023;

c. Resolution 2493 (2023) and Recommendation 2251 (2023) "Political strategies to prevent, prepare for and face the consequences of natural disasters" of the Parliamentary Assembly of the Council of Europe, providing guidance for co-ordination between different levels of governance, and underlining the importance of risk prevention and anticipation with regard to the most vulnerable populations;

d. Recommendation CM/Rec(2018)3 of the Committee of Ministers to member States on "Cultural heritage facing climate change: increasing resilience and promoting adaptation", which recommends that member States ensure the inclusion of cultural heritage in their policies and strategies for adaptation to climate change;

e. the Council of Europe Partial Agreement on the Co-operation Group for the Prevention of, Protection Against, and Organisation of Relief in Major Natural and Technological Disasters (EUR-OPA), which offers a platform for co-operation in the field of major natural and technological disasters;

f. the UN Sendai Framework for Disaster Risk Reduction (2015-2030) as an international roadmap for making communities safer and more resilient, by proposing priority action in data collection, knowledge-building and co-operation at all levels;

g. the Sustainable Development Goals (SDGs) and Agenda 2030 for Sustainable Development of the United Nations, in particular SDG 13: "Take urgent action to combat climate change and its impacts" as well as SDG 3 "Good health and well-being" and SDG 11 "Sustainable Cities and Communities", which may be relevant for disasters and hazards of all kinds.

2. The Congress considers that:

a. even though many local and regional authorities are well prepared for acute crisis situations, the capacities for responding to extreme or multi-layered disasters and hazards could be increased by strengthening solidarity between different levels of governance within a State, by professionalising the management of crises, and by assigning the human and financial means needed to the devolved missions of each level of authority;

b. co-ordination between different levels of governance and co-operation between different stakeholders within a territory is essential and requires constant improvement, notably in the areas of crisis preparedness, communication and professional training;

c. gaps in transparency and consistency of decision-making processes, may represent threats or undermine human rights, democracy and the rule of law in times of crisis;

d. measures employed in response to natural disasters and climate hazards sometimes remain too short-sighted to prevent, mitigate or respond to these events in the most effective and sustainable manner;

e. responses provided to natural disasters and climate hazards should not worsen socio-economic imbalances or the precarious situations of vulnerable persons;

f. communication with and the involvement of the population affected remain a huge challenge in the face of extreme natural disasters and continuous climate hazards;

[2] Debated and adopted by the Congress during the 46th Session on 28 March 2024 (see document CG(2024)46-17, explanatory memorandum, co-rapporteurs Jean-Paul BASTIN, Belgium (L, EPP/CCE); Christian DEBEVE, France (R, ILDG).

g. the identification of different risks of and response plans to crises are ambitious activities that require regular updates at pre-determined intervals.

3. The Congress calls on local and regional authorities in member States to:

a. follow a comprehensive approach in identifying potential risks and addressing any crisis situation expected or encountered, including for natural disasters and climate hazards;

b. foresee a mix of material, administrative and other measures in response to these risks and actual crisis situations, with priorities to be decided on a case-to-case basis, and according to the types of risks faced by their specific territory;

c. ensure that effective vertical co-ordination mechanisms involving different administrative levels (State, region, municipality) are set up to provide effective multilevel responses to emergencies and develop shared tools for the prevention and anticipation of crisis situations (data collection, exchange of good practice, development of expertise and training);

d. set up horizontal co-operation mechanisms that are based on a clear division of responsibilities and regularly reviewed, and that involve relevant stakeholders in a meaningful manner (public authorities, NGOs, private companies, academia, citizens etc.), foreseeing specific co-operation levels and bodies if crisis situations require co-ordinated responses in multiple areas and exceed the limits of one territorial unit;

e. communicate about expected or ongoing crisis situations in the most transparent, precise and reliable manner possible, making use of various types of media, to raise awareness and increase risk-preparedness amongst the wider public, without fuelling fear or anxiety;

f. improve the crisis preparedness and response of local and regional services, including professionals and volunteers involved in emergency response, in particular by developing specific emergency plans for each type of risk, by providing training on expected risks and measures to be taken and by running emergency simulation exercises on a regular basis;

g. design consistent, multidisciplinary and transparent decision-making procedures around crisis situations in order to put in place safeguards against violations of human rights, democratic principles and the rule of law and to follow democratic standards and best practices in ensuring the regular involvement of citizens and fostering youth participation;

h. combine and coordinate effective short-term action with more long-term visions, strategies and measures, to ensure that any investments made in reconstruction or recovery are efficient and sustainable;

i. organise exchanges of good practices at all levels and involving all stakeholders (public authorities, NGOs, private companies, academia, citizens etc.), in order to help people develop a better understanding of their territory, to constantly improve crisis preparedness and response, to seek innovative solutions and to initiate the socio-economic, urban and ecological transitions needed (“laboratories of transition”);

j. initiate a dialogue on current modes of human land use and consumption patterns and their consequences for natural resources and climate change, as well as disasters and hazards amplified by human factors, in order to develop risk cultures and strengthen the resilience of local and regional territories.

4. The Congress commits to supporting the implementation of this resolution and the development of comprehensive responses to natural disasters and climate hazards by promoting the consideration of the full crisis management cycle and the combination of short-term action and long-term strategies.

RECOMMENDATION 510 (2024)[3]

1. The Congress of Local and Regional Authorities of the Council of Europe refers to:

a. its Resolution 455 (2020) "Local and regional elections in major crisis situations" which addresses some of the key challenges of upholding human rights, democracy and the rule of law in times of crisis;

b. the explanatory memorandum on "Local and regional responses to natural disasters and climate hazards: from crisis preparedness to resilience" (CG(2024)46-17) which is based on three case studies in Belgium, Spain and Türkiye and study visits to the two latter countries that took place respectively on 6-8 September and 18-20 December 2023;

c. Resolution 2493 (2023) and Recommendation 2251 (2023) "Political strategies to prevent, prepare for and face the consequences of natural disasters" of the Parliamentary Assembly of the Council of Europe, providing guidance for co-ordination between different levels of governance, and underlining the importance of risk prevention and anticipation with regard to the most vulnerable populations;

d. Recommendation CM/Rec(2018)3 of the Committee of Ministers to member States on "Cultural heritage facing climate change: increasing resilience and promoting adaptation", which recommends that member States ensure the inclusion of cultural heritage in their policies and strategies for adaptation to climate change;

e. the Council of Europe Partial Agreement on the Co-operation Group for the Prevention of, Protection Against, and Organisation of Relief in Major Natural and Technological Disasters (EUR-OPA), which offers a platform for co-operation in the field of major natural and technological disasters;

f. the UN Sendai Framework for Disaster Risk Reduction (2015-2030) as an international roadmap for making communities safer and more resilient, by proposing priority action in data collection, knowledge-building and co-operation at all levels;

g. the Sustainable Development Goals (SDGs) and Agenda 2030 for Sustainable Development of the United Nations, in particular SDG 13: "Take urgent action to combat climate change and its impacts" as well as SDG 3 "Good health and well-being" and SDG 11 "Sustainable Cities and Communities", which may be relevant for disasters and hazards of all kinds.

2. The Congress considers that:

a. even though many local and regional authorities are well prepared for acute crisis situations, the capacities for responding to extreme or multi-layered disasters and hazards, could yet be increased by reinforcing solidarity between different levels of governance within a State, by professionalising the management of crises, and by assigning the human and financial means needed to the devolved missions of each level of authority;

b. co-ordination between different levels of governance and co-operation between different stakeholders within territory is essential and requires constant improvement, notably in the areas of crisis preparedness, communication and professional training;

c. gaps in transparency and consistency of decision-making processes, may represent threats or undermine human rights, democracy and the rule of law in times of crisis;

d. measures employed in response to natural disasters and climate hazards sometimes remain too short-sighted to prevent, mitigate the effects of or respond to such events in the most sustainable manner;

e. responses provided to natural disasters and climate hazards should not worsen socio-economic imbalances or the precarious situations of vulnerable persons;

f. communication with and the involvement of the population affected remain a huge challenge in the face of extreme natural disasters and continuous climate hazards.

[3] Debated and adopted by the Congress during the 46th Session on 28 March 2024 (see document CG(2024)46-17, explanatory memorandum, co-rapporteurs Jean-Paul BASTIN, Belgium (L, EPP/CCE); Christian DEBEVE, France (R, ILDG).

3. The Congress calls on the Committee of Ministers to invite the respective national authorities of the member States to the Council of Europe to:

a. co-operate with local and regional authorities and their associations to explore areas for improving vertical co-ordination mechanisms to better prepare for or respond to crisis situations, including natural disasters and climate hazards;

b. allocate adequate financial resources to local and regional authorities so as to allow them to provide efficient and sustainable crisis responses within their territories;

c. explore ways of improving the mechanisms for mobilising national and international means and resources in the face of extreme disasters that exceed the limits of individual territories;

d. support local and regional authorities notably by:

i. organising national and international exchanges of good practice at all levels and involving different stakeholders (public authorities, NGOs, private companies, academia, citizens etc.);

ii. ensuring precise, accessible, continuous and interactive data collection; and

iii. providing specific trainings to professionals and volunteers concerned by emergency response in local and regional territories;

e. set up and promote national platforms to initiate a dialogue on current modes of human land use and consumption patterns and their consequences for natural resources and climate change, as well as disasters and hazards amplified by human factors, in order to develop risk cultures and strengthen the resilience of local and regional territories.

4. The Congress calls on the Committee of Ministers to consider this recommendation and the explanatory memorandum contained in document CG(2024)46-17 for the future work of the Council of Europe Partial Agreement on the Co-operation Group for the Prevention of, Protection Against, and Organisation of Relief in Major Natural and Technological Disasters (EUR-OPA) as well as of the Drafting Group on Human Rights and Environment (CDDH-ENV) and the Drafting Group on Human Rights in situations of crisis (CDDH-SCR), sub-ordinate bodies of the Steering Committee on Human Rights (CDDH). It also invites the Committee of Ministers to promote, amongst its member States, the funding mechanisms proposed by the Council of Europe Development Bank (CEB) amongst the possible responses to post-crisis reconstruction, disaster prevention and adaptation to risks.

5. The Congress calls both on the Committee of Ministers and the Parliamentary Assembly of the Council of Europe to take account of this recommendation and the explanatory memorandum contained in document CG(2024)46-17 in their activities on crisis situations of all kinds in Council of Europe member States.

EXPLANATORY MEMORANDUM[4]

[4] Prepared with the contribution from the expert-consultants Paola Viganò (Director of StudioPaolaViganò and Professor in Urban and Territorial Design at the École Polytechnique Fédérale of Lausanne (EPFL) and the Università di Venezia (IUAV)), and Etienne Schillers (Architect at Studio Paola Viganò). Photos taken by: Sandro Weltin, photographer of the Council of Europe, in Türkiye (September 2023); Pedro Agustin, photographer mandated by the Council of Europe, in Spain (December 2023) and StudioPaolaViganó and Matteo Villa in Belgium (2022).

1. INTRODUCTION: ORIGIN, FOCUS AND OBJECTIVES OF THE REPORT

1. This report has its origins in a proposal made within the Current Affairs Committee of the Congress of Local and Regional Authorities in September 2022, following the many crises that Council of Europe member States have had to face in recent years and continued to face. These crisis situations include natural disasters, armed conflicts and a global pandemic. The issues to be addressed and problems encountered in doing so have regularly revealed the essential role of local and regional authorities in crisis management. Against this background, in their report, the rapporteurs outline the main challenges that local and regional authorities are facing in specific crisis situations, and to provide recommendations based on documentary research and the examination of several "case studies" through study visits.[5]

2. The rapporteurs decided to focus on natural disasters such as the earthquakes that took place in Türkiye, and climate-related hazards, as already observed in several European countries over the past years. Prominent examples were the floods in Belgium and Germany in summer 2021, and in Slovenia in 2023, but also the many droughts, wildfires and floods that regularly hit the Mediterranean countries, as well as most recently, in January 2024, the new eruption of the Svartsengi volcanic system north of the Icelandic town of Grindavik. On the basis of these examples, and three case studies in Belgium, Spain and Türkiye in particular, the rapporteurs have sought to develop specific and meaningful recommendations for action to be taken by local and regional authorities, in co-operation with other levels of governance and partners.

3. The aim of the report is therefore not to present the information gathered in the most exhaustive manner, but to identify, from selected features of natural disasters and climate hazards and local and regional responses to these events, the common features and lessons to be learned as regards action to be taken in other countries. in their final recommendations, the rapporteurs also highlight the need to consider the challenges of territorial and societal adaptation to climate change, which is a cause of many crisis situations. Finally, the report emphasises that, in a long-term perspective, ecological, social and economic transitions will be essential elements of a structural crisis response.

4. Authorities at the international, national, regional and local levels are seeking the best responses to different types of crisis: armed conflicts and the resulting and not fully mastered migration flows; integration challenges; continuous health crises; or climate hazards. All these incidents and the case studies explored in more depth through this report have shown that the local level can provide extremely effective responses, thanks to better knowledge of the territory, the population and the available tools. The present report is an attempt to structure and specify the responses needed at local and regional level, starting from the local one.

Visit of a refugee camp with Syrian refugees and NGO representatives in Kahramanmaraş,

In the emergency monitoring room of the Ministry of the Interior in Madrid, Spain

[5] In this respect, the rapporteurs thank the experts of StudioPaolaViganò for their valuable contribution to the study visits and the present explanatory memorandum.

2. LOCAL AND REGIONAL AUTHORITIES FACING HAZARDS, RISKS AND CRISES: THREE CASE STUDIES

a. Overall approach to the crisis theme

5. No crisis or disaster is exactly like the other, and interventions will vary from one situation to another. Thanks to their responsibilities in dealing with local matters, but also their local knowledge, responsiveness and solidarity, local and regional authorities are key players in dealing with societal and territorial crises, in the implementation of decisions taken (including by national authorities), and in ensuring that local stakeholders and services implement the decisions taken. Local and regional governments are also responsible for preparedness and developing specific and more long-term strategies and actions for their own territories. Be it for immediate or more long-term responses to crises, action taken by different levels of governance will always be complementary, and their collaboration will therefore be essential for an efficient crisis response.

6. Different regions and localities are not subject to the same risks and hazards. However, Europe currently faces the appearance of extreme phenomena in new hazard maps, involving for example more frequent floodings on dried out soils or on saturated soils, riverbeds which have been heavily transformed and "artificialised" by infrastructures and buildings, occupying and reducing the original space of the water; an aggravating factor when it comes to flooding. Out-of-control wildfires in dry forests have become more frequent across Europe.

7. Nowadays, all territories are potentially concerned by extreme phenomena, sometimes in an unexpected and unprecedented manner. It is therefore important that even regions and localities that currently appear as less exposed to risks and hazards get ready. And even if they are not directly affected, they should consider and seize the role they can play in terms of territorial solidarity, co-operation and support towards more exposed neighbouring regions and municipalities.

8. Local and regional authorities developing crisis responses have varying degrees of influence and capacities in preventing, responding to or following up on a disaster or hazard. Their scope for action is, amongst others, determined by their competences and resources within a national framework, and by their relations with national authorities. The latter are therefore key players in local and regional crisis response since they can both support and limit the scope and effectiveness of action. As regards specific local action, which is in fact the essential level of response in most crisis situations, regional authorities very often take the function of the higher administrative level supporting action in cities and municipalities.

9. Based on this understanding, the report aims at analysing the responses provided to the 2021 floods in the Belgian Vesdre valley, the February 2023 earthquake in Türkiye and the ongoing climate hazards in Spain - so three crisis examples that are very different both in their territorial scopes, level of consequences and destruction - to come up with recommendations for the response to similar natural disasters and climate hazards in the future and in other European territories. Notably with regard to the examples of Türkiye and Spain, the rapporteurs carried out study visits on 6-8 September and 18-20 December 2023 respectively; the programmes of these visits can be found appended to this report (see Annex I and II).

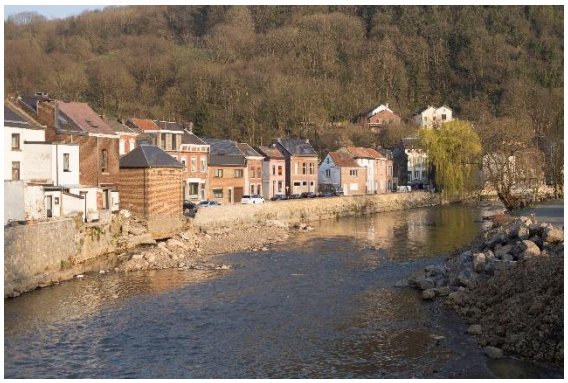
b. Introduction to the case studies

10. Many countries have painful experiences to share when it comes to crisis situations. Natural disasters and climate hazards have been chosen as the focus of this report, not only due to the numerous recent catastrophes observed in Europe and globally, but also because most European countries are affected and need to act, and because local and regional authorities have a realistic margin of response in the face of certain natural disasters and climate hazards, which is considered worth examining so that others can learn from the examples chosen.

11. Amongst the many possible examples, the choice made for this report was to study in more depth, first the 2021 floods in the Vesdre valley in Belgium, also the territory of one of the co-rapporteurs, then the February 2023 earthquake in the southeast of Türkiye and, finally, the ongoing effects of climate change that greatly concern a Mediterranean country like Spain and its southern Autonomous Community of Andalusia.

12. Whilst these examples all seem very different at first glance, they share the characteristic that local and regional territories are highly affected and that their authorities are the first to be called upon for crisis response, even in the wider national and international context. To underline this character of common features, the three case studies will not be covered in three separate chapters but will be referred to systematically under thematic headings.

13. The first case study is represented by the heavy floods touching 209 out of 262 municipalities in the Belgian region of Wallonia, with an epicentre in the Vesdre valley, where 39 people died in July 2021, 100,000 persons were victims of damages, 9,670 ha of land were inundated, 48,000 buildings destroyed or damaged, out of which 45,000 residences, as well as 11,000 cars, hundreds of pieces of art, 559 bridges and 160 infrastructures damaged; all adding up for the region of Wallonia to a cost of 2.8 million Euros. The effects have been devastating for thousands of households, whose buildings were destroyed and who are still suffering from economic and psychological consequences.[6] Following this dramatic event, the architecture, urbanism and landscape office StudioPaolaViganò (in collaboration with the University of Liège, Belgium) has produced a multidisciplinary strategic plan for adapting the territory to future floodings and droughts, thus enhancing its “risk preparedness”.



View into the Vesdre valley, Belgium

Repair works in the riverbed, Vesdre valley, Belgium

14. The example is generally interesting because it combines two major, apparently opposite hazards that are nevertheless expected to appear in more frequent and extreme manners in many parts of Europe: floods and droughts. For the Vesdre valley, climate experts predict the probability of two further occurrences of rain of the same intensity before 2050.[7] After 2050, drought is expected to prevail, with prolonged heat waves and low levels of precipitation. The watershed and its surrounding territory are therefore at significant risk of an alternating occurrence of floodings and droughts, and must consequently tackle the risk reduction for both, which may seem contradictory at first glance.

15. Amongst the challenges for the Vesdre valley more specifically will be to devise strategies capable of tackling these issues in parallel, with a long-term vision that enables the territory and its governance to adapt to the changing climate and to become more resilient, ecologically and socially. This vision must also address the socio-economic problems caused by the region's industrial decline, which pre-date the latest crisis. The example shows to what extent such crisis situations require comprehensive responses, both in addressing problems in various areas, and in taking a large view including the history and the future of a territory.

16. The second case study concerns the two powerful earthquakes that hit southern and central Türkiye as well as northern Syria on 6 February 2023, involving shocks of magnitudes 7.5 and 7.8 and hundreds of aftershocks. According to the latest estimates received during the Congress study visit in September

[6] Inondations, six mois après : à Trooz, 600 personnes ont encore besoin d'une aide alimentaire ; https://www.rtbf.be/article/inondations-six-mois-apres-a-trooz-600-personnes-ont-encore-besoin-d-une-aide-alimentaire-10914010 (downloaded in January 2024).
[7] Xavier Fettweis and Sébastien Doutreloup, Climatology Laboratory, University of Liège. Schéma stratégique multidisciplinaire du bassin versant de la Vesdre. Diagnostic approfondi et multithématique. Contributions de la TEAM Vesdre – Uliège, 2022.

2023,[8] and relevant reports by international organisations, the earthquakes left 57,700 people dead and hundreds of thousands injured. More than 9 million people were affected by the disaster, 3 million people were displaced, and almost 300,000 buildings completely destroyed, leading to the loss of homes for millions, who had to find accommodation in temporary shelters, with limited access to basic services such as water, sanitation and medical care.[9] Solidarity and assistance coming from surrounding municipalities and provinces which were less affected was mobilised immediately, and numerous national interventions and international aid missions were led to address the most urgent needs such as search and rescue operations and humanitarian assistance.

Visit of urban areas entirely destroyed by the February 2023 earthquake in Hatay, Türkiye; accompanied by municipal staff

17. Recovery in the most severely affected provinces of Hatay, Adıyaman and Kahramanmaraş, visited by the rapporteurs during the Congress study visit, progresses slowly, and many needs and challenges remain to be addressed. Additional climatic events have made responses difficult and slowed down the recovery process (very cold temperatures, heavy wind, rains and floods, etc.). This second case study shows that the superposition of various catastrophes and problems, i.e., the simultaneous appearance of a natural seismic disaster, climatic hazards and the presence of high numbers of refugees, notably from Syria, in an already densely populated area, can be an aggravating cause and add different layers of challenges to the initial dramatic event.

18. Spain and its Autonomous Community of Andalusia, serving as the third case study, are amongst the European countries and regions most affected by climate change. The regular droughts dry up reservoirs, cause a lack of water in olive groves (and other forms of cultivation), and lead to water restrictions across the country. Next to such phenomena, Spain's wildfires increase, tend to become bigger and appear ever earlier in the year; in 2023, the first occurred already in March.[10] Rainfall in some regions has fallen by around 35% in the past 50 years. Some 20% of mainland Spain is already desertified, due to climate change and human use of resources, such as overexploitation of water, particularly groundwater extraction. An overall 74% of the national territory is at risk of desertification. In this light, climate change effects are tangible everywhere.

19. Different strategies and actions currently developed by local and regional authorities are aimed at mitigating some of the ecological, economic and social effects. However, it has also become clear that a shift in paradigm will be needed and that the “business as usual” scenario is no longer effective. During their study visit,[11] the rapporteurs could see that new strategies will have to include “substitution strategies” in response to the shortage of resources caused by climate change, such as recycling water

[8] A Congress delegation led by the two co-rapporteurs and an expert from StudioPaolaViganò undertook a study visit to Türkiye on 6-9 September 2023, to examine the effects of the earthquakes and rebuilding measures initiated in the metropolitan municipalities of Gaziantep and Hatay, and the municipalities of Kahramanmaraş and Nurdağı (see programme in Annex I); following this visit, the Congress was also represented at the Green Up Meeting No. 4 ‘’İstanbul’un Estetik Direnişi’’ / "La résistance Esthétique d'Istanbul", in Istanbul on 28 September 2023.

[9] WHO: Türkiye earthquakes: six months of resilient response and support, Statement by Dr Batyr Berdyklychev, WHO Representative, WHO Country Office Türkiye, 1 August 2023, https://www.who.int/europe/news/item/01-08-2023-turkiye-earthquakes--six-months-of-resilient-response-and-support.

[10] Spain's first major wildfire of 2023 comes early, in the midst of widespread drought, Le Monde, 27 March 2023, https://www.lemonde.fr/en/environment/article/2023/03/27/spain-s-first-major-wildfire-of-2023-comes-early-in-the-midst-of-widespread-drought_6020820_114.html (downloaded in January 2024).

[11] The Congress delegation led by the two co-rapporteurs and the expert from StudioPaolaViganò undertook a second study visit to Spain (Madrid and Andalusia) on 18-20 December 2023, to examine the effects of the climate change on local and regional territories and the activities deployed in response (see programme in Annex II).

for olive production to uphold traditional agricultural activities, and “adaptation strategies” aimed at making territories and cities more resilient towards different hazards and to guarantee their uninterrupted habitability. The example also showed that each local and regional territory must consider its very own contribution to global climate change and the local and regional determinants it can influence, to prevent problems from getting worse.

c. From hazard to risk: a human construction

20. The notion of “crisis” is characterised by the fact that high levels of human, (infra)structural and financial capacities are requested to address a given situation, or that these capacities are exceeded. According to this understanding, the crisis period ends once the “multiple overflow” situation has been resolved. However, during the acute phase of a crisis, the pressure on local authorities and their partners is exacerbated and they are “over-solicited” for a certain time: they must react and take decisions quickly, using emergency plans (if these are up-to-date and operational), and use their detailed knowledge of the territory to manage the relief effort.

21. Before considering responses to crises, it is worth taking a closer look at the notion of "risk" to be able to develop a preventive approach and crisis-preparedness; only then, the crisis response will come into focus. Risk is a combination of “hazards” and “stakes”, i.e., a combination of the probability of the occurrence of an event like a drought, flood or forest fire (“hazard”) and its "stakes", here understood as determinants of crisis emergence and development, such as forecasting and prevention, the knowledge of territorial dynamics, or the possible interconnection between different hazards adding on to one another.

22. Furthermore, risks are the product of a hazard multiplied by its consequences in terms of damage and victims. Although natural causes independent of human action are at the origin of certain disasters (e.g. earthquakes), their consequences can be aggravated by human decisions (resource extraction; soil, water and air pollution; CO^2 emissions; urban development and design, etc.). Likewise, in the case of climate hazards, human decisions are likely to increase the risk of disasters, as well as their scale and frequency. That means, in consequence, that even in events of purely natural origin, such as earthquakes and subsequent tsunamis, volcanic eruptions, meteorite falls, rock subsidence, scree slopes, or avalanches, for example, there is a human component, which consists in continuing to live in or develop geographical sectors subject to the risk of hazard without considering possible action taken for coexistence with the risk(s) incurred.

23. Wherever they live, people are exposed to risks of varying frequency and intensity (for example, in seismic zones, in mountainous areas or near major rivers). Each region needs to identify the potential risks and the responses that could be made to reduce exposure to risk and its impact on people. This means, on the one hand, that humans have a share of responsibility in the face of natural disasters and climate hazards, the impact of which they potentially amplify if they ignore the risks in their decisions concerning urban development (including land-use planning, housing, infrastructure, soil sealing, the channeling of watercourses, communication routes, etc.) or in their way of life. On the other hand, people are in a position, if not to prevent a natural disaster or a climatic hazard (in the case of the latter, becoming increasingly frequent and intense with climate change), at least to anticipate or mitigate some of the effects (for example by complying with certain rules in terms of town planning and design, but also in the event of the risk occurring, thanks to specific emergency plans and other tools). From this point of view, risk is certainly present in everyone's life, but it is not perceived as purely natural and inescapable, but as a "human construction" and a factor that can be influenced.

24. This understanding of hazards, risks and crises as phenomena that can be potentially influenced by human decisions and action, including at the local and regional levels, is also relevant for the three case studies:

- The earthquake that devastated southern Türkiye is of natural origin, i.e., man and his actions are not, strictly speaking, responsible for the tectonic movements causing the events. On the other hand, having been aware of the seismic hazard for many centuries, humans have continued to urbanise these areas up to very high densities of population, without developing sufficient safeguards against the risk faced in this area. The provinces of Gaziantep, Kahramanmaraş and Hatay, visited by the rapporteurs in September 2023, respectively host nearly 2.1, 1.2 and 1.7 million inhabitants. Istanbul, which is "waiting" for a major earthquake at an unknown moment of time, possibly in the near future, has a declared population of 15.5 million. With a population of 85 million, at least 20% of Türkiye’s population is at risk of being affected by future earthquakes. Whilst,

in the face of such population numbers, it will be impossible to avoid certain territories as inhabited areas, Turkish decision-makers at all levels know that every possible measure should be taken to make urban structures and their design as resilient as possible and conceive emergency plans which allow for immediate evacuation and disaster response as needed.

- In Belgium's Vesdre valley, industry has developed in the river's major bed, benefiting from the strength and quality of the water since the 19th century. Industrial equipment and habitations were built almost in the riverbed, reducing its space. Today, urbanisation on the surrounding “plateaus” (housing estates, business parks, agricultural exploitations etc.) is transforming the traditional “hedgerow landscape” and its capacity to allow for infiltration and water run-off towards the valley floor and to retain soil erosion. Resinous forestry replaced peat soils, thus also reducing upstream water storage capacity. As a result, the 2021 flood, during which the river regained its space, had a major impact on human settlement and activities. By “colonising” the river and modifying the landscape's role in water storage and infiltration, man has created a risk that goes beyond the tangible impacts of climate change and is not easily “revertible”.

- The climate change Spain and notably Andalusia are undergoing is tangible, both in urban areas and in productive territories. Climate forecasts point to an intensification of drought periods and a consequent scarcity of water resources. Spain is the world's leading producer of olives, oil and table olives, and the Andalusian region is particularly active in this field. The productive landscapes are monocultural, centered on olive cultures, and the lack of water is a major obstacle, reducing productivity. The hyper-specialisation of the productive landscape, and therefore of economic rents, is therefore a risk in itself. Today, one of the substitution strategies consists in recycling the water used to let olives macerate, for irrigating olive trees and processing table olives.[12] More far-reaching reflections on the diversity of crops and the productive economy do not yet seem to have made it to the top of political agendas. Forest fires, on the other hand, are a phenomenon that has always been known in Spain and intentional fires have always been used as a method for burning agricultural waste and cleaning fields; according to national data, 43% are agricultural fires, another 27% are used to transform forest into grazing land, and both types would normally need prior authorisation. In this context, problematic situations often seem to arise from the fact that in a situation of extreme drought, smaller fires get easily out of hand and become an issue to be dealt with by fire-fighting services, and that the traditional knowledge of how to set and control agricultural fires increasingly gets lost and is not present to the same extent amongst Spanish farmers today.

d. Challenges to human rights, democracy and the rule of law

25. Upholding the highest standards of human rights, democracy and the rule of law is the obligation of authorities at all levels - national, regional and local - even in times of crisis. However, exceptional situations, including natural disasters or climate hazards, may interrupt the normal functioning of public institutions and services and cause situations of temporary disorder or even chaos in which the usual principles and values, and may be under attack quite bluntly or undermined in more subtle manners, or in which safety issues arise.

26. Examples for such violations could be cases of looting in collapsed houses, lowering rule of law safeguards in re-construction procedures thus giving leeway to corruption, neglecting or discriminating certain categories of population in the crisis response or failing to ensure consistent and transparent communication with local citizens. Of course, facing such infringements, the overall *acquis* of the Council of Europe and the Congress in matters of human rights, democracy and rule of law, continues to apply and needs to be upheld even during crisis situations, where one of the aims is to uphold, to the greatest extent possible, the normal functioning of societies at all levels.

27. To address specific concerns, different organisations and bodies have looked into the issues and opportunities of crisis situations over the past year. The Congress has, for example, investigated “Local and regional elections in major crisis situations” in Resolution 455 (2020). Also, in response to the 2023 earthquake in Türkiye, the Parliamentary Assembly of the Council of Europe has adopted Resolution 2494(2023) and Recommendation 2251(2023) on “Political strategies to prevent, prepare for and face the consequences of natural disasters”, providing guidance for co-ordination between different levels of governance, and underlining the importance of risk prevention and anticipation with regard to the most vulnerable populations. From the intergovernmental side, the Council of Europe Centre of Expertise for

[12] See the project in Arahal, Spain: H2Olive Tree plan, developed in partnership with the University of Córdoba. See: http://www.h2olivetree.es/.

Good Governance, has come up with a toolkit on resilience-building strategies for local and regional government in 2020.[13] Other international organisations have been exploring how the strengthening of local government structures can contribute to the rebuilding and recovery efforts of a country after a war, such as the OECD for Ukraine only in 2022.[14] These references could be useful for local and regional authorities intending to reinforce their crisis response in complementarity with some of the proposals made through the present report.

3. BEFORE, DURING, JUST AFTER AND WELL AFTER CRISIS: FOUR TEMPORAL HORIZONS (TH) FOR A SEQUENCE OF LINES OF ACTIONS (LA)

28. Experiences in dealing with the multitude of crisis situations over past decades have shown that crisis management is not limited to post-crisis reconstruction, but that effective crisis management requires a comprehensive response and measures adapted to all relevant stages or phases of a crisis: before, during, just after and well after.

29. However, in examining different crisis situations, notably natural disasters and climate hazards, on the field, evidence has shown that the general notions of “stages” or “phases” do not sufficiently reflect the complexity of crisis situations, as they insinuate that one stage or phase is coming to an end before a next one is starting. It is therefore suggested to address these stages as more fluid “temporal horizons (TH)” of crises, starting with (1) the pre-crisis horizon, i.e., the stage of risk prevention or preparation to a crisis, followed by (2) the immediate, emergency assistance, then (3) the crisis management horizons, both happening during crises or shortly afterwards, and finally (4) the post-crisis reconstruction and rehabilitation horizon.

30. These four TH are often perceived as a continuous cycle, given the multiplicity of risks, the various forms and intensities in which natural disasters and climate hazards can appear and their repeated occurrences and interconnections. In addressing any crisis situation concerning local and regional territories, once will soon come to the conclusion that "after the crisis is before the crisis".[15] In this context, local and regional authorities and their decision-makers have seen their roles shift from the one of “city managers” to “crisis managers”, and the key question will generally not be “if” the next crisis (of some kind) will arrive, but “when”. Evidence across Europe also shows that even those territories that are not directly affected by a crisis will often be called upon to intervene or support others in a spirit of territorial solidarity, so are nevertheless concerned in a wider – regional or national - context.

31. In the light of this understanding, it becomes clear that the notions of risk and risk-preparedness need to be integrated into all temporal horizons of crisis response, into public decision-making processes at all levels, i.e., by local, regional and national governments, and into public awareness and attitudes more generally. Moreover, every crisis to manage becomes an opportunity to learn useful lessons for the future (from the own crisis management and the one done by other territories), to “rebuild better” and be better prepared for the next crisis. Reflecting on and improving crisis response from one crisis to the next, may be helpful for local and regional authorities to prevent certain disasters or hazards, or wherever prevention of is not possible, to mitigate their effects at least. Learning from a crisis and from each other will help local and regional territories and authorities to build more resilient futures.

32. In addition to the four “temporal horizons” (TH) of crisis response, the report proposes to work around four “lines of action” (LA), that will cover different areas of intervention in the face of crises. These lines of action have been identified during the strategic analysis and development of visions for the Vesdre watershed floods in 2021, the first case study of this report. Both the four temporal horizons and four lines of action as a basic structure were then validated through the two following case studies of Türkiye and Spain.

[13] See the ReBus Toolkit (2020).
[14] OECD: Multi-level Governance Studies, Rebuilding Ukraine by Reinforcing Regional and Municipal Governance, Paris 2022.
[15] “There is an awareness that living in the global present means living in a continuous state of crisis” (Krasny, 2020).

33. However, before taking a closer look at different temporal horizons (TH) and lines of action (LA), another distinction will be helpful to keep in mind that crisis responses need to be provided in different "technical" areas, which are not covered here in more depth, but represent a structuring element for specific measures to be taken by each local and regional authority and in an interregional manner (both nationally and internationally), according to the nature of a disaster or hazard, and its intensity, scope of destruction and other effects; the key areas, as also evidenced through the case studies, are:

- material responses first in the form of emergency assistance and reconstruction (e.g., search and rescue operations, emergency housing, food and water provision etc.), then via the renewed set-up of essential public services (education, health, social services etc.),
- administrative responses, including management, governance, co-ordination and decision-making processes linked to the crisis, including participation of and communication with the local population, and
- further specific responses, such as the provision of financial aid (subsidies or loans to individual households or companies), or psycho-social support both to the victims of a disaster and the professionals who need to intervene in response.

Removing the rubbles in Hatay, Türkiye, in an urban area where search and rescue was not possible anymore

In the emergency monitoring room of the Ministry of Ecological Transition and Demographic Change, Madrid,

34. The above understanding and concepts, including the four LA, relating to the four TH of crisis response, and interventions in different technical areas, provide the basic structure of the analysis, conclusions and recommendations developed in the following chapters. As the following simplified graphic representation of a "crisis management cycle" shows, the more long-term and underlying themes of resilience and territorial solidarity complete this model:

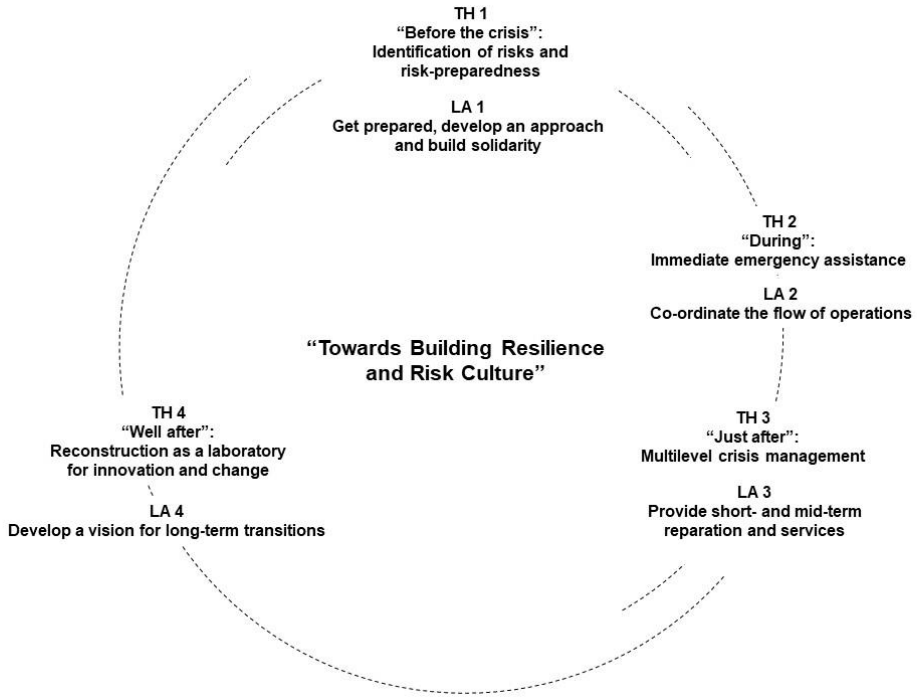


Figure 1: Before, during, just after and well after crisis: four temporal horizons (TH) for a sequence of lines of actions (LA), all contributing to more territorial resilience through the construction of a risk culture.

a. TH 1 "Before the crisis": Identification of risks and risk-preparedness

35. The pre-crisis temporal horizon is marked by uncertainty. The disaster has not yet occurred, and people in a given territory can, for those who are aware, only imagine its possibility and the probability that it will become real. In this context, the concept of "preparedness" proposed by anthropologist and health sociologist Andrew Lackoff, is an important one: "By `preparedness', we indicate a form of planning for unpredictable but potentially catastrophic events. The aim of such planning is not to prevent these events from happening, but rather to manage their consequences."[16] Although explicitly including neither prevention nor mitigation nor adaptation policies, preparedness is essential to build an open capacity of reaction and a general awareness of risks. It is a zero-degree level of response that must be accompanied by structural investigations of the future ("scenarios"), risk identification and coherent actions that would be taken to prevent them. On this basis alone, actions to reduce future emergencies can already take place together with the minimisation of their effects.

36. Amongst the case studies, Türkiye is a country where the level of risk awareness is very high, notably for earthquakes, as the country is located on major geological faults and will be hit by further earthquakes. The intensity of an earthquake is never known in advance but feared. As one of the mayors in the province of Istanbul has put it: "We are waiting for the big one, like the Californian coastal area, and following last predictions by 2026 with a magnitude of 7.6-7.7 on the Richter scale".[17] Currently, all stakeholders in the Istanbul metropolitan province are preparing for a next major incident and decision-makers are deploying their efforts to reinforce resilience and develop strategies at multiple levels.

37. For Türkiye and its major urban agglomerations, future natural disasters do not only represent an issue of urban habitat, development, or recovery, but an existential socio-economic risk. Given that Istanbul represents more than 40% of the Turkish GDP, any major earthquake affecting this agglomeration would represent a huge economic risk for the whole country. For this reason, such an event is treated as a matter of national importance: the AFAD (Disaster and Emergency Management

[16] Stephen J. Collier and Andrew Lakoff (2008): "Distributed preparedness: the spatial logic of domestic security in the United States", in *Environment and Planning D: Society and Space* volume 26, pages 7-28.
[17] Statement by Mehmet Murat Çalık, mayor of the Beylikdüzü municipality and district during Istanbul Green Up No. 4 Conference an "Istanbul's Aesthetic Resistance"; see also: "The expected Istanbul earthquake may occur until 2026", Istanbul Gelisim University, 17 August 2021: https://gelisim.edu.tr/en/gelisim-news-%E2%80%9Cthe-expected-istanbul-earthquake-may-occur-until-2026%E2%80%9D (downloaded in January 2024).

Presidency) and its risk reduction department are currently preparing for future earthquakes in the Marmara region, including Istanbul and other large metropolis. In this context, AFAD has developed a "red system" based on scenarios meant to estimate potential scale of damage and losses before an event; 60 people along are assigned to the earthquake department. AFAD headquarters have branches in 81 Turkish provinces, aimed at supervising "disaster management strategies" and implementing adapted operational plans (distinguishing 11 types of disasters, based on the international SENDAI disaster risk reduction framework).[18]

38. Local decision-makers whom the rapporteurs met in the provinces of Gaziantep, Kahramanmaraş and Hatay estimated that there had been quite a good level crisis-preparedness in their region, both in terms of the readiness of emergency services providing material help, and in terms of governance and co-ordination structures. However, even refined models of territorial solidarity, where all provinces had been assigned surrounding provinces to come to their help in case of emergencies, had difficulties setting in effectively in the face of an earthquake that was far more intensive than anyone had expected. The provinces concerned experienced seven major earthquakes by 19 March 2023, followed by around 47,000 aftershocks and affecting 15 million people in 11 provinces which represent a densely populated area of 120 km^2. However, after a short time period where logistic difficulties (like re-opening damaged airports) had to be overcome, the pre-thought system of intermunicipal solidarity formed the basis of crisis intervention and immediate support to the affected population, and each city had its own specific function in this system; for example, the metropolitan municipality of Gaziantep, that had been, in proportion to others, less concerned than more western municipalities of the region, was functioning as a logistic centre for distributing assistance into the region.

Destroyed urban areas and buildings having resisted in the area affected by the February 2023 earthquakes, Türkiye

39. According to the Union of Municipalities of Türkiye (UMT), which is the main national association of local authorities in the country, risk-preparedness had already been in the focus before the incident, including disaster-focused planning approaches, disaster risk maps, the build-up of institutional capacities and the development of spatial plans for more "disaster resistant cities". However, in the face of the sheer scale of the disaster, the capacity of these tools was overrun. Their full implementation on all territories potentially affected took a lot of time and resources. For example, the metropolitan municipality of Hatay had submitted, in 2021, its plans specifying in which urban sectors needed reinforcement to make them more earthquake-resistant, to the national Ministry of Environment, Urbanisation and Climate Change.[19] In the face of building works to be accomplished both by public authorities and private owners, these measures could not be put into practice before the tremendous earthquake of February 2023. The reconstruction would have to take account of seismic resistance, but also foresee the human, logistic and financial resources needed to confront potential upcoming earthquakes.

[18] Sendai Framework for Disaster Risk Reduction 2015 – 2030, United Nations Office for Disaster Risk Reduction (UNISDR), www.unisdr.org.
[19] Planning tools of the metropolitan municipality of Hatay: Ground survey plan to precisely identify areas at risk; environmental plan; settlement plan – as presented during the study visit in September 2023.

40. The four TH are understood to run through in a continuous cycle. The institutional memory of previous catastrophes, and the implementation of lessons learned or new territorial visions, are fundamental aspects of crisis preparedness. In the case of the Vesdre valley, following the floodings in the Ourthe watershed in 1984 (NB: the Vesdre flows into the Ourthe), a consultative committee for the Ourthe valley had been launched in 1993 as a body integrating the various players with an overall vision for development and management process. This body developed an upstream-downstream logic and hydraulic and hydrological models for the watershed and questioned certain productive landscapes (e.g., spruce forestry) and landscape-based solutions against water runoffs.

41. It is interesting to note that the studies and strategies developed at the time are very similar to those prepared following the Vesdre disaster in 2021, more than 35 years later. Although the topics addressed and the tools used were innovative and even "ahead of their time", this committee and its work have not really had a longer-lasting impact; it seems that, in current governance, planning and data-collection systems, each generation of local and regional decision-makers has to make its own experiences and find its own solutions.

42. There is no evidence left to understand why the studies and recommendations of this committee had never been put into practice. Nevertheless, some assumptions can be made about political inaction and willingness, or the lack of financial resources needed, next to an overall scepticism towards such new concepts. Once again, the experience has shown that the challenge of “non-procrastination” is central, and that the actual implementation of more far-reaching plans or strategies remains a hurdle, often leading to no decisions being taken. Local decision-makers are often being caught in between the pressure coming from citizens wishing to sell, exploit or build on their grounds even if these are located in an area at risk of inundation, and the knowledge that the risk is weak or that, according to human memory, no major incident has ever happened. These political and economic aspects of transition, including when preparing for and adapting to climate change and related risks and hazards, were discussed in-depth during the Congress delegation's visits to Türkiye and Spain and were also a key issue for the Vesdre case study. A strict regulatory framework and the readiness to turn to new forms of economy should therefore accompany the preparation and adaptation to future crisis situations.[20]

LA 1: Get prepared, develop an approach and build solidarity

43. Among the LA to get prepared to any crisis are developing scenarios, setting up security mechanisms and devices, organising disaster simulation exercises, setting up decision-making processes and governance systems, providing education and training to professionals involved, and monitoring the entire risk-preparedness process. The identification of specific risks will then be helpful to narrow down the area of intervention and to integrate new knowledge into the construction of long-term visions and action plans going beyond more preparedness.

Stocktaking of the effects of the latest floodings in Arahal, Spain

Fire emergency plans in Malaga, Spain

[20] This point is not further developed in the report. Some references had been discussed during the strategic scheme of the Vesdre case study, and at the Istanbul conference: for the Vesdre, reinforcement of local and touristic economy, by diversification and capitalisation on the exceptional beauty, diversity and productivity of its landscapes, and its architectural heritage (see as theory of “presential economy”: Terrier Christophe (dir.) 2006, édition *Direction du Tourisme, Mobilité touristique et population présente, Les bases de l’économie présentielle des départements*) ; the concept of the “doughnut economy” was presented in Istanbul by economist Ekin Al, consisting on meeting “the needs of all within the means of the planet” (see as theory of “doughnut economy ”: Kate Raworth, 2018, Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist).

44. In this context, two distinct but complementary types of collaboration should be envisaged simultaneously: horizontal co-operation and vertical co-ordination and support. Mutual aid and solidarity are part of the first type: they could include local authorities regularly assisting each other (including through specific forms of temporary or more permanent intermunicipal governance) or be based on one-off voluntary agreements between local communities to be discussed before the events. Solidarity can also be mobilised within local communities, for example through support coming from local civil society organisations or mutual assistance between citizens more or less affected by a crisis. The second type of collaboration invests State authorities at different levels (national or regional; according to the territory affected by a crisis and the set-up of State institutions), as it is the obligation of governments to protect individual citizens and communities (as fundamental pillars of local politics, democracy and human rights protection).

45. Once again, parallel crisis-preparedness at different levels will be important, in order to get ready and to know how to best coordinate different agencies (e.g., mobilisation of further emergency services or military resources). Once the acute crisis or disaster is there, authorities and their partners at all levels need to be ready to respond swiftly and know what is expected of them in their respective functions and according to the territorial scale involved. As case studies have shown, in many countries, national authorities will come in to support to the local and regional authorities if the crisis encountered is too big to be solved at the local or regional levels alone, also in terms of resources, and if the boundaries of individual municipal or regional territories are exceeded. It is interesting to see that, according to the national context and state structure, there is a more centralised functioning where the State takes over and unfolds on the ground (Türkiye), or inversely, the central authorities rather come to support local and regional authorities (Spain) which keep control of crisis management and co-ordination.

46. The right attitude to be adopted to prepare for a crisis can be developed in several ways: through medium and long-term strategic plans and visions, which define a roadmap towards ecological, economic and social transition and adaptation and resilience to crisis. Those plans and visions, addressing the long term, must be accompanied by short-term actions, sometimes involving strong political decisions on risky situations in a *"laissez-faire"* manner, and through immediate and decentralised actions at the very local level. They should be based both on vertical co-ordination and horizontal co-operation on the one hand, and on citizen involvement and participation on the other. Transitional measures and objectives should not be experienced or perceived as a "punishment" by citizens but should be fully understood and carried by citizens themselves taking "ownership".

47. Regarding the long-term strategic mode of action, at the provincial level, decision-makers in Istanbul are currently working on the "Istanbul Vizyion 2050"[21] with several universities. Their ambition is to be able to control the development of Istanbul while proposing a vision capable of articulating actions over the long-term, adapting and being resilient to the risks associated with climate change and natural disasters. This vision is also inspired by other international cities that have developed similar approaches (Barcelona, London, etc.).

48. Istanbul is at high risk of earthquakes but also floodings caused by torrential rain. After a 3-year period during which data were collected, a series of indicators and targets for 2050 were defined. They are classified according to several themes, all constituting a broad vision and roadmap: urban adaptation to climate change, transformation and resilience of the economy, accessibility to the city, quality of life and services for all, active and inclusive mobility, integration of intelligent infrastructures and their networking, equality of citizens for a free society. In the words of the Mayor of Istanbul, Ekrem Imamoglu, this sounds as follows: "We started by saying, 'We Have a Dream' for Istanbul. This document foresees crises on different issues, approaches inequality as a fundamental issue, and reveals a plan relying on Istanbul's power, history, and people. The people of Istanbul prepared this plan for Istanbul; it is a guide for everyone who lives and produces in this city". The probability of an earthquake is not explicitly mentioned, but among many others, some goals directly refer to the notion of preparedness towards disasters, the strengthening of territorial solidarity and the balanced development of the urban space. These themes will be further developed in the report and its conclusions.

[21] Presented by Prof. Hatice Kursuncu, researcher at Istanbul Planning Agency, during Istanbul Green Up No. 4 Conference an "Istanbul's Aesthetic Resistance"; see also: https://vizyon2050.istanbul/en

49. Regarding the absolute need of putting an end to *"laissez-faire"* attitudes, the Doñana National Park in Andalusia, created in 1969, is a good example. This park is a natural area with a seasonal climate and wetlands. Climate change and human activities in and around the park put the area at high risk, regularly threatening its current scope through intentions to develop other land uses and consuming its resources. One of the most serious risks is the contamination of fresh groundwater by seawater. This is caused partly by illegal wells and excessive use of freshwater resources, particularly for irrigation of the intensive strawberry cultures around the park. Put simply, if the levels of groundwater are not high enough, brackish water would seep into the soil, potentially causing a major ecological disaster. To mitigate these effects and put an end to illegal practices or cultures that consume too much water, the Spanish government plans to invest 1.4 billion Euros to save the area: for each hectare of intensive agriculture abandoned, farmers will receive 100,000 Euros[22] in compensation.

Urban and natural zones close up in Doñana National Park, Spain

Descending water levels in Doñana National Park, Spain

50. Regarding decentralised territorial actions, a good example is the relationship between land management and risk management in Spain, particularly in the Spanish autonomous region of Castilla y León, which regularly suffers from major forest fires. At the same time, the region is suffering from the exodus of inhabitants and productive activities, causing a lack of human resources to maintain the landscape and missing knowledge on traditional ways of managing forest fires, based on the preventive use of fire. Former generations of farmers were more familiar with fire as a means of preparing agricultural land ("slash and burn farming") and its control and were more aware of the risk involved; so in the past, there were less accidents and out-of-control fires.

51. Today, however, the Spanish forestry landscape is not more intensified but rather less active. Fewer and older people live in villages and look after land and forests. The landscape has changed, and the woodland become dryer, so that fire spreads faster in neglected forests. At different levels, professional firemen, in a decentralised manner, help farmers and landowners to restore this knowledge based on a "managing the fire" approach, more than "fighting against the fire". The goal is also to restore the productive landscape based on agroforestry, which would be a more diversified cultivation and use of forest land.[23] Moreover, the lack of coherent responses at national and European levels does not help. For example, it is not possible to penalise livestock activities in the forests, because the European forest model does not fit well with the Spanish understanding of forests as "mixed" agroforestry areas. The invention of the agroforestry model has the advantage that the forest environment becomes more resilient to fires and at the same time has a sustainable maintenance over time. Whilst in protected areas like the Doñana National Park, the key concern is the one of a conflict between natural zones and human activity, in agroforestry areas there is an explicit interest in maintaining human activity to preserve the landscape, because human presence is a safety factor – which once again proves that crisis prevention and response needs to be done on a case-to-case basis.

[22] https://www.euronews.com/green/2023/11/27/spain-announces-a-14-billion-deal-to-help-protect-donana-wetlands-from-drought.

[23] https://news.mongabay.com/2021/07/spanish-farmers-fight-forest-fires-with-agroforestry-and-many-sheep/.

b. TH 2 “During”: Immediate emergency assistance

52. The second TH covers the response during the emergence of the crisis, when the immediate threats to people, to infrastructures, industries and economic activities are the priority. The efficiency of responses generally depends on the preparedness levels before the disaster strikes.

53. During the disaster, the local network of mutual assistance is not always in the condition to act because persons in charge of the response are affected as well or are not in a position to reach their intervention post. Generally, higher administrative levels also need a certain time to deploy their action, and this time is precious, why the preparation of vertical and horizonal co-operation is so important.

54. The challenges linked to immediate assistance and aid were particularly visible through the case studies of Türkiye and Belgium. In the face of the devastating earthquake of February 2023, Turkish authorities at all levels managed to mobilise an impressive extent of resources to lead the most urgent search and rescue operations, and to provide immediate help, shelter and food to those finding themselves without a roof. A particular challenge for local decision-makers also lied in the fact that mayors and municipal staff, expected to intervene and to help their local population, were themselves victims of destruction, injured and in any case emotionally affected.

55. However, in the face of the sheer scope of the Turkish disaster, immediate help was mobilised at all levels: local, provincial, national and even international (with big organisation, like UNDP and Red Crescent already present in the area, due to the numerous Syrian refugee camps). In the case of the Vesdre valley floods, it became visible how solidarity was mobilised at a larger scale: volunteers coming from the three regions of the country (Flanders, Wallonia and Brussels) played an important role. Today, after the latest disaster, the awareness of “a common destiny” in the valley has been reinforced through planning activities at different levels, including the realisation of a common “Strategic Scheme” for the entire watershed, so awareness and preparedness have increased.

Destroyed houses and school in the earthquake affected area in Türkiye

56. In any crisis, emergency interventions are closely linked to communication, which can save lives in the event of a major disaster. Different communication mechanisms play a role in forecasting, anticipating and managing the consequences of the disaster or hazard. However, the case studies show that the communication foreseen to be used during a crisis must consider the fact the usual infrastructure and networks of communication (media, telephone services, human resources, etc.) may be directly affected as well. In Belgium, the first victims to deplore were persons who did not respect the signposting towards roads that were unusable and were taken away by the floods. Others did not listen the messages on evacuation orders.

57. In the case of the Turkish earthquake, for example, the disaster occurred before any warning communication could take place, shortly after 4 am, and most means of communication were not operational any longer just afterwards. Televisions, radios or antennae were destroyed or did not operate any longer, and mobile networks did not function. As electricity provision was as well, even recharging mobile phones became a challenge, and many people spend the first hours in their cars to keep their families warm, as outside temperatures were extremely low, but also to charge their mobile phones.

58. In the Vesdre valley, part of the population was also taken by surprise as the flooding progressed and the water rose during the night, and communication was adjusted progressively. After the disaster, a round table reflecting on crisis management was set up, and looked, amongst others, at different communication techniques, with their advantages and disadvantages in terms of approaching the population.[24]

Technique	Benefits	Disadvantages
Door-to-door done by Police	Effective in extreme emergencies Direct and human alert	Possible in a limited area Only possible if there is no immediate danger
Police loud-speaker	Effective in the event of evacuation	Takes time to alert the entire area concerned; this can create panic movements, especially during the night, and will not reach older persons hearing less well or persons under sleeping medication
Traditional media (TV, radio)	Quick alert Rapidly reaches a very large number of people	No specific area is targeted
Social media	Wide and steep diffusion We can reach specific target groups (young people, etc.)	Little impact if not followed up by the public before something happens Risk of not seeing the message in the mass of information
"BE-Alert" *(see explanation below)*	Highly targeted (street, neighbourhood, specific area); No intermediary channel: direct information from the authorities to the public; Effective for communicating urgent recommendations to the public	Less suitable in certain situations: impact on the whole country, or a situation that occurs during the night.

Figure 2: Communication techniques and their (dis-)advantages in a crisis situation; the example of Belgium

59. The Belgian "BE-Alert" network developed at national level enables information to be sent throughout the country in the event of an incident. The alert message is transmitted by the responsible authority and sent to all registered addresses. Currently, more than 80% of Belgian municipalities are registered and can use BE-Alert in the event of an incident on their territory; however, some municipalities in the Vesdre valley had not been registered back in 2021. Messages are sent via various channels (e-mail, social media, telephone or SMS) in all the country's languages and in English. In the EU context, many countries are currently developing and testing similar systems, including Spain. In Spain in particular, and in the case of emergencies like wildfires or floodings, the use of drones with speakers and/or equipped for flyer distribution to alert the population was also mentioned.

60. Recent recommendations coming from the Walloon Parliament stress the need to improve the radio network so that communication can continue even if telephone networks are saturated or faulty (with the potential risk that even radio infrastructure may be affected by a crisis). Following the most recent crisis, the possibility of having contact points and people in each district to receive and distribute information was raised. These examples show that, in any crisis, it is therefore strongly recommended to have several, alternative means of communication in place that will be effective, and to check that essential messages are properly received by the target population.

61. In addition to poor communication due to the unpredictability, scope or speed of events, and possible technological malfunctions caused by the disaster itself, particular attention must be paid to human and other technical resources for crisis response, which can also be put at risk. During a disaster, municipal services, like rescue services, can themselves be affected and be hindered in providing necessary assistance and interventions. During the Turkish earthquake, municipal services in all cities and towns were affected and could not function normally, as they deplored the loss of staff and buildings.

[24] "Organisation de la gestion de crise et la planification d'urgence en région Wallonne 20210924 _ aline thiry - uliège - spiral annexe B rapport stucky » (Organisation of crisis management and emergency planning in the Walloon region). See: https://bibliotheques.wallonie.be/doc_num.php?explnum_id=13816

62. For example, in the town of Kahramanmaraş a significant number of its municipal employees and representatives lost their lives. Others were also living in tents in sometimes precarious conditions for a while. The survivors of the disaster, including those at the heart of municipal action, were also traumatised by the violence of the event and the loss of one or more loved ones. In Hatay, all municipal buildings were destroyed by the earthquake and all services had to find unscathed buildings.[25] This created obstacles and slowed down organisation and co-ordination of the flow of operations. It is therefore necessary to think about the location and the resistance of infrastructures that are relevant to a disaster or foresee alternative solutions in a timely manner.

LA 2: Coordinate the flow of operations

63. Once again, all three case studies give positive examples of how the flow of operations can be coordinated in the direct aftermath of a disaster, so still "during" the crisis. In the context of a federal State, the Spanish local and regional authorities, supported by national authorities for the response to specific, larger disasters, seem to be well organised; stakeholders at all levels have developed refined methodologies for identifying risk and prepared special planning tools towards different risks. The city of Malaga, for example, has a general risk management plan and specific sub-plans for different risks (floods, earthquake, forest fire, etc.). Optimising crisis management has been a key priority of Spanish territories and authorities over the past years, involving professionalised, thus trained teams that are decentralised in the territory and have access to the logistic equipment needed.

64. Accordingly, different Spanish regions are well equipped with risk management infrastructures. In the case of forest fires of a certain intensity or scope, the national protection mechanisms would also set in. Coordinated by the State Committee for Co-ordination and Direction (CECOD), under the responsibility of the Ministry of the Interior and its Directorate General of Civil Protection and Emergencies (DGPCE), and with the participation of the Ministry for Ecological Transition and Demographic Change (MITECO) and the Ministry of Defence, national authorities are, for example, in charge of international co-operation and co-ordination on forest fires and other emergencies, of data collection and of developing and making available specific expertise.

Exploring crisis and emergency response with local and regional authorities at UMT and with representatives of the Ministry of Ecological Transition and Demographic Change (MITECO), Spain

65. Spanish expertise in fighting forest fires is internationally recognised, and regularly called upon for assistance to other countries (hundreds of interventions in Portugal over recent years). However, out of 10,000 forest fires affecting the country in a year, only about 300 would be large enough (i.e., exceeding the limits of one region) to require national intervention; all other incidents would rather be dealt with by the autonomous communities. The decentralised set-up and functioning, following the principle of subsidiarity, seems efficient in this case, giving the regions a wide scope of competences and responsibilities, and allowing them to adapt their crisis response activities to the local and regional cultures and territorial specificities.

[25] In September 2023, the Congress delegation was received in the Hatay Expo 2021 buildings, that were amongst the few public buildings on the hill-side still standing after the earthquake. All municipal services had been temporally relocated in this recent infrastructure.

66. The national level is always ready to come in for effective support, even though the level 3 (national) crisis management never had to be triggered in the recent past. However, smaller municipalities, like Arahal or Estepa, generally dispose of lower levels of own financial resources, which is regularly brought to the attention of higher levels of governance. In the Spanish context, the province, as a higher level of local administration, is supportive toward small municipalities. For instance, in Estepa, the recent study for a new water collector was managed by the city, but the actual construction works are entirely financed by the province.

67. In Wallonia, several types of emergency and intervention plans (PUI) are provided for: general emergency and intervention plans (PGUI), which define general guidelines and information needed to ensure the management of emergency situations, and specific emergency and intervention plans (PPUI), which supplement the PGUI with additional provisions specific to particular risks as identified during the risk identification phase. The development of these plans is the responsibility of competent administrative authorities.

68. As regards the immediate assistance, even though many municipal infrastructures and staff were affected by the disaster, Turkish authorities could largely spread their interventions. Search and rescue operations were treated as an absolute priority and large-scale national and international support mobilised in the earthquake area. The co-ordination of these operations was led by local authorities and NGOs, provincial and national authorities, and international organisations jointly, just like the provision of food shelter and immediate healthcare that were defined as the next line of priorities, just after search and rescue.

69. Despite the scope of the earthquake exceeding all expectations and emergency plans, the intermunicipal solidarity became quite instrumental at some point. Thanks to the co-ordination by AFAD, under which certain mayors were appointed “governors” for specific response areas (e.g., waste, educational services etc.) or could volunteer for helping local governments that were more affected. Effective crisis response immediately after the shocks, so still during the crisis, could also be provided thanks to the intervention of the Turkish military, which had arrived in the earthquake zone once the first co-ordination and access issues had been solved, and thanks to the presence of national and international humanitarian organisations in the region, notably Red Crescent and UNDP but also many others.

c. TH 3 “Just after”: Multilevel crisis management

70. After the emergency peak, and the phase of saving human lives, focus shifts from providing immediate emergency assistance to initiating the mid- to long-term reparation work, re-establishing institutions and services, planning the reconstruction of damaged buildings and infrastructure and starting to explore structural adaptations needed. More specifically, interventions will be needed regarding the housing conditions of people finding themselves without a roof, enterprises whose means of production are out of order, destroyed stores, damaged schools and sports facilities, municipal administrations without computer equipment, non-operational roads, bridges and railways, as well as defective networks for water supply, sewage and electricity. It will be necessary to identify and record all dysfunctionalities, to re-establish all these infrastructures for immediate and daily functioning, but also to sustainably repair them.

71. Dealing with and supporting the victims represents a considerable share of interventions, given that they are sometimes in a state of shock, over having lost someone close, and need to manage themselves without having the resources to do so. Those living in the most precarious situations are also most vulnerable in situations of crisis and stress, as they have less family to turn to, are less well insured against any events, or have no or less financial reserves to absorb the shock. It is necessary to foresee specific assistance outside of the municipal services given that the municipality is often itself affected and the municipal staff confronted to their own difficulties linked to the catastrophe. TH 3 therefore includes a deeper understanding and management of synergies (and potential conflicts) among actors, authorities, and territorial levels. The transparency of decisions and action taken *vis-à-vis* the citizens during this third stage, is crucial to maintain and reinforce collective hope and joint efforts towards the construction of a safer future.

72. In the case of the Vesdre valley, doubts emerged on the dams’ operational management in a crisis situation, and the priorities set have weakened the levels of trust between the citizens, the administrative level in charge of responding to such situations and the authorities responsible for supervising the latter. This is why the third temporal horizon is also the appropriate one to start investigating largely and deeply

the reasons and the responsibility of the event and to provide the foundations of a renewed approach to it, by drawing conclusions on what has worked out well, underlining what was missing, what did not function, and what are the consequences and responses to provide.

73. Trying to understand the events that had led to this catastrophe, various investigations have been made as of July 2021: a judicial inquiry into the causes of the flooding to understand if there was any human responsibility for the disaster and if yes who it was to be assigned to. Moreover, an independent analysis of the management of waterways during the bad weather conditions of the week preceding 12 July 2021 was undertaken, leading to the so-called "Stucky report", and a parliamentary inquiry commission on the flooding was ordered and directed by the Walloon regional Parliament.

74. Regarding the Vesdre watershed, different studies were launched in parallel at different scales and time horizons. This work, involving different spatial and temporal perspectives, was justified by the need to strike a balance between the immediate character of local needs encountered by stakeholders on the ground (i.e., the "short-term" everyday perspective) and the desire to achieve a more long-term vision and development strategy for the area (i.e. to respond to the "long-term" needs of adaptation and resilience). The complex interplay between these complementary studies generated a wealth of information, but also led to certain contradictions and a delay in decisive results that would sometimes arrive once other choices have already been made. This example shows, once again, how important is the co-ordination of short-term and long-term strategies and decisions taken at different administrative levels.

75. As part of the strategic plan for the Vesdre catchment area, the diagnostic phase (identification of infrastructural, property and psycho-social damages, identification of aggravating causes, etc.) made it possible to draw up an inventory, and also to understand the area’s potential (in terms of soil and subsequent land use, landscape structures, forms of agriculture, use of valley bottoms, etc.) to mitigate the risks involved in future floodings and droughts. At the end of this first part of the work, a map of the area's own resilience potential to flood and drought was drawn up, i.e., a map describing the area's intrinsic ability to be resilient, with, or without further human intervention.

76. Before formulating a vision of the future for the Vesdre valley area, contrasting scenarios were studied and discussed with the Walloon Region, the various stakeholders and the general public, through a process of citizen participation. “Scenario building” is a tool for exploring the future, imagining, as in this case, radical hypotheses for change and adaptation. The aim of this exercise is not to directly choose one of the scenarios developed and transform it into a vision, but to illustrate their impact scenarios and expose them to dialogue, to question their strengths and weaknesses in order to build a vision that is shared by all the stakeholders and agree on concrete directions and steps to be taken. For example, out of the four scenarios proposed for the Vesdre valley, two were highly contrasting and stimulated reflection between the territory's current organisation and governance (“business as usual” scenario) and the need to give more space to the water (“what the river wants” scenario). The first scenario was seen as a threat, while the second gave rise to lively discussions on the possibility of continuing to live at the bottom of the valley, close to the water, with a view to its possible resilience. It was finally agreed that more space should be given to the water, while at the same time transforming the buildings to adapt to future risk, thus preventing the lower part of the valley from becoming a "ghost" area, i.e. abandoned for reasons of risk exposure.

Destroyed buildings and site visit in the Vesdre valley, Belgium

77. Coming back to the situation in Türkiye, some months after the event some progress had been made on recovery. After having secured people's lives to the greatest extent possible, Turkish authorities at all levels had started assessing overall damages, reviewing disaster response plans, making cleanup and waste sorting and recycling efforts, arranging for more stable or even permanent housing (i.e., containers or provisional buildings), and organising the provision of locations and resources for economic recovery (e.g. by hosting shop-owners and services in provisional buildings). However, all representatives of local authorities met by the rapporteurs insisted on the fact that many more resources were needed to rebuild urban structures that had been entirely destroyed by the earthquake, and it became clear that historical cities could never be rebuilt according to their original substance and appearance.

LA 3: Provide short- and mid-term reparation and services

78. This third LA covers the first reparations of damages, the recording and mapping of all the damage resulting from the disaster, the restoration of basic utilities and services (e.g., electricity, water, etc.), the reconstruction of damaged infrastructure, and the development of a deeper understanding of what has exactly happened in order to be able to manage it at coherent territorial levels and units. During the whole reparation and recovery phase, it will be important to maintain an open agenda while information about the event is being gathered and keeps coming in continuously, because this is the moment to develop a deeper understanding of what happened and submit to honest criticism the transformations realised in the past, in order to start on making forecasts based on evidence and proposing directions and measures for re-orientation.

79. Applied to the example of the Vesdre valley, the reconstruction of the riverbanks affected by the violence of the Vesdre flooding started just after the flood, but most measures had been considered provisional, waiting for the result of the hydraulic simulation study at the scale of the valley. At that moment of time, reversible interventions, provisional solutions, and "light projects", alongside open public debates about the event, were considered the best actions, also from the point of view of the investments to be spent on reparation, which were meant to be made in the most coherent and sustainable manner. Only on the basis of more reliable and precise evidence, future explorations and the construction vision could actually start.

80. As regards the Turkish example again, six months after the events, all the population affected was either accommodated in container villages or in more Spartan tent villages. The intention of authorities was to offer container accommodation to victims, including the mostly Syrian refugees, to the greatest extent possible. However, in September 2023, many were still waiting for permanent housing opportunities that were under (re-)construction, hoping that they would find more viable solutions before the next winter would arrive. On the other hand, high numbers of earthquake victims who had lost their houses had left the region and were staying with family, be it in the capital Ankara or other cities.[26]

81. Equally, six months after the earthquake first educational facilities and grocery stores were operational again. Larger and traditional industries were still in the process of being rebuilt, and this would still take a lot of time in a region that had been economically very dynamic (e.g., with textile industry, food, notably ice cream production and metal crafts in Kahramanmaraş, or agriculture, food production and gastronomy in Nurdağı or Hatay). All this shows that the task of re-accommodating all earthquake survivors who had lost their homes, is massive, and would not be resolved without high levels of national and international solidarity.

82. Important to be noted in this context is the large Turkish diaspora and the fact that many people of Turkish origin in Western Europe wished to welcome their family, but that, in order to leave Türkiye, a visa delivered by the destination country was needed, whilst consulates in affected areas were closed and applicants needed to travel to the capital which made this form of solidarity yet more complicated. During disasters, it therefore seems useful to adopt more pragmatic and solidaric administrative approaches rather than a petty reading of texts governing the functioning in normal situations.

83. At the time of the Congress visit, so six months after the earthquake, overall, the cities were still very much marked by the massive destruction and the works for removing the rubble of collapsed houses was still going on in many places, with waste being taken to a few centralised locations far away

[26] This type of emigration could continue in the sense that Turkish citizens living in areas with a high seismic risk (e.g. the southern regions visited by the Congress delegation, but also Istanbul metropolitan area), and take the decision to settle permanently in other parts of the country, mainly cities (Ankara, etc.) not subject to the seismic hazard. For more information about the spatial distribution of seismic hazard in Turkish territory, see: https://www.afad.gov.tr/afet-haritalari.

from riverbeds or areas exposing the ground water tables. An assessment undertaken during the months after the earthquake had classified houses into categories according to their level of destruction (serious damage, medium damage, light damage). Notably in the preservation of houses that were only slightly or medium damaged one could see how vulnerable decision-making processes at the local level could be. This sensitive aspect could not be explored in depth, but it became evident from different discussions, that certain house owners could be tempted to take influence on the category that their building would be assigned to, to increase the chances for them to continue using it. A particular attention should be given to designing a classification system that is as clear as possible, to avoid that there is any opening or possibility for circumventing it, at the expense of the solidity of the habitat to be rebuilt and in the light of any new earthquakes in the future.

84. Likewise, the example of recent heavy floods in Andalusia, Spain, showed that short-term recovery measures, such as repairing roads and bridges or re-constructing buildings, must not detract local decision-makers from the long-term actions that will be required for adaptation strategies making the area more resilient to future climate hazards. Whilst short-term repairs are necessary to enable people to get on with their daily lives, to let a region get back to its normal function, or to preserve a strategic site for the immediate future, more long-term action has to be reflected on and ideally implemented in parallel.

85. This is well illustrated through the example of Estepa, a small municipality near Seville, visited by the rapporteurs. This small town, built on the slope of a hill, has been suffering from the consequences of heavy torrential rains on several occasions over the last five years. The dangerous side of the phenomenon is notably the flood affecting the downhill parts of the village, where the key economic and artisanal activities are located. Moreover, due to the speed at which the run-off water descends the streets of the town, houses and infrastructures are regularly damaged, networks foreseen for discharging water are saturated and the water levels increase quickly according to a phenomenon called the “bathtub”, where the evacuation is only possible if the entry points are fare above the exit points of the waters.

Steep slopes in Estepa, Spain

Re-dimensioning water evacuation systems in Estepa, Spain

86. A project prepared by the municipality and financed by the province at a level of 6 million euros (in line with the principle of subsidiarity and a certain degree of autonomy of the municipality), foresees that the municipality carries out the studies and implements the project, aimed at increasing the capacity of the downhill rainwater drainage network and re-orienting the water into a park where it can infiltrate the soils. Even though the project seems to be a step in the right direction, its efficiency in the light of the current effects of climate change and the intensification of events and their frequency remains to be seen. The new, enlarged pipe diametre meant to drain far more water, is based on a return period of heavy floods of 500 years, which does not correspond to the torrential rainfall experienced in recent years. If the rainfall continues to intensify in the coming years, even the extended system will no longer be able to absorb the water. Then, this project could soon be read as a technical response to a current problem, but it could already be outdated in the near future.

87. To deal with the eventuality of the current project being “overtaken” by the actual weather conditions, other projects requiring longer discussions, studies and implementation phases are currently being explored. They concern the upstream cause of the problem in Estepa, where the water falls and runs off, onto the upper parts of the town and the surrounding agricultural areas; thus something that could be better prevented from the very start. However, implementing such strategies requires other forms and levels of project management and governance. It means interacting more closely with various landowners and residents, finding different types of funding, and intervening in public but also private land and buildings, for example. It also means finding “space” in the city in the physical sense of the term, in its streets and public spaces, to deploy new strategies for retaining, slowing down and infiltrating water upstream. “Finding space” requires a wider ecological and socio-economic transition also in other sectors, such as the modernisation of mobility, to free up public space. Only the implementation of such multidimensional projects, taking a systemic view of cities and towns and adopting bold and innovative approaches, will also make it possible to absorb new quantities of rainfall and increase risk resilience in a sustainable manner.

88. In many cases, citizens will not be ready to wait for the authorities to initiate rebuilding efforts. In the Vesdre valley, once the urban landscape had been largely cleaned and the debris evacuated, some inhabitants immediately started themselves to rebuild and restore their homes. Some months after the July 2021 flood, the regional authority had launched a set of relevant tools for rebuilding in flood-prone areas, initiated through a ministerial circular of 23 December 2021. Two further guidance documents on construction and development in exposed areas and on sustainable rainwater management were targeted to inhabitants, companies or other activities, helping them rebuild by following certain “best practices”. However, the economic situation of many inhabitants, especially those living along the watercourse, often did not allow them, without help coming from insurance or through public subsidies, to invest in the recommended rebuilding work, that would cost more than restoring the building "as it had been before".

89. Ultimately, the sequence of operations implemented in response to a crisis, from immediate repair and protection to the implementation of long-term strategies, should be structured along the different risk management horizons. To the greatest extent possible, it should be avoided that so-called “quick wins”, i.e., rapid interventions with undeniable benefits, that are easy to implement and appear to be the only solution for reducing risk in the short term, get into conflict with long-term operations, either by competing with the latter over scarce resources or by making other operations impossible.

90. In other words, short-term action must not block or paralyse the long-term, and – in return - the long term should not be aimed at “undoing” the short-term interventions. The co-ordination between short-term and long-term action in the case of a crisis becomes one of controlling and efficiently using limited public resources, and of making public action understandable to citizens, who might not understand why immediate rebuilding would be followed by demolishing, then once again rebuilding. Incremental implementation, following a “phased” approach, will therefore ensure a more efficient and sustainable crisis response, instead of simply rebuilding as fast as possible; long-term visions should be conceived to a certain extent to determine the “walking direction” before definite rebuilding starts in crisis-struck areas.

d. TH 4 “Well after”: Reconstruction as a laboratory for innovation and change

91. The fourth TH is the one where some degree of physical, environmental, economic and social stability will have been achieved, and the reconstruction, or recovery phase, has the potential to allow a local or regional territory to revert to its normal functioning and operation. However, if reverting “back to normal” means replacing what has been destroyed with the same equipment, activities, or infrastructure, this can contain the seeds of the next crisis (“business as usual”). The crisis should, then, be the moment to critically reflect on the existing socio-economic and territorial model of development and the risk it may have produced. For example, in the Vesdre valley, a socio-economic and ecological crisis had already been observed before the disaster. Following the decline of the textile industry, the vulnerability of the population living along the rivers was and is higher than the one of inhabitants living on the plateaus. The 2021 disaster has made spatial and environmental injustice even more evident, and the reconstruction could not simply go back to “business as usual” because this would have further procrastinated addressing already visible problems and reducing evident levels of risk.

92. Another important distinction to be made when looking at crisis management cycles, is the one between “preparedness” and the issue of “well-being” of inhabitants. Whilst, in the first temporal horizon “before the crisis”, it is possible to create a condition of readiness, the long-term work of enhancing the living conditions inside a territory demands the implementation of a wide range of policies in a framework of a renewed vision for the future. The goal of preparedness is not preserving people’s health, although the fact of being ready for an event to come can save human lives. Relying on initial research into the reasons and responsibilities for a disaster and opening up to alternative development strategies are key approaches to reducing risk or preventing the production of new risks and mobilising the potential for creating better living conditions. A new alliance between a territory understood as a subject and its society and inhabitants must be conceived to be shared by all the institutional and non-institutional stakeholders.

93. Spatial, territorial, or urban planning has an important political and economic dimension. The natural disasters and climate hazards examined through the case studies reveal how urban spaces, and especially their open spaces (parks, unbuilt areas), are those where risk and crisis can be more easily managed (for example as assembly places gathering people far from buildings during earthquake) and where climate change effects can be mitigated (for example in the form of green spaces to attenuate heat islands or to allow for water infiltration). Those spaces are also under pressure by real estate development (to address housing needs, or out of commercial interests or speculation) and regularly sought to be developed as densely as possible, since they are often placed at the core of cities and of high economical value. This value should be reconsidered in the light of the benefit a territory can obtain by keeping those spaces unbuilt in term of crisis preparedness and management, and in a perspective of avoiding much higher costs in the future.

94. When it comes to urban planning and design, and all across Europe, the rules and good practices in terms of construction are regularly undermined by contractors to extend the benefits margins by allowing for the highest density or level of exploitation of an estate. For example, poor compliance with the rules and standards for building with reinforced concrete in Türkiye, notably in the past, and failure to respect prescribed maximum building heights constituted a phenomenon that has aggravated the consequences of the earthquake disaster, particularly as regards the historic fabric. Also, during the temporal horizon of reconstruction following a disaster, renovations or extensions of individual houses do not necessarily follow the highest standards or good practices in terms of construction and adaptation and resilience-building towards risks. In the Vesdre valley, for example, many citizens have been renovating their house as it was before, without following the recommendations of the previously mentioned references and guidelines, often due to a lack of money, but also because insurances would finance repair works following damage but not investments to mitigate risks. These observations highlight the need for innovation in terms of techniques, governance and funding for these operations, but also democratic control of building procedures and building permits.

LA 4: Develop a vision for long-term transitions

95. New visions, protocols, and action plans will be part of the LA promoted for TH 4. Based on the development of prior scenarios, long-term visions will lay out to make the necessary socio-economic and ecological transition happen. Like the whole European territory, the areas affected by disasters and hazards must also continue to pursue the common goals of reducing CO_2 emissions, energy footprints and levels of land consumption, as well as putting a halt to the impoverishment of natural resources (soil, water etc.) and agriculture.

96. The process of jointly elaborating a shared vision, will be the moment to discuss the fundamental shifts required (political, cultural and related to land use and development) that might inspire an innovative development project well embedded in the qualities and characteristics of a given context, which is regularly the new context of visible climate change in Europe. Co-operation should be strengthened at the local level, including with civil society and organisations of volunteers, and new levels of governance should possibly be imagined that are better suited to the functioning of the ecological system (for example the sub-watershed basin as a community-based scale, where water management and territorial care are organised by several municipalities jointly) or better corresponding to the scope of actual challenges (for example in better organising fire services response in wild-fires that exceed the territory of one municipality). With a shared vision towards the future, it will be easier to develop activities aimed at obtaining new resources, creating partnership, implementing coherent strategies and finally strengthening resilience to further disasters. In the face of uncertainty, lack of political willingness or courage to adopt new approaches or long-term visions, “laboratories of transition” could be important tools to achieve urban, socio-economic and governance innovation.

97. In the case of the Vesdre valley, the current ambition is the implementation of a “laboratory of transition”, opening it to the attention of political leaders and the wider public. The current pre-election period is not the ideal time to take structural decisions, but it is rather the right time to stimulate reflection, put forward clear proposals that the various decision-makers can take on board to position themselves and prepare the ground for future action. Once again, the gap between political timeframes and the actions taken by citizens, associations and local authorities must not represent an obstacle in thinking about and designing the tools that will enable resilient and mutually supportive reconstruction, adaptation and preparation for future crises.

98. A key theme raised by the “laboratory” concept pursued for the Vesdre valley concerns the levels of governance and action in terms of territorial resilience and solidarity. In this case, it is proposed to work around “risk communities”, which must be coherent in terms of the hazards present and in a position to provide adapted and effective responses. Having worked on all the catchment area previously, it now seems appropriate to develop specific strategies at sub-catchment level, following each tributary of the main river. These sub-basins are also the scale at which daily life and activities take place and at which associations and citizens organise themselves. So, this work on an intermediate, yet intermunicipal scale, the so-called “constellations”, placed somewhere between region and municipality levels, proposes a coherent and effective relationship between hazard, risk, geography and human activity which may serve as a model for other territories.

99. Another example of a coherent territorial management scale, enabling strategies and actions to be put in place, is the Guadalquivir Hydrographic Confederation in Andalusia (and other Confederations in Spain), comprising the entire catchment area of the river. This Confederation, under regional aegis but with political independence in decision-making, takes account of all water systems and resources, without dividing them into different classes or managers. It coordinates and involves all water-related stakeholders (farmers, industry, natural parks, etc.). In this way, the Confederation can manage the whole area in terms of water quality, drinking water reserves and irrigation in a transversal manner, and propose solutions to drought and water shortages. This governance body could also take part in a long-term reflection on the development of the area, in terms of its dependence on water, the management of its productive areas and its economy.

100. Spain provides a number of good practices for long-term climate change adaptation and reduction of energetic footprints. Already before 2011, the Environment Council and the Federation of Municipalities and Provinces of Andalusia were organising the “Ciudad 21” programme, then becoming “Ciudad Sostenible”; a programme regrouping almost 300 municipalities to implement of over 600 urban development projects. Andalusia reports a 10% reduction in its emissions from 2018 to 2019 alone, due to an increasing transition from coal to renewables. The development of renewable energy is also the main reason behind the drop in the region’s emissions from 2005 to 2017 (-21.7%). In 2017, renewables represented 38.8% of total electricity production in the region with 22 power plants alone produce 22.77% of the country’s energy production.[27]

101. With regard to actions for innovation and change, based on new visions, it was too early to perceive such approaches in Türkiye, as authorities, organisations and people in the earthquake zone were still very busy re-covering from the past trauma, the massive destructions and getting back to the normal functioning of their cities and towns. The level of despair over almost 60,000 deaths and the total vanishing of entire historical cities was too high to develop or share overall visions for the future, and there was a general call for more international solidarity and resources to help the cities and towns in their rebuilding efforts.

102. Nevertheless, notably during the visits to Hatay and the subsequent Istanbul conference, ideas were put forward for strategies and levers for action. For example, the metropolitan municipality of Hatay, as one of the oldest cities in the world, which is proud of its culture, including its gastronomy (recognised by UNESCO), wants to rebuild itself with respect for both its intangible and built cultural heritage. In this respect, Hatay plans to base and boost its reconstruction project on its assets, which are synonymous with the development of its attractiveness to investors, and there seems to be common agreement that a specific vision would be needed. One of the objectives in this context is to avoid “trivialising” reconstruction, by simply following earthquake-resistant architectural models currently developed at national level by the Turkish government. From the point of view of local authorities, such top-down architectural designs, cannot satisfy the cultural characteristics of each province, city or town and need to be adapted to each specific historical and cultural context.

[27] See Global Synthesis Report on Local Climate Action 2021 and 2022, by Climate Chance, Paris: https://www.climate-chance.org/en/about-us/.

103. The February 2023 earthquake was a major rupture in the development trajectory of the metropolitan municipality of Hatay. Today, the city is trying to capitalise on what had been initiated before the catastrophe and wants to boost its appeal. In their relationship with the central government (sometimes of different political colour from the local one), some municipalities are working towards greater independence in their reconstruction plans and projects, with the intention of avoiding being subject to "standardised" architectural styles or urban projects. Whilst, in the face of such an enormous disaster, it seems fully legitimate and necessary for a central government to contribute to organising reconstruction and to provide resources. It is important to regularly recall that this must happen in close co-operation with local and regional authorities who have better knowledge of their territories and whose role will therefore be complementary to enable the organisation of reconstruction by respecting the specific characteristics of the area concerned, taking also into account the specific expressions of climate change and related hazards that may differ from one territory to the other.

104. Resilience, balanced territories and risk culture are central notions of this report, resulting from the observations made through the case studies and in the field. They will be further developed in the conclusions as cross-cutting and interconnected concepts that will be instrumental to structure all the dimensions of and responses to a crisis and could actually be turned into a true “crisis response model” to serve as a “check-list” to tick off on essential action required in response to crisis situations at local and regional levels.

4. CONCLUSIONS: FROM CRISIS PREPAREDNESS TO RISK CULTURE AND RESILIENCE

105. In upcoming years, Europe will be forced to face further natural disasters and climate hazards. Whilst purely natural disasters remain an incalculable risk, the continent and individual Council of Europe member States will not be in a position of solving climate-related challenges in the short term and on their own, but a huge, concerted effort will be needed, combining short-term and long-term visions in a systemic and comprehensive approach. This report by the Congress of Local and Regional Authorities of the Council of Europe is meant to provide notably local and regional authorities with guidance and tools prepared in the light of the management of three disasters, to help them increasingly integrate a culture of crisis and risk anticipation, preparation, management and resilience into their territorial development strategies.

a. Upholding principles of democratic governance in times of crisis

106. There is a growing recognition of the pivotal role played by local and regional authorities in safeguarding human rights, democracy, and the rule of law during crises. Fundamental principles are often tested during crises, as demonstrated in the case studies. Examples from Türkiye reveal difficulties with seismic construction rules, their full implementation and risks linked to economic real estate interests. [28] Parallel subsistence economies, black markets, and accentuated socio-economic imbalances may emerge in crisis-affected areas.

Socio-economic impacts and vulnerabilities

107. Climate change and disasters exacerbate socio-economic imbalances, as evidenced in the Vesdre valley, where the poorest were proportionately much more affected. Similarly, in Andalusia,[29] water-related economic concerns highlight the inadequacy of temporary interventions in the context of climate change. Criminal activities, including looting and arson, may increase during crises, emphasising the need for comprehensive risk reduction strategies that include public security measures.

Public health and psychosocial impacts

108. Public health, encompassing both physical and mental well-being, becomes a major concern post-crisis. Survivors of earthquakes and floods experience injuries and psychological trauma, affecting different generations. The fear associated with risks can shape a shared "culture of risk" and solidarity,

[28] See for example: https://www.ft.com/content/6113a9d2-25d4-4329-bb6a-0a50b1cff30c; https://www.theguardian.com/global-development/2023/feb/07/turkey-earthquakes-death-toll-prompts-questions-over-building-standards.

[29] Water Supply in Andalucia - Confederaciones Hidrográficas, https://www.andalucia.com/living/water-supply/hydrographic-confederations#google_vignette.

but it can also open the door to potential populist manipulation.[30] An effective crisis response must take into account the "invisible" effects on mental well-being, allocating resources accordingly. Likewise, the diverse consequences of climate change on different categories of population and in particular certain vulnerable groups need to be kept in mind, for example the effects of extreme heatwaves on older persons or persons with disabilities.[31]

The role of media and education in crisis response

109. Media, including mass media, local outlets, and social networks, play a crucial role in disseminating information during all phases of a crisis. However, misinformation, the dissemination of rumours or fake news, can lead to tensions between citizens and authorities. Long-term perspectives suggest that various forms of journalism, including documentaries, contribute to collective memory and education.[32] Public education, especially in primary schools, becomes essential for raising awareness about climate change, with a focus on equal access to information.

Ensuring equality and human rights in crisis response

110. Crises affect diverse populations indiscriminately, underscoring the importance of equal protection and assistance. Vulnerable populations, facing economic, health, or political challenges, are particularly at risk. A human-rights-based and democratic crisis response should ensure equality throughout all temporal horizons. Adhering to the highest standards of human rights, democracy, and the rule of law is not only an objective in itself but also enhances the effectiveness of crisis response, builds trust, and fosters stable and peaceful societies, even in times of crisis.

Citizen and youth participation as fundamental action

111. In this respect, citizen participation is a democratic practice to be developed throughout all TH of the crisis cycle, as citizens themselves will be instrumental in providing support to others, and in participating in the elaboration of sustainable solutions, as the example of the Vesdre valley showed. Involving citizens into the development of future visions and strategies, will contribute to constituting a basis of political willingness and preparing upcoming strategic decisions to be taken towards innovation and change.

112. The involvement of young people is particularly important here: to build truly resilient cities, youth engagement and awareness-raising through workshops, campaigns and local youth councils or youth organisations should be implemented well before a crisis situation arises, then again during the crisis by involving them in crisis response plans and teams and explain the implications of sometimes painful crisis responses to them in the most transparent manner. Finally, young people will be an important resource for recovery initiatives and community-based rebuilding projects, not only because young people will be sensitive to innovative ideas, but because any crisis response will be an investment for their future.[33] However, in a broader context, it will also be important to follow an intergenerational approach, accompanied by a joint reflection on resilience.

b. Crisis as tipping points for local and regional adaptations to risk and climate change

113. The complex cyclical and systemic nature of crises should incite policy makers to start, as of now, implementing adaptation strategies and measures to different ongoing changes. It is not because the date of the next crisis is not yet known that everyday business already binds a lot of activities and resources, and that time is an important factor for a profound change, that society should deal with short-term symptoms only and otherwise “sit and wait” for future crises. Even where natural disasters or climate hazards may be unavoidable, and prevention is not sufficient, negative and sometimes dramatic effects may be mitigated by including the notion of risk in decision-making and planning processes and by getting better prepared for potential events.
The accelerating impact of climate change on global stability

[30] On these themes: Patrick Boucheron & Corey Robin, 2015, *L’exercice de la peur. Usages politiques d’une émotion*, Presses Universitaires de Lyon.
[31] Spain: Inadequate Response to Heatwaves | Human Rights Watch (hrw.org) 26 June 2023,
[32] See for example the work of journalist and documentary film-maker Quentin Noirfalisse and Jérémy Parotte. See for example : https://www.vedia.be/www/video/info/quentin-noirfalisse-medor-quot-a-present-reparer-la-riviere-quot_112879_272.html
[33] “Building resilient cities – youth engagement”: written contribution submitted to the Current Affairs Committee during the October 2023 session, by the 2023 Congress Youth Delegates.

114. The four TH of crisis response are part of a model including adaptation and resilience-building with regard to future risks (earthquakes and other spontaneous natural disasters) and to a context in transition (climate change and the societal adaptation needed). Evidence increasingly shows that one of the main sources of current and future hazards (with an accelerating effect) is climate change, which ultimately threatens the conditions of habitability and human survival in a number of territories, and in the meantime undermines global stability and peace, not least to migration flows that may be caused by climate change.

A call for comprehensive mitigation and adaptation strategies

115. In the light of the multiplication of natural, but also “man-made” disasters and climate hazards, and next to other crisis situations (war, public health crises etc.), comprehensive mitigation and adaptation strategies should be developed now, including short-term and long-term perspectives and action. Accordingly, the four TH of crisis intervention and the four LA are proposed to be the starting points for initiating a profound ecological, social and economic transition.

Anticipatory action and mitigation of simultaneous risks

116. Human action taken in all TH must be aimed at anticipating and responding to risks, and at mitigating the superimposition and simultaneity of events (e.g. earthquake and floods in Türkiye; drought, flood and structural poverty in the Vesdre valley; water restrictions, mono-cultures fields and highly specialised economies in the south of Spain), notably in the presence of aggravating factors (weather, geographical accessibility, political situation, etc.) and in order to counter chain reactions (collapse of the economy and production, further political problems and instability, degradation of human dignity, etc.). Decision-makers in all Council of Europe member States should be aware that one crisis can trigger further critical events and aggravate the situation in a local community, a region or a whole country.

Crisis perception as a tipping point for transitions

117. The perception of crises as a tipping point, triggering innovation and change, can therefore be a breeding ground for a territorial transition that takes full account of natural risks and the effects of climate change. A joint movement and a global dynamic towards a better resilience and risk culture needs to be build up – it needs to start at the very local level where crisis situations affect the individual citizen.

c. Territorial dimensions of risk and risk management

118. The analysis of three case studies underscores the inherent territorial dimension of "constructed" natural disasters, especially climate hazards, across four TH. This dimension is pivotal for all four LA, encompassing territorial management, spatial planning, and risk-specific education programmes. Territorial adaptation is highlighted as a key strategy to diminish the impact of risks, including those associated with purely natural disasters. Moreover, mitigation and innovation strategies play a central role in curbing climate hazards and their consequences.

Challenges in long-term adaptation

119. Examining the Vesdre valley case reveals the exacerbation of flooding due to urbanization, emphasizing the need for a change in development priorities. Urgently required is a political shift in prioritizing the regeneration and transformation of existing urban areas over new developments, echoing policies like "zero net land consumption" by 2050. [34] However, these approaches pose significant challenges in governance, project management, and land value. The importance of long-term adaptation strategies is reiterated, emphasizing the necessity of preserving strategic spaces within cities facing economic and real estate development pressures.

[34] For the Walloon case, see: https://orbi.uliege.be/handle/2268/305374
For example, see the work carried out by the University of Liège as part of the Vesdre strategic plan "Planological approach". 3 perimeters are proposed in order to reduce the potential for urbanisation of the area in relation to the risk of flooding and drought: Town planning vigilance areas, Land vigilance areas and Sector Plan Review Perimeters: https://lampspw.wallonie.be/dgo4/site_amenagement/index.php/site/inondations/schema-vesdre.

Urban planning for ecological and socio-economic transitions

120. Adaptation strategies must be prepared and implemented at all territorial levels, addressing challenges such as economic and real estate development pressures in cities. Finding new spaces in urban structures to support socio-economic and ecological transitions is a complex challenge, exemplified by the transformation of Madrid's Manzanares river.[35] This case illustrates the need to rethink the place of car mobility in modern cities and its impact on open and natural spaces. Working on risk reduction involves developing synergies and common strategies, encompassing socio-economic, ecological, and climatic transitions.

Visit to the re-naturalisation projects on Rio Manzanares, Madrid, Spain

Learning about the comprehensive urban planning approaches followed for Rio Manzanares, Madrid, Spain

Balancing urbanisation and risk reduction

121. The case studies reveal the intricate relationship between urbanization, risk, and environmental impact. Concentrated population growth in hazard-prone areas, exemplified by Istanbul's hyper-dense metropolis, poses earthquake risks. Conversely, the "desertified" countryside, like Spain's Castilla y Mancha region, lacks resources to combat hazards, such as forest fires. The ongoing rural exodus and population concentration within cities contribute to increasing risk, highlighting the need for new territorial balances to ensure sustainable local development.

Territorial governance for effective crisis management

122. Policies, utilities, and infrastructures must address the territorial dimension in any constructed disaster or hazard. Determining the correct levels of reflection and intervention is crucial for local and regional authorities. Effective crisis management necessitates inclusion at all levels of decision-making and territorial governance, with decentralization enhancing efficiency. Recent cases underscore the importance of territorial solidarity in crisis response across various administrative levels, emphasizing its role in all temporal horizons of crisis response, not just during emergencies.

d. Towards resilience, the construction of a risk culture

123. The report emphasises that immediate responses to crisis situations are essential for providing urgent assistance and preventing further harm. However, it underscores the need to move beyond short-term measures and address the root causes of crises. The challenge lies in differentiating between immediate responses and long-term actions, particularly concerning natural disasters like earthquakes, where predictions are challenging. Urban planning and design, coupled with effective decision-making mechanisms, are vital for mitigating the effects of natural disasters. Yet, the magnitude of this task is substantial, especially for historical European cities requiring reinforced built habitats.

[35] In order to open up and renaturalise the previously canalised Manzanares river crossing Madrid, and develop new landscape continuities in the “Calle 30” project (a project visited by the Congress delegation in December 2023), 6 km of urban highway have been moved underground, involving significant investments. See: https://www.madrid.es/UnidadesDescentralizadas/UrbanismoyVivienda/Urbanismo/MemoriaDeGestion2006/ActuacionesSingulares/Ficheros/C05.pdf.

Paradigm shifts for climate hazard resilience

124. For climate hazards, preventive actions offer a larger margin, highlighting the necessity for a paradigm shift in urban development. The report stresses the importance of addressing root causes collectively at national and European levels. Strategies must extend beyond altering constructible zones or architectural styles and delve into systemic changes. Shifting towards circular economies and sustainable practices, like water recycling in Andalusian olive production, is proposed. This shift demands bold political initiatives and the recognition of exemplary practices as guiding lights in Europe's adaptation to the changing climate.

Challenges to societal paradigms and economic models

125. Current crises should evoke a reflection on models and practices of urban development, on support to agricultural practices, on the evolution of mass tourism, and question the fundamental societal and economic paradigm centered around wealth creation. The key question of the future of modern societies will therefore be how to maintain a balance between the conditions of habitability and production systems, whilst preserving peace at a global scale.[36] The widening gap in wealth distribution globally and locally further complicates the issue. Balancing habitability conditions and production systems while ensuring global peace becomes a 'fundamental parametre for the functioning of modern societies.

Territorial solidarity and societal transformation

126. The report advocates for resilience and solidarity, emphasising their symbiotic relationship. Territorial solidarity, involving individuals, communities, and territories, is identified as essential for effective crisis response. The development of a shared risk culture, grounded in resilience and solidarity, constitutes the basis of a change in mentality and behaviour, as well as a change in the parametres to be considered for territorial planning decisions. Non-governmental organisations and local associations play an important role, contributing not only during crises but across all temporal horizons.

Countering fear, misinformation, and building a risk culture

127. The report highlights the importance of preventing the instrumentalization of collective fear and uncertainty. Political constructions of fear and populist deviations are identified as threats that must be intercepted. Lack of knowledge often leads to the search for scapegoats, hindering adaptation efforts. Political decision-makers are called upon to transparently communicate the real causes of crises, dispelling beliefs and fostering a risk culture based on evidence and shared responsibility. Initiatives like public digital platforms[37] and applications are cited as tools to combat misinformation and build a collective understanding of risks, reinforcing democracy and the rule of law even in crisis times.

Resilience and risk culture

128. This report accentuates the profound influence of resilience and risk culture in shaping effective responses to crises. While immediate measures are indispensable, a more enduring approach involves cultivating resilience to systematically address root causes. This extends beyond short-term relief efforts, particularly for natural disasters like earthquakes, where predicting precise timing and scope remains challenging. Urban planning and design, coupled with efficient decision-making mechanisms, are identified as essential components of this resilience strategy.

129. Concurrently, the development of a risk culture emerges as a crucial element for long-term resilience. It involves instilling a shared awareness and understanding of risks, fostering a collective vision for sustained adaptability and crisis preparedness. This symbiotic relationship between resilience and risk culture forms the bedrock of a transformative approach to crises, encouraging a comprehensive and proactive mindset that transcends individual events. The collective experiences during crises become catalysts for societal debates, encouraging a bottom-up approach to resilience that embraces a culture of risk, promoting collective responsibility and the transformation of mentalities and behaviours.

[36] On the Emergence of an Ecological Class: A Memo (Latour, 2022).
[37] See: https://www.mapaclima.es/?variable=temperature_avg&year=2015-2040

5. CONCRETE ACTIONS TO BE TAKEN BY AUTHORITIES AT ALL LEVELS

130. For local and regional territories to provide effective responses to crises, notably natural disasters and climate hazards, and to develop the capacities allowing them to become more resilient in the face of such events in the future, the rapporteurs strongly recommend that the competent local and regional authorities take a comprehensive view and approach towards any crisis situation potentially expected or actually encountered. Such a comprehensive approach implies systematically keeping an eye on the full "crisis management cycle". It is proposed to do so by addressing the following four lines of action (LA) and temporal horizons (TH):

- TH 1 "Before the crisis": Identification of risks and risk-preparedness:

  LA 1: Get prepared, develop an approach and build solidarity

- TH 2 "During": Immediate emergency assistance

  LA 2: Coordinate the flow of operations

- TH 3 "Just after": Multilevel crisis management

  LA 3: Provide short- and mid-term reparation and services

- TH 4 "Well after": Reconstruction as a laboratory for innovation and change

  LA 4: Develop a vision for long-term transitions

131. In all these dimensions of crisis response, local and regional authorities should foresee a mix of material, administrative and other measures, as appropriate in the light of their current level of exposure to risk and the types of risks or actual events faced by their specific territory. It will, moreover, be important that they systematically combine and coordinate the most effective short-term action with a more long-term vision, strategies and measures, to ensure that any investments made in reconstruction or recovery will be efficient and sustainable insofar as they anticipate future crisis situations. The case studies have shown, for example, that it will not be sufficient to provide victims of a disaster with provisional shelter or housing opportunities, but that long-term housing solutions must rely on urban planning and design that ensure that buildings are resistant to future disasters or avoid those urban zones where future events are expected to take place.

132. From an administrative or governance point of view, all authorities involved in crisis response should ensure that effective vertical co-ordination mechanisms involving different administrative levels (State, region, municipality) are being set up to develop shared tools aimed at preparing for and intervening in crisis situations (data collection, exchange of good practices nationally and internationally, development of expertise and trainings). They should also aim at developing horizontal co-operation mechanisms, notably at local and regional levels, but also across regional borders, that are well-defined, based on a clear division of responsibilities and regularly reviewed, and that involve relevant stakeholders in a meaningful and stable manner (public authorities, NGOs, private companies, academia, citizens etc.); in some cases, the setting-up of specific co-operation levels and bodies may even be useful if crisis situations require responses exceeding the limits of one territorial unit.

133. In the perspective of striving for better crisis preparedness in different territories, useful measures to be taken could include:
- organising the exchange of experiences and good practices at all levels (local, regional, national and international, and cross-border),
- involving academia into the search of innovative solutions,
- providing platforms initiating a dialogue on current consumption patterns and their consequences, and on necessary socio-economic urban and ecological transitions, and
- exploring innovative approaches to crisis response ("laboratories of transition").

134. Planning and decision-making processes in local and regional territories should follow the highest democratic standards and best practices, as regularly promoted by the Congress, also in crisis situations. This should include ensuring the regular involvement of citizens and fostering youth participation throughout the crisis management cycle. With regard to potential risks or actual disasters, consistent, multidisciplinary and transparent decision-making procedures should be designed to stand as safeguards against any violations of human rights, democratic principles and the rule of law. Accordingly, the capacities of crisis preparedness and response of institutional services, their staff and their partners, should be continuously improved, including by providing specific training on expected risks and measures.

135. Public action taken in the face of risks and disasters also requires raising awareness and increasing risk-preparedness of the larger public as soon as potential crisis situations have been identified or are expected and involving citizens themselves and civil society organisations in the crisis response as those affected often have the best understanding of people's needs. At any time in the crisis management cycle, it will be important to communicate about expected or ongoing crisis situations, as well as their consequences and measures to be taken in response to the crisis, in the most transparent manner, on the basis of precise and regular information coming from local and regional decision-makers, and by making use of various types of media, without fuelling fear and anxiety.

136. The rapporteurs are convinced that increasing public awareness and communicating in the most consistent manner will contribute to strengthening the resilience of local and regional territories to crisis situations, including natural disasters and climate hazards, through the development of risk cultures, by reconnecting people to their territory and helping them develop a deeper understanding for its specificities, and through the mobilisation of solidarity at all levels – within a community, and between local and regional territories, and States.

Annex I :
Programme of the Congress study visit to Türkiye

STUDY VISIT TO TÜRKIYE
OF THE CONGRESS OF LOCAL AND REGIONAL AUTHORITIES
OF THE COUNCIL OF EUROPE

6 - 8 September 2023

PROGRAMME[38]

Congress delegation:

Rapporteurs

Jean-Paul BASTIN	Rapporteur on local and regional responses to major crises report (Belgium, L, EPP/CCE) Substitute Member of the Current Affairs Committee, Mayor of Malmedy (Belgium)
Christian DEBÈVE	Rapporteur on local and regional responses to major crises report (France, GILD/ILDG) Member of the Current Affairs Committee, Member of the Regional Council of the Grand Est Region, Chairman of the International Relations Committee of the Grand Est Region (France)

Council of Europe Secretariat

Maren LAMBRECHT-FEIGL	Secretary to the Current Affairs Committee, Congress

Expert

Étienne SCHILLERS	Architect, StudioPaolaViganò, Brussels

Wednesday, 6 September 2023
Ankara

Information about Post-Disaster Activities of the UMT
Address: Kavaklıdere mah. Tunus cd. No:12 Çankaya / Ankara

Dr Hayri BARAÇLI, Secretary General, UMT
Dr Ahmet KAZAN, Deputy Secretary General, UMT
Halil İbrahim AZAK, Deputy Secretary General, UMT
Kayhan ÖZÜM, Deputy Secretary General, UMT
Dr Ramazan Özcan YILDIRIM, Deputy Secretary General, UMT
Gülfem KIRAÇ KELEŞ, Head of Foreign Relations Department, UMT
Cemal BAŞ, Deputy Head of the Congress Delegation, UMT

Roundtable Meeting (with UNDP, IOM and Turkish Red Crescent)
Location: UMT, Meeting Room 0

Miodrag DRAGISIC, Deputy Resident Representative, United National Development Programme (UNDP)
Seher ALACACI, Assistant Resident Representative, United National Development Programme (UNDP)
Aslan Turgut BULUT, Director of Disaster Recovery, Turkish Red Crescent
Martin LEGASSE, Senior Emergency Coordinator, International Organization for Migration (IOM)

[38] Organised with the kind support of the Union of Municipalities of Türkiye (UMT)/Türkiye Belediyeler Birliği (TBB)

Disaster and Emergency Management Presidency (AFAD)
Address: Üniversiteler Mah. Dumlupınar Bulvarı No: 159 06800 Çankaya/ Ankara

Gökhan YILMAZ, Chair of Planning and Risk Reduction Department
Other representatives of the Department

Ministry of Environment, Urbanization and Climate Change
General Directorate of Local Governments Visit
Address: Mustafa Kemal Mahallesi 2082. Cadde No:52 Çankaya / Ankara

Turan KONAK, Director General of Local Authorities

Thursday, 7 September 2023
Gaziantep and Kahramanmaraş

Gaziantep Metropolitan Municipality

Fatma ŞAHIN, Mayor, Gaziantep Metropolitan Municipality
Osman TOPRAK, Deputy Mayor, Gaziantep Metropolitan Municipality

NGOs operating at local level

Kahramanmaraş Metropolitan Municipality

Hayrettin Güngör, Mayor, Kahramanmaras Metropolitan Municipality

NGOs operating at local level

Friday, 8 September 2023
Nurdağı and Hatay

Nurdağı Municipality

Yakup BAHAR, Deputy Mayor, Nurdağı Municipality

Hatay Metropolitan Municipality

Doç. Dr. Lütfü SAVAŞ, Mayor, Hatay Metropolitan Municipality

Meeting with the Secretary General of the
Union of Municipalities of Türkiye (UMT/TBB)

Annex II :
Programme of the Congress study visit to Spain

STUDY VISIT TO SPAIN
OF THE CONGRESS OF LOCAL AND REGIONAL AUTHORITIES
OF THE COUNCIL OF EUROPE

18-20 December 2023

PROGRAMME[39]

Congress delegation:

Rapporteurs

Jean-Paul BASTIN	Rapporteur on local and regional responses to major crises report (Belgium, L, EPP/CCE) Substitute Member of the Current Affairs Committee, Mayor of Malmedy (Belgium)
Christian DEBÈVE	Rapporteur on local and regional responses to major crises report (France, GILD/ILDG) Member of the Current Affairs Committee, Member of the Regional Council of the Grand Est Region, Chairman of the International Relations Committee of the Grand Est Region (France)

Council of Europe Secretariat

Maren LAMBRECHT-FEIGL	Secretary to the Current Affairs Committee, Congress

Expert

Étienne SCHILLERS	Architect, StudioPaolaViganò, Brussels

Monday, 18 December 2023
MADRID

Meeting with representatives of the Ministry of the Ecological Transition and Demographic Challenge

María Torres-Quevedo, Sub-Director
Angela Iglesias, Head of Services

Ministerio para la Transición Ecológica y el Reto Demográfico
Venue: Plaza San Juan de la Cruz, 10, Madrid

Meeting with representatives of the Directorate General of Civil Protection and Emergencies (DGPCE), Ministry of the Interior

Benjamin Salvago, Deputy Director for Prevention, Planning and Operations
Cristina Marugán Güemez, Coordinator of International Relations
Other staff members: José Luis Rubic, Carlos Garcia, Carmen Cabo

Venue: DGPCE, Quintiliano 21, Madrid

[39] *Organised with kind the support of the Spanish Federation of Municipalities and Provinces (FEMP)*

Field visit to the Río Manzanares in Madrid - a river naturalization project as an urban development responding to climate change

Ricardo Iglesias, City of Madrid
Nieves Vicente, Director/Conservator Parque Lineal del Manzanares
Santiago Fernandez Malaga, Head of International Relations Section of the City of Madrid
Fernando Porras, Architect of Estudio Porras e Isla

Venue: Casa del Reloj de la Junta Municipal de Arganzuela. Paseo de la Chopera, 10.

Roundtable meeting at FEMP with various local and regional stakeholders, in particular the representatives of:

Francisco Díaz Latorre, Director General de Servicios Jurídicos y Coordinación Territorial de la FEMP
Francisco Javier Vázquez Requero, Vicepresidente 1º de las Cortes de Castilla y León y miembro del Consejo de Europa y miembro del CPLRE
José Luis Sanz Merino, Delegado territorial de la Junta de Castilla y León in Segovia.
José María Bravo Gonzalo, Vicepresidente de la 1ª Diputación Provincial de Segovia.
José Benlloch, Alcalde de Vilareal y Presidente de la delegación española CPLRE 2019-2023
José Francisco Herrera, Ayuntamiento de Madrid
Miguel Cebrián Porosón, Ingeniero de Montes del Ayuntamiento de Torremocha de Jarama (Madrid)
Mr. Francisco Hernández de la Cruz, Alcalde-Presidente del Ayuntamiento de Mombeltrán
Marta Ortiz-Arce Vizcarro, Iberia Partnerships Manager Land Life Company
Joana Fernandes, Iberia Partnerships Manager Land Life Company

Venue: FEMP headquarters, Villa de Madrid, Calle del Nuncio, No. 8, Madrid.

Meeting with the Director General of Legal Services and Territorial Co-ordination of the Federation of Spanish Municipalities and Provinces (FEMP)

Tuesday, 19 December 2023
DONANA NATIONAL PARC, JUNTA DE ANDALUSIA (SEVILLA)

Visit of Donaña National Park

Juan Pedro Castellano, Director of the park,
Miguel Ángel Bravo, Park curator
José Juan Chans, Manager

Venue: La Rocina situado en Carretera, A-483, Km. 27, 5, 21750 El Rocío, Huelva

Confederación Hidrográfica del Guadalquivir

Joaquín Paez Landa, President of the CHG
Nuria Jiménez, Technical director
Gloria Martín, Secretary General
Alejandro Rodríguez, water commissioner
Víctor Cifuentes, Chief of Hydrological Planning

Venue: Plaza de España, Sector II y Sector III, C.P. 41071, Sevilla (España).

Junta de Andalucía:

Sergio Arjona Jiménez, Vice-Councillor

Venue: Avda. Manuel Siurot, 50, 41013 Seville

Wednesday, 20 December 2023
ARAHAL, ESTEPA, MALAGA

Representatives of Arahal municipality
followed by field visit to the H2OliveTree Project

Ana María Barrios Sánchez, Mayor
José Antonio Linares Fernández, Technical Director of ARECIAR
Francisco Javier Rosado Segura, Technician of Arahal City Council
Gonzalo Martínez García, Technical Director of the project UCO
Teresa Benítez Lora, Manager of the GDR (group of rural development) Serranía Suroeste Sevillana

Venue: Plenary Hall of Arahal Town Hall

Representatives of Estepa municipality
followed by field visit

Antonio Jesus Muñoz Quirós, Mayor
Gamito Rodriguez, town councillor in charge of urban development
Staff members

Venue: Pl. del Carmen, 1, 41560 Estepa, Sevilla, España

Representatives of Malaga municipality

Francisco de la Torre, Mayor
Penelope Gómez, Delegate Councilor of the Environmental Sustainability Area
Avelino Barrionuevo, Delegate Councilor of the Security and Civil Protection Area
Juan José Denis, Manager of the Municipal Water Company (EMASA)
Fran De Juan Fernández, Prevention Technician of the Municipal Water Company (EMASA).
Juan Antonio Ferrer, Chief Mayor of the Local Police
Juan Antonio Benítez, Head of the Civil Protection Service of the Malaga City Council
Salvador Castillo, Head of Prevention, Fire Fighting and Rescue Service

Venue: Av. Cervantes, nº 4 – 29016, Málaga. 1st Floor, Sala Azul.