FutuResilience
Building sustainable futures together

D4.3 Policy briefing report

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Abstract: This report presents the policy implications of the FUTURESILIENCE project in light of the preliminary results, encompassing the beta version of the knowledge base and toolbox, along with the early activities of the experimentation phase. Emphasizing the pivotal role of evidence, the report illustrates the formulation of policies directed towards enhancing preparedness and fostering societal resilience, serving as an exemplary instance of knowledge valorisation.

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1 Introduction

The FUTURESILIENCE project aims to strengthen Europe's economic and social resilience and, thereby, its ability to respond quickly to future crises. This aim will be accomplished by facilitating the fast and effective use of policy-relevant research and innovation (R&I) findings for national, regional and local actors. At the project's core, an experimentation phase will include ten pilot cases called "FUTURESILIENCE Labs". The labs will work on diverse societal challenges that different crises may impact. Facilitated by consortium partners, the labs will discuss and co-create solutions aiming to build societal resilience. During this experimentation, multiple stakeholders will discuss and test evidence-based strategies tailored to their specific context and matching their local needs.

This deliverable describes the policy implications of the preliminary results of the FUTURESILIENCE project, including: the first policy brief (section 2) and the first policy roundtable held online on 30th November 2023, which also presents an overview of achievements and challenges of three FUTURESILIENCE labs (section 3). Section 4 of this report discusses future challenges and opportunities in policymaking and outlines initial recommendations that will ultimately feed the policy roadmap (D.4.6 expected on M36).

2 FUTURESILIENCE first policy brief

Why valorising knowledge is important for building societal resilience? [1]

2.1 Introduction

Different crises such as the COVID-19 pandemic, financial system shocks and refugee movements due to conflict and climate change have raised the **interest in resilience.** These challenges have tested the capacities of diverse communities to effectively cope, adapt, and engage in rebuilding efforts with the aim of achieving greater resilience. The effects of these adverse events highlighted inequalities in the public, private and civil society sectors and at all institutional levels (local, regional, national, and European) in the way they are prepared to face unexpected crises and to deal with uncertainty. **Research and Innovation (R&I), including social innovation, can play a crucial role in informing policy development and decision-making** by providing a basis for a more flexible and responsive capacity of stakeholders, thereby strengthening resilience and preparedness for future crises.

The **FUTURESILIENCE project** aims to strengthen European economic and social resilience through an enhanced ability to quickly respond to future crises. This will be achieved by facilitating the fast and effective use of policies based on R&I findings through 10 pilot cases called 'Future Resilience Labs'. During the experimentation, multiple stakeholders will discuss and test evidence-based strategies tailored to their specific context and matching their local needs.

The project **fosters knowledge valorisation for creating resilience** at local and regional levels. As defined by the European Commission, knowledge valorisation is *"the process of creating social and economic value from knowledge by linking different areas and sectors and transforming data, know-how and research results into sustainable products, services, solutions and knowledge-based policies that benefit society."* It calls for the participation of all actors including users of research results and technological developments, policymakers, and citizens.

2.2 Societal resilience: what is it about?

The international scientific community understands **resilience** as the degree to which a **social system** can organise itself to increase its ability to learn from past adverse events to better protect itself in the future. It describes the extent to which systems absorb threats or shocks, being able to maintain and adapt their inherent structure, performance, and behaviour.

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[1] This policy brief has been published last November 2023 (with updated policy recommendations on January 2024) at https://futuresilience.eu/sites/default/files/2024-01/FUTURESILIENCE_PolicyBrief1_V2.pdf

Resilience can be understood as a comprehensive system composed of two key components: the **human communities**, embedded in values, beliefs and social structures; and the **physical system** where communities live, mainly linked to urban planning and composed of infrastructure, communications, energy facilities, geology and natural systems[2]. In particular, scientists have analysed the capacity of **resilient systems to promote transformation**, contribute to addressing societal challenges and increase future preparedness.

Societal resilience refers to the intrinsic ability of a community to manage and respond to shocks and adverse events, and it is highly shaped by pre-existing societal conditions[3] [4] [5]. Similarly, the concept of community resilience emphasises citizen's participation in creating resilience as well as managing the threats and the conditions of uncertainty. Some of the main assumptions in the literature are:

- **Policies to build and strengthen resilience** should be developed at the local level as social, economic, and cultural characteristics of each place may vary significantly . Resilience is a process that emerges from sense-making and actions that are embedded in society, including its structures, values and bonds. While solutions can have a degree of replicability, they should, in any case, be tailored to new and different contexts.
- **Societal resilience implies moving to a new paradigm**. It suggests an expansion of the more established discourse of societal safety and security that will allow safety science to reach out to a broader public audience, further engaging with citizens in the co-design of future resilience and promoting democratic transformations.
- Societal resilience **needs participation of the entire community**. It depends on flexibility and the capacity to dynamically adapt to changing conditions, considering the varied needs of relevant networks, time constraints and the impact of internal and external stakeholders.

Reflecting on Societal Resilience

- What does resilience mean in your jurisdiction? Which policies have been implemented to build or strengthen resilience? Are those policies oriented to specific challenges or crises, or do they look to be cross-cutting?
- What is the role of local communities in the process of making cities or regions resilient? What is the role of scientific evidence as a basis for the policies?

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[2] Godschalk, D. (2003) "Urban Hazard Mitigation: Creating resilient cities", Natural Hazard Review, Vol. 14, n. 3, pp. 136-143.

[3] Burton, Christopher G. 2015. "A Validation of Metrics for Community Resilience to Natural Hazards and Disasters Using the Recovery from Hurricane Katrina as a Case Study." Annals of the Association of American Geographers 105 (1): 67–86.

[4] Cutter, Susan L., Lindsey Barnes, Melissa Berry, Christopher Burton, Elijah Evans, Eric Tate, and Jennifer Webb. 2008. "A Place-Based Model for Understanding Community Resilience to Natural Disasters" 18: 598–606.

[5] Manca, A.R., Benczur, P., Giovannini, E. (2017) "Building a Scientific Narrative Towards a More Resilient EU Society Part 1: a Conceptual Framework", , EUR 28548 EN, doi:10.2760/635528

2.3 The FUTURESILIENCE approach

Using science-based approaches for policymaking

To valorise knowledge and encourage policy uptake of research results, **"evidence-based policymaking" emerges as a key concept in policy design**. As defined by the European Commission, evidence-based policymaking refers to the idea that *"policy decisions must be based on, or informed by, objective evidence and/or scientific frameworks".* Furthermore, undergo a complex process of decision-making and evolution, including through problem definition, agenda setting, policy formulation, implementation, and evaluation. These stages are not linear; rather, they run into each other as policies are constructed and negotiated by various actors, both public and private, often at **different levels of governance**.

Science-based knowledge can contribute towards mitigating the uncertainty of policy problems. However, it may be less effective when it comes to mitigating ambiguity, understood as the presence of multiple, conflicting, and irreconcilable interpretations of public events, situations, and processes. Indeed, the levels of ambiguity are contingent on the policy sector. Nevertheless, for scientific knowledge to have a policy impact, it must engage directly with the policy debate and use policy-relevant language. Moreover, evidence should be adaptable to addressing increasingly interconnected challenges and promote dialogue among different policy areas in finding cross-cutting solutions.

Providing access to actionable knowledge and approaches to test its applicability for diverse groups enhances both innovation capacity and resilience. The consortium **developed a Knowledge Base,** currently published in beta version and planned to be openly accessible in 2025. The primary objective is to enable wider access to user tailored R&I results, providing a high capacity to inform policies and apply them in real life. This initiative is designed to strengthen resilience and future preparedness by means of increasing capacities and reducing vulnerabilities.

The **Knowledge Base includes more than 600 actions towards strengthening societal resilience in a wide variety of domains.** These include for example, labour market, industries, housing, health, governance, finances, energy, mobility, etc. Documents come from research done under Horizon 2020 and Horizon Europe, as well as policy recommendations and good practices from international organisations, corresponding to a similar time frame. Most documents included in the database are i) based on scientific evidence, ii) have been previously tested in society (following the Societal Readiness Level classification), and iii) policy relevant, meaning they provide well-grounded policy options with informed background on possible positive impacts. Finally, the database includes filters that facilitates the navigation, such as thematic areas of interest, type of intervention, intensity of change, societal readiness level and shock phase.

> **Reflecting on the Knowledge Base**
>
> - What kind of knowledge do you consider to be evidence when deciding on a policy that aims to enhance resilience? What does societal resilience mean to you?
> - What are the main barriers for using evidence-based solutions in your policy deliberations?
> - What is the input of citizen groups in the process?

Developing a toolbox for policy testing

A core element of the project is a toolbox aimed at designing and testing policy relevant findings stemming from European R&I that can contribute to EU resilience and future preparedness. The toolbox was launched in August 2023 as beta version and will be available for the FUTURESILIENCE labs during the experimentation phase of the project (see section below). The toolbox will be made available in open access after a validation phase in 2025.

The FUTURESLIENCE Toolbox is composed of three main blocks:

- **Process tools:** it includes different methodologies for policy testing. While mainly based on Foresight and scenario development, it also includes a range of methodologies to map local challenges in a collaborative way (e.g. Crowd-mapping), analyse barriers for policy implementation (e.g. Agent-Based Modelling) or test the appropriateness of policies against different plausible future events (e.g. Wind-tunnelling).
- **Policy tools:** a series of existing policy design tools aimed at supporting policymakers to work with evidence for policy design. It also includes a guide to navigate the Knowledge Base, aimed at creating a bridge between science and policymaking process.
- **Thematic tools:** these are specific tools to work on concrete or interconnected challenges or crises (e.g. health, agriculture, finance, climate change, disasters, etc.). It includes tools developed by Horizon 2020 and Horizon Europe funded projects as well as tools designed by recognised international organisations.

Setting up such a process together with key stakeholders will enable policy makers to get a better **understanding of future challenges and stakeholder perspectives**. The process will also generate strategies to address these challenges and early warning signposts alerting them to the need for strategy revisions. The participatory joint learning process will enhance the **transformative capacity of the system**, so stakeholders will form **novel linkages**, learn about each other's perspectives, identify shared ground and develop **future oriented attitudes** including sensitivity for a wider range of emerging phenomena and recognition of uncertainty.

Reflecting on the Toolbox

- What is in your experience a good way to test evidence-based policies? Why applying Foresight tools could be of benefit for future preparedness? When do you usually apply policy testing tools?
- What can policymakers learn from experimenting policy testing tools with different stakeholders?

Experimentation as core strategy

When a crisis strikes, the classic tools of government policy and the market solutions may be inadequate, and the optimal response will require the active involvement of multiple stakeholders to find solutions and prepare for possible future scenarios. To address this challenge, **experimentation could be a way forward** and would be most helpful if it results in active learning. Co-design methodologies create socially recognised value and can generate impact through being formalised as pilots or programmes, where people can create, shape and experiment with new ideas meeting their needs.

Hence, by involving policymakers and stakeholders in process design and implementation, there is a greater chance to develop solutions that are informed not only by science, but also **shaped by citizens and stakeholders at the local level**. In this respect, science and policymaking should be at the service of societies and aim to meet societal needs, today and tomorrow, to create a positive and transformational impact.

FUTURESILIENCE labs are at the core of the project. Organised in co-creation mode and mentored by a group of experts from the consortium, each lab will address one or more thematic drivers requiring solutions to increase resilience in the long-term. The priority of the labs is to match the needs at the local, regional or national level with existing policy-relevant R&I findings ensuring that these findings are translated into policy and new societal solutions. Consequently, it provides policymakers and citizens with a high degree of confidence and trust in responding to new challenges.

The project already counts three pilot cases working on specific challenges:

- MURCIA Lab: The lab will work as co-creation space, supporting citizen science and crowd-mapping of climate change impacts, tailoring policy solutions aimed at improving urban performance. The labs will strengthen the governance of all urban actor, to be able to develop preparedness models to mitigate the impacts of some challenges such as reduce heat island, reduce flash rainfalls and flooding as well as increase the compactness of the city.
- CHIOS Lab: The lab will focus on planning and developing a strategy to strengthen the ability to respond multidimensional and overlapping crises. This will be accomplished

by considering multiple areas for action in areas such as social protection, community engagements, health provision, schooling, financial considerations and budgeting, thus strengthening the resilience of the administrations and the society.

- BAPEMED Lab: The lab aims to develop a more resilient healthcare system, working with multiple stakeholders across the country. The pilot case will build on three key trends: demographic developments, the growing burden of non-communicable diseases, and the expanding role of technology. The focus will be on the shift happening within health systems towards increased prevention and more personalised health, which requires digital health literacy.

In the second half of 2023, the project launched an open call to fund additional seven pilot cases through a cascade funding mechanism. The experimentation phase will occur in 2024, including cross-learning activities between pilots and other EU-funded project pilot cases working on building resilience.

2.4 Policy implications and action items

The linkage between **science, society and policy is key to enhance societal resilience**. Science can help policymaking by providing knowledge, attitudes, and skills to address societal challenges and increased preparedness for future shocks. Society can contribute to policymaking by framing societal challenges from experience and actively engaging in policy design and implementation. Finally, policymakers could better understand how people deal with complexity and how science-based policies can add positive value to societies and economies.

Some preliminary **recommendations** and challenges for upcoming labs implementation:

- There is a need to tackle the nature of future threats: policymakers should be early listeners of scientific "signals" and not wait until shocks happen. There is a need for anticipatory governance, and this requires coordinated efforts in the science-policy-society triangle.
- There is a need to work on the level of uncertainty: this implies focusing on evidence-based solutions applicable to multiple scenarios (e.g. by using the project Knowledge Base or other relevant databases). It means having plan A, B, and C for X, Y, and Z situations. Experiment, replicate and scale up/out (e.g. using Foresight tools in iterative, learning processes, adapting to different situations and local needs).
- There is a need to enhance community engagement: to operate at different geographical levels, we should reach more remote areas, reinforce regional approaches and look at increasing trust in science through societal engagement at local level.

3 FUTURESILIENCE first policy roundtable

On 30th November 2023, the first FUTURESILIENCE Policy Roundtable took place online. The event aimed at engaging policymakers in an interactive discussion on the progress of the FUTURESILIENCE project, and in particular, discussing **the role of evidence for building policies oriented to increase preparedness and presenting the FUTURESILIENCE Labs approaches**. Specifically, the policy roundtable served as an opportunity for policymakers to be informed about the beta versions of the two main outputs of the FUTURESILIENCE project (the Knowledge Base of policy-relevant R&I findings and the Toolbox for policy testing) and the presentation of the three existing FUTURESILENCE Labs (Murcia, Chios and BAPEMED).

This meeting represented a significant milestone for the FUTURESILIENCE project, with 38 attendees: researchers and **policymakers** from different institutions (research institutes from all over Europe, Research Executive Agency, DG DRT units, among others) met online and **engaged in a debate on their experiences related to effective and efficient resilience policy design and possible future actions about societal resilience**.

Time	Topic
14:00	**Introduction** ▪ Knowledge valorisation: making research results work for economy, society, policy – Iphigenia Pottaki, DG RTD ▪ The FUTURESILIENCE project – Matias Barberis, EFIS Centre ▪ Moderation: Chiara Lodi, University of Urbino Carlo Bo
14:30	**Main session: How can evidence contribute to creating policies to build societal resilience?** ▪ Evidence-based policies for societal resilience – Matias Barberis, EFIS Centre ▪ Resilience in practice: a toolbox for policy testing – Philine Warnke, Fraunhofer ISI ▪ Presentation of FUTURESILIENCE Labs: ○ MURCIA Lab - Fernando M. García Martín, Universidad Politécnica de Cartagena ○ BAPEMED Lab - Martin Kruse, BAPEMED ○ CHIOS Lab - Jenny Sykala, Municipality of Chios ▪ Interactive session with participants
15:45	**Conclusions and wrap-up**

Table 1. FUTURESILIENCE 1st Policy Roundtable Agenda

The roundtable revolved around several vital issues that can be summarised in **four key points**:

🔴 The **relevance of knowledge valorisation for policies**. Research & Innovation can inform policymakers about how to test outcomes of policy initiatives and/or policy reforms to achieve resilience in **different areas of society**. In EU institutions, knowledge valorisation

is gaining momentum, aiming to mainstream **best practices** to create value from knowledge. In this respect, the work of the European Commission on the definition of **codes of practice** for knowledge valorisation is pivotal and will be relevant for future implementation of the project labs;

- Citizens' **engagement** in knowledge valorisation is essential for society, markets, and competitiveness. Citizens could help provide proposals to improve the management of **different kinds of shocks and crises**; upcoming code of practice on citizen engagement for knowledge valorisation could be applied to improve engagement in the project labs.

- There is significance in ensuring that different types of research communicate in a shared language. Applying the **multidisciplinary approach in the construction of the knowledge base and** connecting with other EU projects, policies and campaigns during the mapping process was recognised as a key step in the valorisation process;

- Foresight and other similar approaches that are linked to **participatory mapping and participatory modelling** are also crucial for contributing to achieving societal resilience.

Key quotes from speakers of the 1st Policy Roundtable:

- "*This project is relevant for knowledge valorisation policies. It is about the uptake of research results to inform public policies in different areas, engaging with citizens, using experimentation as a policy tool and building resilience*" – Iphigenia Pottaki (Policy Officer DG RTD)

- "*We are building a Knowledge Base with research results in different areas typically impacted by crises. They can inform more robust and flexible policies to strengthen capacity and preparedness at societal level*" – Matias Barberis (FUTURESILIENCE coordinator – EFIS Centre)

- "*Foresight and other tools in our Toolbox allow to develop long-term solutions by improving capacity for continuous knowledge valorisation*" – Philine Warnke (Fraunhofer ISI)

- "*Striking a balance between political realities and evidence-based policymaking is crucial for developing effective and equitable solutions*" – Jenny Sykala (CHIOS Lab)

- "*The project provides the local community and policymakers with knowledge and tools to understand key challenges of climate change effects and promote the co-creation of robust actions at a local level*" – Fernando Garcia (UPCT, Murcia Lab)

- "*The advantage of using evidence is that we can look at policies that have been tried and tested elsewhere; it gives us an advantage in the policy design*" – Martin Kruse (CIFS, BAPEMED Lab).

Recordings of the policy roundtable are available on the project's YouTube channel: https://youtu.be/WxCPgV5NloM?si=oiO7che_e_ENios0

4 Conclusions

The publication of the First Policy Brief and the First Policy Roundtable represent an important milestone for the FUTURESILIENCE project. Both tasks were crucial for reasoning and discussing the policy relevance of the project's critical activities during the first year of the project (creation of the knowledge base, development of the toolbox and kick-off of the three pre-selected FUTURESILIENCE labs). Indeed, knowledge valorisation and the way science and society interact with and feed the policymaking process are at the core of the FUTURESILIENCE project.

The First Policy Brief highlighted the key elements of the process guiding the FUTURESILIENCE approach and identified a series of open questions to be considered in the experimentation phase. The first set of open questions revolves around the exact definition of societal resilience, the role played by local communities, and scientific evidence in building it. The second set of open questions concerns the practical implementation of evidence-based policies and the role played by foresight tools.

In the first Policy Roundtable, participants underlined some critical challenges and opportunities for valorising the knowledge base and implementing the toolbox.

- The most discussed topic is the multi-stakeholder approach. It is crucial for the FUTURESILIENCE project to identify mechanisms through which experts, policymakers and, especially, citizens collaborate to build resilience against crises. The involvement of a wide range of stakeholders in one place at the same time is complicated as building resilience might not be among the priorities of these actors, making it challenging to gain strong support. Promoting engagement activities, such as workshops or roundtables, could represent a first step but may not be enough. In this respect, the involvement of 'intermediary bodies' (e.g. trade unions, NGOs, informal groups, etc.) could help increase active participation.
- Another critical challenge relates to a natural resistance of societies to change. Even when changes are promoted, citizens have difficulties accepting them. This aspect could be related to a decrease in citizens' trust in politics (and thus policymaking process) and a lower trust in authorities' skills in dealing with different types of crises. Early engagement with the entire community and fostering dialogue between policymakers and citizens could contribute to cultivating a productive and collaborative relationship.
- Finally, another challenging issue is aiming for the inclusion of marginalised and more vulnerable groups . If a society does not consider or engage these groups, it cannot create societal resilience, but it would only talk to elite groups. Some pilot cases will work with the most vulnerable populations (e.g. homeless and housing, or elderly in times of disasters), looking to discover efficient ways for inclusion.

4.1 Next steps

Throughout the FUTURESILIENCE project, we expect to publish at least five policy briefs. Future policy briefs will be primarily based on the pilots' experience and will have a similar structure, including the following: an introduction and description of the area/region; description of the pilot (i.e. action taken; topic addressed, etc.); stakeholders' engagement; lesson learn. The structure aims at clearly presenting the findings in an implementation-relevant perspective, which includes reflections on potential challenges and obstacles, successful examples and suggestions for further actions and/or possible scale-up of the experience at a wider level. Achievements, obstacles and learnings from the pilots will emerge from a series of interactive mutual learning exercises that will take place during the next year of implementation.

The second European-wide policy roundtable will be organised during the project's third year (2025) after all pilot cases have been finalised. It aims at sharing the pilots' experiences and learnings as well as promoting policy uptake and shaping of the project results. Meanwhile, the project will organise policy events at pilot levels, engaging with the policymakers and practitioners closer to the specific cases of analysis. The relevance of the engagement scale is particularly relevant, considering that the challenges addressed in each lab involve various jurisdictions (local, regional, or national). Learning from different realities of policymaking and understanding the role of knowledge valorisation in each area of policy design will be at the core of the discussion. It is ultimately feeding the testing of robust and flexible policies for creating societal resilience in different areas such as, among others, health, climate, migration, housing, and labour and skills.