VALIDATED LOCAL RISK ACTIONABLE DATA FOR ADAPTATION

POLICY BRIEF

APRIL 2026

Policy Brief
Making Climate Data Usable: the Need for Place-Based Knowledge

EARSC - European Association of Remote Sensing Companies

About the VALORADA project

The VALORADA project (2023-2026) brings together 14 European partners under Horizon Europe to strengthen climate adaptation and resilience at regional and local levels, supporting the EU mission of 150 climate-resilient regions by 2030. Demonstrators include Gabrovo and Burgas (Bulgaria), Přerov and Mladá Boleslav (Czech Republic), Occitanie (France), Central Greece, and Molise (Italy).

VALORADA assesses the data baseline for adaptation by identifying priority climate risks, evaluating the accessibility and usability of European climate and non-climate data, and co-developing a framework that links socioeconomic, demographic, Earth Observation, and climate datasets. The project develops and showcases prototype data-manipulation tools, co-creating guidelines to build *resilience-information catalogues*, generating climate-risk indicators, and enabling customisable integration of diverse datasets for decision-making. To maximise impact, VALORADA ensures its tools follow the FAIR principles, are interoperable with existing repositories, and support capacity building across demonstrators.

Summary

In local and regional climate adaptation, biophysical indicators, technical models, and high-level statistical variables might often be the preferred tools to assess climate risks. While these inputs are important, they cannot provide a full understanding of climate risks alone. It is equally important to **take into account the value systems of communities, place-based characteristics, and local data valuation processes.** These factors shape how local communities perceive risk, play an important role in identifying relevant data, and influence the ways local communities conceptualise their value for climate adaptation. This policy brief, building on the know-how gained during the VALORADA project, advocates for **co-design and participatory approaches that ensure that the local knowledge and perceptions play an important role in EU policy and project frameworks,** as well as for tools and platforms that make use of the potential of synergies between existing data and place-based knowledge.

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Main Messages

- **Participatory methods that bring social values of local communities to the forefront** should be incorporated as a standard practice in EU-level projects, including Horizon Europe and Mission Adaptation frameworks.
- Tools and platforms, which can **combine quantitative data with place-based qualitative knowledge** (narratives, stakeholder-defined thresholds, local histories), should be supported.
- **Capacity building** for local and regional authorities to engage in systems thinking and value-based climate risk assessment should be fostered.
- EU data and climate adaptation frameworks should ensure that **human perspectives and social interactions are thoroughly considered** in the processes which capture the value of datasets.
- **Long-term co-creation frameworks**, inclusion of local and regional authorities, and process-oriented approaches should be supported.
- EU project calls and assessments should **include diverse local values and clear evaluation criteria** on these values.

Introduction

Cities and regions are at the forefront of the societal transformation towards sustainable and climate-resilient development. [1] They provide a vital contribution to the existing efforts at the national and international level and are crucial for the implementation of policy measures and their localisation. In addition, they provide know-how on how to foster climate adaptation and mitigation, and in some cases, they might demonstrate a higher level of ambition and commitment to reaching climate goals. [2] The VALORADA project builds on these pillars and is in line with the **EU Mission for Adaptation to Climate Change**, which aims to support the transformation of 150 European regions to become sustainable and climate-resilient by 2030 and to help regional and local authorities understand climate risks, develop adaptation pathways, and implement innovative solutions.

Therefore, ensuring fair and inclusive participation of local and regional communities in climate adaptation measures is crucial. To assess and prioritise climate risks across Europe, it is important to take into account the local value systems, place-based characteristics, and valuation processes, in which the value is attributed to data through socially constructing processes that are strongly context dependent.

[1] Regional and local adaptation to climate change: Gaps, challenges and opportunities. European Parliament. https://www.europarl.europa.eu/thinktank/en/document/EPRS_IDA(2024)757589

[2] Climate-diligent cities: Aligning mitigation ambitions with the Paris Agreement. Barcelona Centre for International Affairs. https://www.cidob.org/en/publications/climate-diligent-cities-aligning-mitigation-ambitions-paris-agreement

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These factors shape local communities' perception of what is at risk, what should be protected, and how the risk reduction actions should be conducted. Additionally, they play a key role in how the local actors identify relevant indicators and data and how they conceptualise value in diverse datasets. Therefore, this Policy Brief advocates for participatory, value-based methods in EU-level projects; inclusion of diverse local values in project calls and assessments; support tools that can combine quantitative data with place-based qualitative knowledge; capacity building supporting value-based climate risk assessment; and long-term co-creation frameworks.

VALORADA's approach

To support the uptake of local perceptions and knowledge for designing climate adaptation measures and to promote data value capturing, VALORADA has developed several frameworks and tools to strengthen local and regional capabilities through a process-oriented approach, designed to make climate risks visible and actionable for stakeholders.

Throughout the project, 10 Climate Impact Chains (CICs) were co-developed through a participatory process involving local stakeholders across ten European regions. The CICs map how climate hazards evolve into risks by considering exposure, vulnerabilities, and adaptive capacity. VALORADA has **analysed CICs to understand how value systems and place-based considerations influence the definition, representation, and prioritisation of climate risks, which values play a role there, and how institutional cultural values impact risk perception**. Besides that, the Local Climate Information Profiles have been co-developed, risk indicators reflecting local priorities have been co-generated, and evaluation workshops, which provided feedback on the accuracy of climate risks representation in CICs, on the clarity of information, and on the need for any additional factors to be considered, have been conducted.

As regards capturing data value, VALORADA has created a **Data Valuation Framework** for datasets that the local administrations already use. It should support decision-makers with facilitating a common understanding of data value as regards climate risk through a set of metrics and four value dimensions, such as relevance, strategic value, usability, and quality. [3] Furthermore, the project introduced a **Resilience Information Catalogue**, which aims to foster the valorisation process by systematically sorting the datasets, enabling the identification of high-value datasets in the long list of existing items. This catalogue is compliant with the INSPIRE directive and includes basic information about indicators, their requirements, and calculation methods, as well as a classification of the generic data types needed for these indicators.

[3] VALORADA Climate-data Valuation Framework. VALORADA Documentation. https://valorada.github.io/documentation/data-valuation-framework/

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Value systems and place-based characteristics in climate risk assessments

Arguably, climate risk assessments might focus on physical, socio-economic, and ecological aspects, overlooking the place-based social and political dimensions or factors that are predominantly subjective. These include the acceptable level of risk for individuals and organizations, or how people perceive and respond to climate risks. Such approach may result in a long-term mismatch or tensions between mostly science-based and technical understanding of climate risk and the place-based perceptions of what is in danger and what should be protected. [4]

Therefore, it is **crucial to consider how people perceive and respond to climate risks**. The project has demonstrated that **climate risk perceptions and answers are indeed shaped by underlying values and place-based characteristics**. Furthermore, it highlighted that effective risk assessment includes understanding of what communities value and their risk perception, and that conflicts or tensions between values and the perception of risks and risk responses were evident.

Taking all this into account, the legitimacy of climate risk assessments is likely to be **incomplete without considering local identities, values, and histories**. To maximise the potential of local value systems and place-based characteristics in climate adaptation, it is crucial to make sure that the inclusion of diverse local values in project calls and assessments, and the involvement of clear criteria, are promoted. Furthermore, participatory, value-based methods should be incorporated as a standard practice in **EU-wide projects under the Horizon Europe and Mission Adaptation frameworks**. As regards the assessments of climate risks and mitigation measures, support tools and platforms that can combine quantitative data with place-based qualitative knowledge, such as narratives, stakeholder-defined thresholds, and local histories, should be fostered.

These steps could help ensure that the local knowledge and perceptions are not lost and can meaningfully contribute to climate adaptation and mitigation measures. They are also in line with the **EU Adaptation Strategy**, which calls for all regions and cities to become more resilient by 2050, emphasising improved data, risk assessment and cross-sectoral coordination, focuses on policy development at all levels and sectors, and considers the local level as the bedrock of climate adaptation. [5] The Adaptation strategy should be complemented by an **Integrated Framework on European Climate Resilience and Risk Management** in the second half of 2026, which aims to establish a more ambitious, comprehensive, and coherent EU approach to climate resilience, and specifically mentions the need to ensure cooperation of national, regional, and local levels. [6] Together with the VALORADA consortium, two demonstrators (Central Greece and Occitania) successfully contributed two submissions to the public consultation call of the Integrated Framework.

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[4] Reveco et al. (2025) Integrating value systems and place-based characteristics in climate risk assessments. In: Frontiers in Climate, Volume 7 - 2025
[5] EU Strategy on Adaptation to Climate Change. European Commission. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0082
[6] European Climate Resilience and Risk Management – Integrated Framework. European Commission. https://climate.ec.europa.eu/eu-action/adaptation-and-resilience-climate-change/european-climate-resilience-and-risk-management-integrated-framework_en

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However, these initiatives would be incomplete without a **clear dedication to co-design processes with local and regional authorities**, capacity building efforts, and cooperation between different communities. The involvement of local authorities and cities is a clear goal of the **2025 EU Agenda for Cities**, which considers cities as incubators of cutting-edge solutions and engines of sustainable growth, and aims to facilitate yearly high-level political dialogues as well as targeted technical consultations with them. [7] The efforts to include cities and regional authorities in the climate adaptation sector have already been embodied in the work of the **Covenant of Mayors**, which aims to promote the voice of the local communities on the European stage, and can be used as a tool to ensure that policymakers listen to the local perceptions of climate risks and adaptation measures. [8] In future policy work, these already existing frameworks should be supported and reinforced.

Harnessing the climate adaptation value of data at the local level

Different types of climate-related data coming from historical climate records, weather observations, or future weather projections are often available. While local administrations might have access to them or even have them in their storage, these datasets are arguably not able to inform climate adaptation measures alone. The work conducted under VALORADA suggests that often, the climate adaptation value of these datasets is not clear enough.

In addition, the concept of data having inherent value by itself has been contested, as it is difficult to assess this trait objectively. This, overall, leads to the realisation that a dataset cannot be easily characterised as valuable on its own. The VALORADA project has tackled this issue and provided insights on how scientists, practitioners, and local planners conceptualize value in diverse datasets. Insights from the VALORADA Data Valuation Framework show that the process of attributing value to data is rather complex. Furthermore, the data must be meaningfully interlinked with circumstances, communities, and complementary datasets to make it a useful tool.

Taking this into account, the VALORADA project assumes that the potential value of public sector data (municipal, development, socioeconomic, or Earth Observation) has not been used to the fullest extent. The project has identified three main scenarios that are hindering the potential. First, in a *lack of awareness* scenario, a dataset can support multiple functions, which are, however, not sufficiently recognised. Second, in a *missed opportunity* scenario, data that could be relatively easily collected and analysed, and could subsequently provide a substantial contribution to climate adaptation, is unnoticed. Third, a *lack of capability* scenario assumes that while datasets actually possess the potential to provide climate risk insights, other factors limit their use.

[7] EU Agenda for Cities 2025. European Commission. https://ec.europa.eu/regional_policy/sources/communication/2025-cities-agenda/2025-cities-agenda-communication.pdf

[8] EU Covenant of Mayors. European Commission. https://eu-mayors.ec.europa.eu/en/What-we-do

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Additionally, **two key experiential challenges faced by local and regional stakeholders** have been revealed; either there is a lack of access to data and a lack of knowledge on which datasets are needed for climate resilience; or data access is there, but there is a lack of knowledge on how to use it.

These challenges can be addressed by several measures at the local, national, or EU levels. First, it is crucial to **foster capacity building for local and regional authorities to engage in value-based climate risk assessment**. Second, it is important to acknowledge that, in addition to technical aspects, data value is attributed to socially constructed processes and is strongly context dependent. Therefore, **perspectives of local communities and social interactions remain vital**, and they should not be overlooked as regards capturing data value. This should be kept in mind especially in connection with the **INSPIRE Directive**, which aims to foster information sharing, but has also focused on identifying and defining high-value datasets with tangible benefits for environmental policy, [10] and with the **European Data Strategy**, aiming to support data availability by opening up high-value publicly held datasets across the EU. [11] Third, it is crucial to **promote tools such as data catalogues and valuation frameworks** to ensure that valuation criteria are participatory, transparent, and recognised.

Valuation and valorisation of data

When it comes to the discussions about how data acquires value, *valuation* and *valorisation* are two intertwined concepts. In the scope of VALORADA, the conducted research suggests that instead of understanding value of data as something inherently given, it is attributed through socially constructing processes and is strongly context dependent. Value of data is shaped by a process of *valuation*, which can be explained as an action of valuing or the process of assessing or fixing the value of a thing. [9] *Valorisation* can then be explained as a socio-technical process through which data is transformed into actionable knowledge.

Overall, these steps should be accompanied by the **promotion of long-term co-creation frameworks and dialogues** (such as the one outlined in the EU Agenda for Cities), inclusion of local and regional authorities, and support for participatory process-oriented approaches that integrate plural values, situated knowledge, and reflect institutional contexts to increase objectivity and transparency. Such measures could help EU policymakers tap the potential climate adaptation value of datasets at the local level as foreseen by the **European Data Governance Act**, which aims to leverage the potential of data for the benefit of European citizens and explicitly mentions the role of environmental data in combatting climate change. [12]

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[9] Lamont, M. (2012). Toward a Comparative Sociology of Valuation and Evaluation. Annual Review of Sociology, 38(1), 201–221. https://doi.org/10.1146/annurev-soc-070308-120022
[10] Inspire Knowledge Base. European Commission. https://knowledge-base.inspire.ec.europa.eu/overview/maintenance-and-implementation_en
[11] A European strategy for data. European Commission. https://digital-strategy.ec.europa.eu/en/policies/strategy-data
[12] European Data Governance Act. European Commission. https://digital-strategy.ec.europa.eu/en/policies/data-governance-act

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Conclusion

The VALORADA project has shown that when it comes to climate adaptation at the local level, **value systems, place-based characteristics, and local perceptions play an undisputable role in assessing climate risks and measures**, complementing technical and scientific data. However, these local understandings and perceptions might be overlooked in many cases. To avoid this, future policy and project efforts should support **participatory, value-based methods in projects across the EU**, include local values in project calls and assessments, foster tools and platforms which combine quantitative and place-based qualitative knowledge, and continue in capacity building efforts as regards value-based climate risk assessment. Furthermore, a similar approach should be adopted when it comes to capturing the value of local datasets, where **human perspectives and social interaction should be involved**, and frameworks that help local stakeholders engage in participatory and transparent valuation processes, such as data catalogues, should be promoted. These steps could benefit both the local and regional administration and communities, but also policymaking at the EU level.

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