

Climate Impact Chains

Making climate risks visible, local and actionable



Climate risks are not just about hazards, they are about people, places and values.

Climate Impact Chains help regions understand how climate change turns into real-world risks.

What is a Climate Impact Chain?

A **Climate Impact Chain (CIC)** is a methodology that helps identify **how climate hazards (like heat, drought or floods)** become risks through a sequence of impacts on **people, ecosystems and local systems**. It links:

- climate hazards
- exposed people and assets
- sensitivity of systems
- capacity to adapt

→ to reveal **where risks emerge and why they matter locally**

Why CICs matter?

Beyond biophysical processes and existential threats, climate risks are also shaped by locally embedded values, priorities and perceptions. CICs help to make these values explicit, thereby enabling the identification, definition and prioritisation of climate risks in ways that are locally meaningful and decision-relevant. In concrete, in VALORADA, CICs help us to:

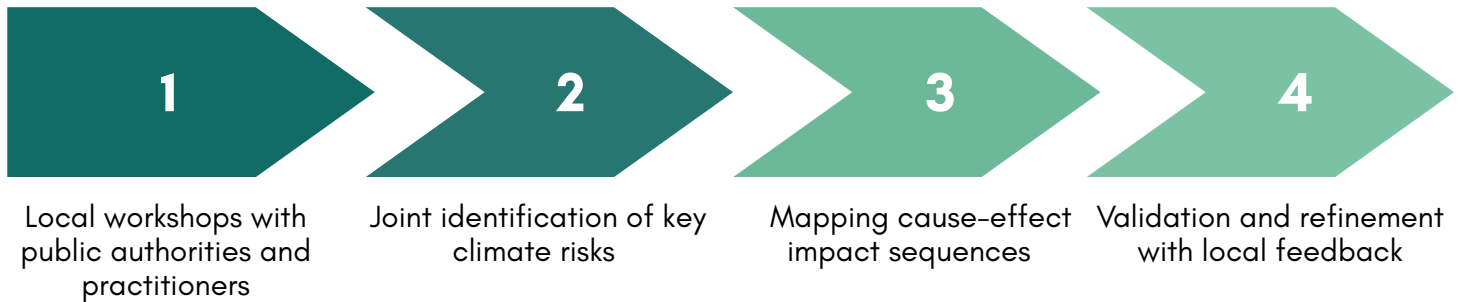
- Connect climate data with **local realities**
- Make **hidden vulnerabilities visible**
- Support **better, more legitimate decisions**



How CICs are developed in VALORADA?

In VALORADA, Climate Impact Chains are **co-created with local stakeholders**, not produced in isolation. The CIC developed in VALORADA emphasises integrating **social values and place-based characteristics, giving an emphasis on people's risk perceptions in connection to their lived experiences.**

The process includes:



This ensures CICs reflect **how communities actually perceive and prioritise climate risks**, not just model outputs.

What do CICs reveal?

Across **6 European regions**, VALORADA co-developed **10 Climate Impact Chains** focusing on:



Droughts



Heat & urban warming



Floods

The analysis showed that climate risks are shaped not only by physical impacts, **but also by social values**, such as:

- Safety
- Protection
- Sustainability
- Fairness
- Social justice
- Cooperation
- Accountability

Example: Urban heat and people's health



A Climate Impact Chain can show how:

- rising temperatures
 - intensify heatwaves
 - increase exposure of vulnerable populations
 - strain health systems
 - amplify social inequalities

This helps decision-makers **identify where action is most urgent** and **which data is needed** to support it.



How CICs are used in VALORADA?



Climate Impact Chains are the **starting point** for VALORADA's data work. They help:

- Identify **critical systems at risk**
- Define **relevant climate risk indicators**
- Guide the selection of **climate & non-climate datasets**
- Feed VALORADA's **data catalogues and tools**

KEY TAKEAWAY

Climate Impact Chains turn climate data into shared understanding, and understanding into action.

Contact us

 <https://www.valorada-project.eu>

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