

Task 1.1 Establish a baseline

Task 1.1.1 Gather evidence

What is this task about?

This task is about gathering the necessary evidence with which to take stock of where your region stands in terms of its climate risks, vulnerabilities, **climate risk management**. This includes evaluating climate impact studies, adaptation and disaster risk reduction measures, policy objectives and priorities, strategies and action plans, as well as current funding, budgets, resources, and institutional, legal, and regulatory frameworks. Additionally, it requires identifying key challenges and opportunities, including those likely to be worsened by climate change, to effectively respond to evolving climate conditions.

In this task, you build your evidence base – including all the relevant associated social, cultural, economic, environmental, and institutional aspects to support the identification and prioritisation of adaptation and resilience needs and strategies in later tasks. This involves:

- Developing a data collection plan
- Collecting historical data and information
- Identifying relevant legal, fiscal, institutional and operational frameworks, including policy objectives and priorities, strategies, plans and regulations
- Analysing evidence and deriving insights from the data collected

Why is it important?

Gathering evidence provides an initial understanding of your region's vulnerabilities and climate resilience maturity, which are essential for effective climate adaptation planning. It helps in recognising and articulating the direct and indirect impacts of climate risks on various sectors in your region. Most importantly, it establishes a solid factual evidence base to inform subsequent tasks of the Regional Resilience Journey. It also helps to identify any data and knowledge gaps that could be addressed through further research and innovation.



Insight : Be aware of the iterative nature of data collection and its continuous feedback with the parallel tasks of 1.1.2 Frame the Problem, 1.2.1. Map Relevant Systems, and 1.2.2 Identify Stakeholders. Input from these three tasks requires adjustments in data collection, revision of the data collected, and additional information as more insight into the challenge is gained.

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How can you complete it?

- **Develop a detailed plan for data collection:** determine specific information and data needs for the Regional Resilience Journey and define data sources, data collection methods, available resources and timeline. Assign roles and responsibilities for gathering data and organising and maintaining the information database.
- **Collect historical data and information:** gather data and information on the current state of your region's system, including past climate-related extreme weather events, their impacts, and ongoing challenges. This should also cover previously implemented or planned adaptation and disaster risk reduction measures, as well as socio-economic and environmental data on the prevailing context and regional dynamics, such as demographic changes, economic development, and land use changes. Engage stakeholders in the data collection process to build a base of comprehensive evidence informed by their observations, knowledge, and experiences.
- **Identify relevant legal, fiscal, institutional, and operational frameworks:** review local, regional, sectoral, and national policies, strategies, and plans addressing or that have addressed climate risks and vulnerabilities, as well as other relevant policy objectives and priorities. Identify legislation related to climate adaptation and disaster risk management. Analyse available fiscal mechanisms and the roles, mandates, and capabilities of key institutions involved along your Regional Resilience Journey.
- **Analyse evidence and derive insights:** integrate and synthesise the collected data, identifying any gaps in information or knowledge that require further data collection, research, or innovation. Highlight potential sources and mechanisms for gathering or generating this data. Extract key initial findings related to your region's adaptation and resilience needs.

Further detailed technical guidance on completing this task, along with useful tools and methods can be found in Appendix D2.

External stakeholders can be involved for various purposes, such as ensuring access to data from different organisations by securing their consent and aligning data standards and collection methods. Additionally, certain stakeholders can enrich the evidence base with their unique observations, knowledge, and experiences. Implementing open data practices can encourage citizen participation, including data generation. It is good practice to consult stakeholders on the types of data that would be useful to them, identify existing citizen initiatives, and explore potential synergies with your resilience journey.



Food for thought: Three fundamental aspects to consider in this task are: i) the availability and reliability of data sources, ii) the time frame scope over which the baseline is constructed including both historical data and current conditions, and iii) the geographical scope to which the baseline applies (spatial boundaries), which is also linked to the framing of the problem (Task 1.1.2).

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What are key inputs for the task?

- Self-assessment (Task 1.3.2)
- Problem framing (from Task 1.1.2)
- Understanding of your system and the components (from Task 1.2.1.) about which to gather evidence
- Economic and financial baseline (from Task 1.2 'Gather economic and financial evidence' of the Investment Plan).

What are the expected outputs?

- A summary of the evidence on climate-related environmental and socio-economic trends and challenges, climate impacts from previous events, ongoing climate risk studies, and existing legal, fiscal, institutional and operational frameworks for adaptation in your region.
- An organised database or repository containing all collected data, ideally accessible to the stakeholders involved in your Regional Resilience Journey.
- Identified knowledge and data gaps to be addressed by actions to build your region's KEC Knowledge and Data.



Before moving on, have you...

- ☐ Developed a summary report outlining the region's evidence regarding past and current changes in climate conditions, other relevant environmental and socio-economic trends and challenges, as well as the current legal, fiscal, and operational landscapes within which you are developing your Climate Resilience Strategy?
- ☐ Established a repository for your data and assigned responsibilities for its ongoing management and update?
- ☐ Identified any knowledge and data gaps to be addressed through future research and/or innovation?
- ☐ Engaged stakeholders to provide and collect data and information based on their observations, knowledge, and experiences regarding past extreme weather events and ongoing climate-related challenges?

D2.

Task 1.1.1 Gather evidence – Technical guidance on how to complete

How can you complete this task?

Develop a data collection plan

- **Define data needs:** identify the specific information and data you need for your Regional Resilience Journey, such as regional vulnerabilities, climate risks and impacts, adaptive capacity, and adaptation needs in the areas or sectors of your concern. Considering your baseline, define specific metrics and indicators (e.g., temperature trends, population at risk, critical infrastructure) that need to be measured or assessed.
- **Identify potential data sources and data collection methods:** prioritise collecting existing data from secondary sources to reduce costs and time. This includes sources, such as governmental reports and official databases; climate risk projections and impact assessments from credible sources; other relevant studies conducted by research institutions, universities, NGOs, and local organisations. Also consider primary data sources (e.g., surveys and interviews with relevant stakeholders; field measurements; direct observations) where gaps exist or where specific, localised data is necessary.
- **Assign a task force for data collection:** form a multidisciplinary team responsible for overseeing the data collection process, ensuring representation from climate and environmental science, economics, sociology, urban planning, engineering, health, and policy.
- **Establish a timeline:** create a detailed schedule with milestones for data collection, analysis, and reporting phases. Consider the iterative nature of this task which informs and is informed by the parallel tasks of problem framing (Task 1.1.2) and systems mapping (Task 1.2.1).



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D2. Task 1.1.1 Gather evidence – Technical guidance on how to complete

Collect data

- **Gather secondary data:** use national or local meteorological services, climate databases, and socioeconomic statistics. Compile existing research studies, impact assessments, and climate projections developed by research and academic institutions. Utilise relevant reports and data from local organisations and NGOs. This is a list of data conventionally collected in this task:
 - **Climate data:** historical weather data, such as temperature records, precipitation, seasonal variability, extreme events (e.g., frequency, extension, duration, and intensity of past events like storms, floods, droughts, and heatwaves) from meteorological departments and climate databases.
 - **Socio-economic data:** includes data on population and demographics (e.g., current population distribution, density, and demographic factors, as well as projections, and public health), economic indicators (e.g., income levels, employment, economic sectors and productivity), and infrastructure and services (e.g., roads, water supply, energy, healthcare, education) from national census records, regional databases, and socioeconomic surveys.
 - **Environmental data:** information on natural resources, land use patterns, air quality, the current state of ecosystems and biodiversity from environmental agencies, research studies, and NGO reports.
 - **Risk-related data:** this includes aspects such as climate-related impacts on sensitive sectors, communities, or groups, as well as existing and projected climate risks identified in previous studies. Collect information on the impacts of previous extreme events (including economic and non-economic losses and damages) from official or sectoral reports.
- **Adaptive capacity data:** information on the current capacity of communities, institutions, and systems to respond to changes in climatic conditions. This can be found in existing policies, strategies, plans, and regulations related to climate adaptation and disaster risk management; in available funding mechanisms (including government programs, international aid, and private sector investments) and financial tools that support or hinder climate adaptation; in the roles, mandates, and operational capabilities of key institutions involved in climate risk management (e.g., Civil Protection agencies, Forest Departments, Water Utilities, River basin authorities); or by accounting for technologies, practices, measures, and responses for climate adaptation and disaster risk reduction already in place as well as ongoing climate adaptation initiatives.
- **Supplement with primary data** (if needed): Compare collected data against the defined information needs to identify missing or outdated data. Where gaps are identified, plan and conduct primary data collection through surveys, interviews, or field studies.
 - **Identify primary data sources:** you can collect qualitative and quantitative data from key stakeholders, including academic experts, researchers, practitioners, and local authorities, or record on-site data, such as temperature readings or water levels. If possible, seek input of communities, the private sector, NGOs, and incorporate local knowledge about historical climate patterns and coping strategies.
 - **Prioritise primary data collection:** since this may be costly and time consuming, you can prioritise data that directly inform key aspects of your baseline (e.g., vulnerability, risks, or adaptive capacity) and choose the most cost-effective methods focusing on high-impact areas that can be addressed within the budget and time constraints.

D2. Task 1.1.1 Gather evidence – Technical guidance on how to complete

Analyse evidence and derive insights:

- **Organise data:** Integrate the data in a database and organise it into relevant categories (e.g., socio-economic, climate, environmental, institutional data).
- **Process collected data:** use, for instance, statistical analysis or data visualisation tools (e.g., GIS) to identify patterns, trends, dynamics, and other relevant information related to climate risks, vulnerability and resilience of your region.
- **Extract insights:** review the evidence focusing not only on vulnerabilities and resilience of single systems or elements (i.e. community, infrastructure, area), but also on the interdependencies between them (e.g. water supply system depending on the energy grid, or industries depending on transport and communication infrastructure) and how these affect other 'hidden' sectors and populations indirectly.

Tip: The AGORA Climate Data Academy can support you in understanding climate data and the importance of their collection and visualisation.



Food for thought: All the collected information together (primary and secondary data) helps you understand better your region's context, trends, and dynamics—necessary for better undertaking your Regional Resilience Journey.

Report findings

- **Synthesise information:** extract key findings, including past climate impacts, ongoing risks, critical vulnerabilities, and local resilience capacities and opportunities. Highlight any insights or gaps in data and knowledge that may require special attention in the future.

Tip: Be aware of the iterative nature of data collection and its continuous feedback with the parallel tasks of 1.1.2 Frame the Problem and 1.2.1. Map Relevant Systems. Input from these two tasks requires adjustments in data collection, revision of the data collected, and additional information as more insight into the challenge is gained.



Supporting resources:

- [The Climate Resilience Measurement for Communities \(CRM\)](#)
- [European Climate Data Explorer](#)
- [JRC PESETA IV](#)
- [World Bank's Climate Change Knowledge Portal](#)
- [ThinkHazard.org](#)
- [ResourceWatch Dashboards](#)
- [ClimateAnalytics's Climate Impact Explorer](#)
- [ARCH Resilience Assessment Dashboard RAD](#)
- [COACCH Climate Change Impact Scenario Explorer](#)
- [Open Climate Data: Open Gov Guide](#)
- [Examples of climate data projects](#)
- [Citizen Generated Data: Toolkits and Guides](#)