D.2.4.3. Toolkit manual – Planning for adaptation in Adriatic region

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Interreg Italy-Croatia: AdriAdapt

AdriAdapt is a project funded under the European programme Interreg Italy-Croatia and its objective is the improvement of the capacity of the urban and coastal areas of the Adriatic area to respond to the effect of climate change at local level and the implementation of the resilience of the territory.

The project has developed a set of operational tools to help cities to increase knowledge of climate phenomena at the regional and local level, regional and local, and to be able to plan and develop climate adaptation plans and actions that contain concrete and integrated actions to combat climate change. The project aims to improve local climate change adaptation capacity in Adriatic region by creating an information platform that provides access to guidance, data and tools that will help local authorities to take adequate policy measures and develop plans to increase resilience in urban and coastal areas.

The project has four major actions. The first is the improvement of available climate-related knowledge and the production of dataset and projections for detailed information on climate-related impacts in the Adriatic pilot areas. These knowledges are very important for decision making process.

The second is the elaboration of a climate information system and a knowledge platform for the Adriatic region. The system and the platform include best practices, guidance documents, legal frameworks and climate and vulnerability studies.

The third is the test-integration of the knowledge platform in Croatian and Italian pilot cities and urban areas, where adaptation and resilience plans will be designed.

The fourth is the dissemination phase of the information contained in knowledge platform. It has to be considered as a region-specific repository for climate policy and plans and it provides support and locally relevant data for follower cities.

The partnership of the project has been able to pool all skills and competences of relevant institutions in order to achieve the set of project results, having the capacity to create strong links to target groups addressed by the project.

This document is the deliverable *D.2.4.3. Toolkit manual – Planning for adaptation in Adriatic region* and described a theoretical framework to teach and guide an adaptation planning process.

1   Introduction

The document has been developed in **English language** to facilitate the comprehension within the project and the dissemination after the end of the project, both for the two countries involved and all the other external affected to themes and topics. Moreover, the document has been developed in English language because it is strictly connected with the deliverables 5.2.2., that uses the same language.

The Toolkit is the *guide-to-teach*. How can we teach and guide who participate to planning processes?

This Toolkit is a resource and a planning guide both for who will teach and disseminate "*adaptation planning for climate change*" and for who will learn and practice, such as **city planners**, **professionals,** and **technicians**, to better understand, assess and act on climate change at the local level, specifically in the Adriatic region.

This document aims to guide in the planning for climate change process and to support city climate change planning processes and capacity building and training. The Toolkit aims to facilitate the decision-making processes and to integrate climate change adaptation across the organisation and planning processes and instruments. The Toolkit aims to contribute to:

- improve **awareness** of climate change past trends and future projections.

- **integrate** adaptation into planning processes.

- manage climate-related **risks**.

- **structure** planning frameworks and processes.

- turn climate change vulnerabilities and uncertainty into **decision options and opportunities**.

- build **flexible** adaptation actions.

- build a strong decision-making process and maintain standards of service in **extreme situations and conditions**.

- foster **links and networks** across different territories, cities, local authorities.

The planning process is flexible and non-linear. It should be designed on vary situations and realities, because each part of a studied territory may be at **different stages of planning** (both in terms of planning for climate change and other integrated dimension of territory/city planning). This toolkit may be used for the **whole planning** process or only for a **few steps** by different local

authorities, according to the needs or to the local level of planning. The territories and the cities have different planning structures, authorities, administrative processes, technical and financial capacities and resources. Therefore, the use of this toolkit has to be flexible, depending on local capacity and need.

The following ACTIVITITIES[1] aim to help planners and other project actors to follow a line for teaching and planning for adaptation in the Adriatic region. The planning framework should be built in relations to the *activities* described in the following pages, but, since every process is different, the use of every *activity* may not be required. Thus, the *activities* can also be used to support single parts or few steps of a planning process/project.

1.1 Toolkit and the deliverable D.5.2.2.

The toolkit is connected with the deliverable *D.5.2.2 Description of the on design of the capacity building package*. The toolkit consists of a theoretical framework of the training courses and events, a theoretical and methodological guide to teach and plan. It answers to the following questions:

- How should we teach "*adaptation planning for climate change*", in particular to city planners, professionals, and technicians?

- Which should be the steps for teaching and practicing "*adaptation planning for climate change*"?

- How should the "*adaptation planning for climate change*" process work?

The toolkit is structured in 4 steps: stakeholder management, multi-level perspective (MLP), visioning, and management and monitoring. Each part presents some *activities* (10 in total) that help to create both a systemic perspective of framework and a standalone/individual utility.

The second part (D.5.2.2.) is dedicated to *how* AdriAdapt project has approached training about climate change adaptation in the project pilot areas. The theoretical framework has been adapted and integrated according to the pilot areas' needs, demands and capacities. The deliverable D.5.2.2. answers to the following questions:

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[1] The term ACTIVITY substitutes TOOL because the main objective of this document is to guide through the methodological path of planning process for adaptation to climate change. The document does not present tools but helps to have the right questions to teach and guide the process. The ACTIVITIES are the main steps (10) of the process.

- How have we adapted the theoretical framework to the specific requests?

- Which *activities* have been used and practiced the most?

- Which are the most relevant results of the training moments?

It shows where the practice fits into the theory and in which steps AdriAdapt experience has focused the most.

1.2 The aim of the Toolkit

As mentioned before, the *activities* focus on **problem solving** (macro and micro), through a **continuous learning process**. The toolkit is not designed to be fix and to impose a one-solution way, but to **think differently** on a plurality of ways to face and tackle the problem. The toolkit is designed to be flexible and based on a **systemic perspective** that push to learn from the processes.

In many cases, the *activities* may be adapted to **specific properties and needs** of the context (territory, city, neighbourhood, group). This is what the practical experience of AdriAdapt shows up (D.5.2.2.).

In the learning process is not only a matter of topics and contents. **Time** plays a relevant role in the learning process. After the implementation of each *activity*, monitoring, assessing and reporting are important to understand the impacts of the training actions, i.e. the concrete, obtained results and their relation to the challenge/problem. **Not only results are important: the process itself can teach and provide lessons**.

The Toolkit is a base instrument to implement and enhance **creativity**. Start from the toolkit and create your own pathway to teach and guide "adaptation planning for climate change".

1.3 From theory to practice

Sustainable urban planning policies can reduce **territories' vulnerability to climate change risks**. This toolkit provides support to integrate climate adaptation into the practice of urban planning (adaptation measures within the projects, decision-makers engagement, use of nature-based solutions to reduce climate vulnerabilities) to ensure **practical, sustainable and resilient territorial development**.

1.3.1 The importance of training events and courses on climate change adaptation at local level in the Adriatic region

The deliverable D.5.2.2. should be considered as the second part of the toolkit. It shows what training courses and events AdriAdapt has concretely developed and how these have been implemented. These moments are included in a **long capacity building process**, through which experts and scientists have tried to raise up the level of skills and knowledge of local authorities and staff. As mentioned before and as described in the following pages, the training moments did not use all the available *activities* defined in the theoretical framework. The theoretical frameworks provide a line of approach, which must be adapted to the specific situations.

This is what has happened in the Adriatic experience. For example, most of the pilot areas had already identified the actors, their geographical position and the relation with the macro-problem of climate change (Stakeholder management step).

The first step of the training-learning process has been the definition of the problem related to the specific Adriatic region.

The second step (*Multi-level perspective*, MLP) has been that mostly required by the AdriAdapt pilot areas. This step enabled to improve the knowledge framework and the context's vulnerabilities dataset and knowledge levels. The *activities* of this step have been used to teach and support local technicians and planners.

The *Visioning* step has also been widely required and its *activities* has been used to better understand and visualized the possible scenarios, actions and pathways for the territorial-urban development.

The last *activity* (within the *Management and monitoring* step) has not been used, but partially described and anticipated in some meetings and workshops (as future step beyond the project).

The **relationship between theoretical framework and AdriAdapt project** (*what activities have been used? Why and how?*) is a strong part of these two deliverable (D.2.4.3. e D.5.2.2.), because show a practical application of the theory. The **importance** of training events and courses on climate change adaptation at local level in the Adriatic region is remarked by the significant **increase of awareness and expertise** of the pilot areas' staff (and in the whole partnership).

2 First part: theoretical framework

	Theoretical framework
2.1	**STAKEHOLDER MANAGEMENT**
2.1.1	ACTIVITY 1: Definition of the problem
2.1.2	ACTIVITY 2: Identification and description of the actors
2.1.3	ACTIVITY 3: Stakeholder's mapping, networks and problem affinity
2.2	**MULTI-LEVEL PERSPECTIVE (MLP)**
2.2.1	ACTIVITY 4: Definition of the context map
2.2.2	ACTIVITY 5: Identification of change directions
2.2.3	ACTIVITY 6: Barriers and blocks detection
2.3	**VISIONING**
2.3.1	ACTIVITY 7: Opportunities map
2.3.2	ACTIVITY 8: Future story visualization
2.3.3	ACTIVITY 9: Elaboration of the roadmap
2.4	**MANAGEMENT AND MONITORING**
2.4.1	ACTIVITY 10: Prediction of transition and project elements

Table 1 - The *activities* of the theoretical framework of the toolkit

2.1 Stakeholder management

The stakeholder management process consists of two phases: stakeholders' network analysis and engagement. The first phase aims to map and understand existing networks, their single components (stakeholders) and their specific behaviours and connections. The second phase – the engagement process – aims to involve stakeholders within specific activities. The engagement phase allows getting many positive points, such as to increase the knowledge, the experience and a wider range of perspectives, or to reduce conflicts between the involved (or not involved) actors. Moreover, it is helpful build a sense of belonging to the process (objectives, solutions) and to see the network as actual community, because the outcomes are more shared and accepted.

Stakeholder management is formed by three *activities*: Definition of the problem (1), Identification and description of the actors (2) and Stakeholders' mapping, network and problem affinity (3).

2.1.1   ACTIVITY 1: Definition of the problem

"Who are you? What is your problem?" To find a solution you need to make the problem visible, tangible and understandable. A clear description and recognition of the problem is the first step to a deep understanding (and solution research). If you understand and if you can properly describe and tell the problem, you are ready for the construction of a solution.

You must define the problem whenever you face a complex situation, characterized by a plurality of sides, perspectives and opinions. Climate change is one of this situation, which has not a simple definition. When we talked about territories and cities, the complexity is very high, and the definition and the statement of a problem is not brief and easy. To simplify the problem description there are a lot of tables and canvas produced by literature, both for urban planning and economic planning. We suggest using the following one and to fill it with the participation of the stakeholders, both to make them part of the problem definition and to gather the plurality of points of view on the same issues.

When you talk to the stakeholder to define the problem, you should be more conversational al less complex you can. This approach helps you to gather more sides and perspectives of the same problem: therefore, the more perspective you have, the richer description of the problem you get. The participatory process can totally upset the initial conception of the problem and you may change even some strong belief and approaches to the problem.

The definition of the problem (the real problem and not the apparent problem) comes from the dialogue. Often, participatory process is idealized in a peaceful opinions' exchange. On the contrary, especially in the definition of the problem (and the relative interests), the confrontation is a battlefield, and a strong moderation is required.

	Problem definition	
1.	Who are you? And why are you helping the stakeholders to find a solution to the problem?	
2.	Can you define the problem with a big and wide picture?	
3.	What climate change related challenges are you facing?	
4.	How can you face technical challenges?	
5.	How can you face social challenges?	
6.	What resource do you have? And what would you need?	
7.	How do you see the problem now? Is it enriched by the gather of the previous information? Can you define it more deeply?	

2.1.2 ACTIVITY 2: Identification and description of the actors

"Who are the actors? How are they related to the problem?" providing a list and the description of involved stakeholders (also explaining the relation and interaction with the problem and with the context affected by the problem) is usually the first step to be considered in activity 2. The identification of the stakeholders is useful at the beginning of a new project or initiative finalized to find a solution of a problem (adaptation to climate change impacts in cities and rural territories) that affect many actors (public, private, citizens…).

The world is interconnected, and all the socio-economic realities are composed of territorial (and extra-territorial) networks. The projects strongly interact and interplay with other markets or other dimensions of a system (see Multi-level perspective in the following section). If you engage these networks since the beginning, the project has more possibility to get better results. As mentioned before in the introduction paragraph on Stakeholder management, the engagement of the network creates a sense of belonging to the project.

The list of the actors should contain all the actors affected by the problem, or the ones who affect the problem. Do not forget less powerful actors and do not consider any actors as marginal or

irrelevant for the project. Start with a large number of actors and select and filter them along the process in later phases. All the actors should be named and classified, to have the right data, hierarchy and sector belonging. Gather all the actors in informative table and do not forget to update the number of actors (they can change, increase or decrease during the process) and the position within the process.

Figure 1 Stakeholders' involvement and training moment during the project (meeting in Cesena, AdriAdapt project's image)

2.1.3   ACTIVITY 3: Stakeholder's mapping, networks and problem affinity

Once, you have organized the stakeholders into your specific context categories, understand why they would be interested in participating to the process, how they could contribute to it how much they are relevant (essential, important, minor…). Then, describe their stake in the issues, the formal position, their availability of/control over relevant resources and their power to promote or block the process.

But *"where are the stakeholders? What spatial relationship and incidence do they have within the territories? How does the network is set in the territory/city?"*

The map is a visual and analysis instrument providing answers to above questions. Mapping stakeholders is the act of spatialize the stakeholders' network and to understand how they are spread in the territory/city. The previous identification, description and classification of all the actors have to be transformed into a visual representation of the territory, trough graphs and maps. These *activities* allow seeing differences, as well as finding affinity groups and conflictive relationships. The pictures of the stakeholder's network may represent some key attributes, such as influence, relevance, interest, attitude, adaptation or resistance to changes, or expertise.

The stakeholders' mapping is useful when you have already identified and described your stakeholders. It helps you visualize the complex interplay of relationships. If you use the maps support, you can make better decisions or you can better support the decision maker, about the adequate strategies to engage the actors.
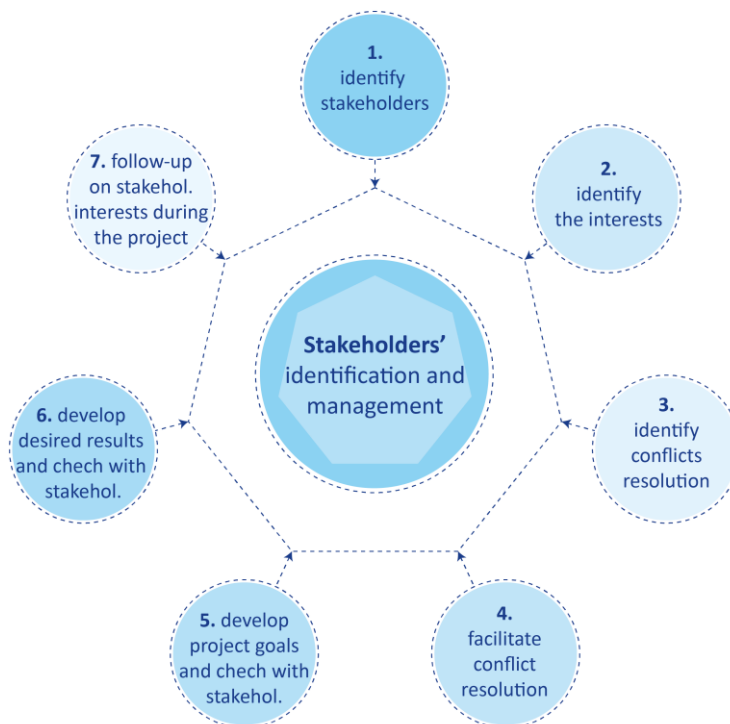
Figure 2 Stakeholders' identification and management stages along the planning process

2.2 Multi-level perspective

To understand and describe a complex system, such as a territorial region or a city, and its changes, such as climate changes and socio-economic transitions, the multi-level perspective is a helpful tool. It helps to consider all the layers and level of governance of the system, trying to figure out how they interact and impact on the system. To simplify the deep complexity of a territorial/urban system, the multi-level perspective follows three big levels: macro, meso and micro. The three levels interplay and trigger changes and transitions in the studied system. The macro-level includes long-term trends, crises (demographic, macro-economic, macro-political, environmental ones) and landscapes (geomorphological, hydraulic, seismic and anthropic risks and vulnerabilities). The meso-level includes regimes, mainstream practices, structures and culture (rules and regulation, infrastructure, economic structures, behaviour). The micro-level is the level of radical innovations, local and different from the mainstream (innovation projects, local experiments, bottom-up initiatives).

Three major *activities* shall be considered as part of the multi-level perspective: Definition of the context map (4), Identification of change directions (5) and Barriers and blocks detection (6).

2.2.1   ACTIVITY 4: Definition of the context map

"How the system around your challenge works? What are the vulnerabilities and the resources? Where are we working?" The context map is a visually comprehensive picture of the system on which your project/process is focused on. The context map is the result of the context analysis and includes: a general framing, the socio-economic trends and situations (data, statistic, images), the environmental conditions (vulnerabilities, resources, properties…), the innovation initiatives (projects, resources, potential) and what comes from stakeholders' sides and perspectives (perception and community maps and information).

The context map is useful at the beginning of the project, when you need a quick idea about the system of the challenge you are facing. It is also useful during the process, when it put together and overlap more information (such as vulnerabilities assessment, impacts analysis, territory exposure, land use and consumption…). It is necessary before making key decisions, to have general and specific frameworks on threats and opportunities. If you miss this step, you can underestimate some variables that can affect the overall process, the specific decision and the future plans.

The context map must be simple and synthetize the multi-level dimension of the system. What is actually very complex, must be summarised and represented in the simplest way to communicate the system the project is working on. The context map increases the awareness of the overall territorial/urban system and helps to make better decision.

**Figure 3   Context analysis with stakeholders' participation and vulnerabilities assessment
(Vulnerabilities assessment process, AdriAdapt project's images)**

2.2.2   ACTIVITY 5: Identification of change directions

"How has the context map evolved over time? What are the main relations between the levels of the context over time?" Together with data and trends coming from statistic information, the identification of changing directions is a very important moment of the planning process of complex systems, such as climate change adaptation for territories or cities.

Through any kind of visual instrument, you should highlight and compare the evolution of the context over time. A system (especially territories and cities) is characterized by a continuous interrelation, between different levels and within the same level. The identification of the change directions needs a picture of the system of your challenge, to read and understand the past traces and *how and why* situations and solutions changed over time.

The main task of this *activity* is to create a logical map of connection between the levels of the system of the project. *What kind of influences all the levels have with the others? How does the micro level affect the meso one? And how the macro? How did they do it in the past, over time and socio-economic changes? How can these influences be important for your project or your planning process? What can we learn from the past?*

To better focus in the sea of changes and directions that you detected, the use visual-coloured tools (e.g. post it or others) are very helpful to create a comprehensive map or drawing of the evolution and changes.

Figure 4   Territory's transformations and analysis of the vulnerabilities and weaknesses due to the changes (Vulnerabilities assessment, AdriAdapt project's image)

2.2.3   ACTIVITY 6: Barriers and blocks detection

"What are the main barriers, blocks or limits for your project? Can you decrease the possibilities of failure, by previously detecting and recognizing the main barriers?" As well as in most of the *activities*, a visual approach is highly recommended to identify the main blocks for your project and to break them down into smaller problems. The building of visual scheme with blocks and links to the project is important also to prioritize the problems and list them in term, of urgency, scale, or other criteria.

First, gather the main problems and split them into smaller issues. Then, organized the sub-problem in the main categories which contributes positively or negatively. Each category can be furtherly split in the causes of the sub-problems. All the causes must be priorities as mentioned

before and a list of alternatives should be compared. This moment is the last of the multi-level perspective and the context analysis.
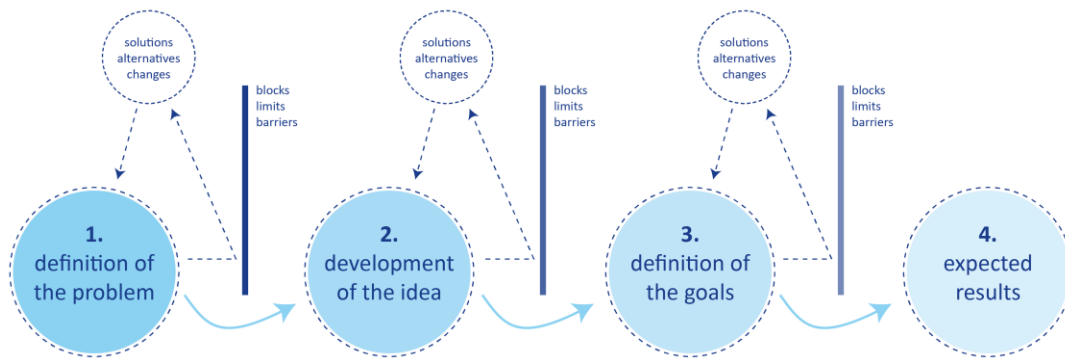

Figure 5   Blocks, limits and barriers during the planning process stages

2.3 Visioning

Visioning implies drawing a desirable future and describing how it might be. There are many ways to picture and plan the future. Forecasting is a possible method; it is based on the analysis of current data and the construction of future trends. Nevertheless, we cannot predict the future and while planning we must consider multiple variables and alternatives. To this regard, the elaboration Future Scenarios is often used; it consists in the creation of alternative futures based on on-going trends and assumption about the future evolution. Visioning is a foresight method. It attempts to create a desirable future scenario (and feasible) where the present problems are solved.

To build a vision, trends and statistic are very important to create the base of the future development. However, expert knowledge is as important as the data gathering. The vision has to be inspiring and based on a radical idea. It has to consider all the level perspectives, even if it addresses only some of them. Open and participatory approaches are very important and follow the Stakeholder management *activities*. Storytelling, images, maps, photo effects, presentations, are the more used techniques to create dream-sharing-session within workshops and event with the involved stakeholders.

Three major activities shall be considered as part of the visioning phase: Opportunities map (7), Future story visualization (8) and Elaboration of the roadmap (9).
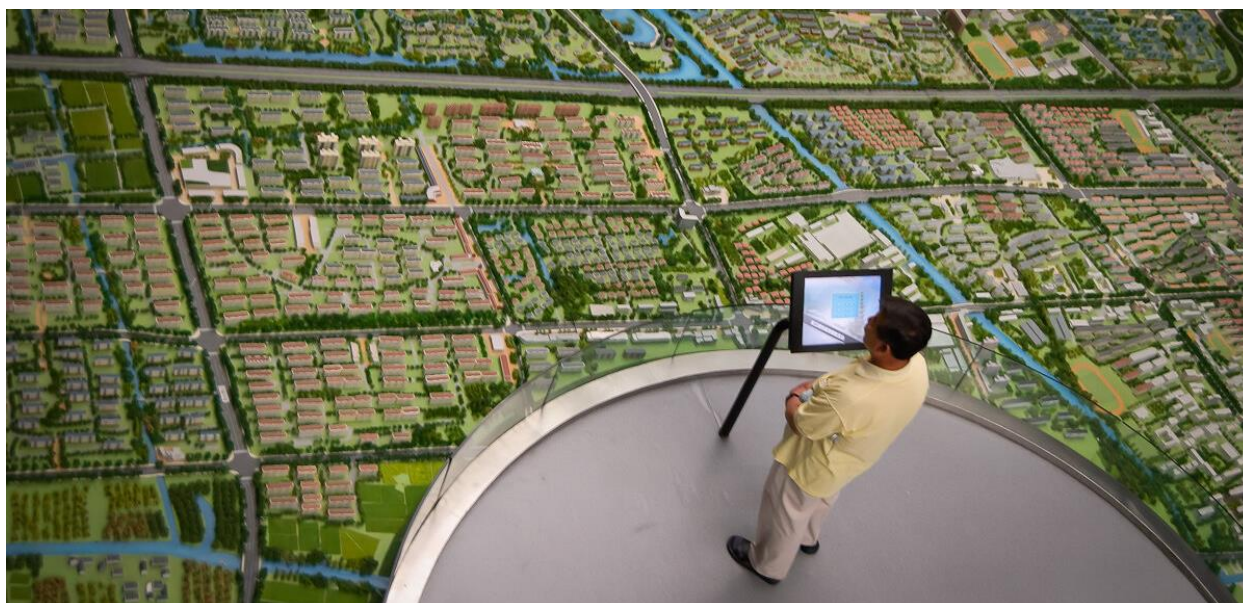
Figure 6   The vision stands between the problem and the vulnerabilities and the action plans and projects: the vision is the innovation idea of a desired future

2.3.1   ACTIVITY 7: Opportunities map

"What are your challenges? What has been implemented to face the challenges? Where are the gaps to turn the challenge into opportunities?" The *activity* 7 is very important to answer to these questions. You need to visualize your challenges and find out all the answers to the challenges. From these practices, positive or negative, you will be able to absorb information and understand which the most positive way is to face your theme.

In the macro-theme of Climate Change, there are many challenges to cope with. The map of opportunities helps you to focalize on the key variables of a specific challenge and analyse what has already been done. You will see that, in your region or somewhere else in the world, someone has already faced your challenge giving different answers, solutions, ideas or approaches. Some of these may be a good tip for your local challenge as well, while some others may be completely inappropriate.

Once you have a window on the variety of answers, you will also note that entire challenges, or part of them, have not been solved yet. Those white answers are the field of your opportunities. *What kind of gaps have you found? How can you turn them into opportunities? What do they need*

to become actual opportunities? How these opportunities stand in the overall strategic framework? Do they answer to a single challenge or are they cross-cutting?

2.3.2   ACTIVITY 8: Future story visualization

The *activity* 8 is the core of the visioning phase, dealing with how you present and visualise the vision to the planning group, the local authorities and all the stakeholders involved. The vision is the story of the future and a dynamic figure of how you imagine the development of the territory you are working on. The story needs a visualization to help you (and everyone is dealing with the future planning) to imagine and describe the ideal, desired future. Words and images are tools that can be used to better explain the future outcomes and the steps-process-projects to reach it.

How do you imagine the future of your territory? What is the radical idea for an ideal future? How do you represent it? How do you tell your story? How do you answer to your specific-local challenges? Can your future story visualization hit all the involved stakeholders (or part of them)?

The vision process starts after the definition of the problem/challenge, and before the beginning of the measures design (that come as consequences of the vision, or in the framework of the vision). Once you deeply know the challenge that you are facing, and all the impacts it causes to the territory, you can start building of a common and shared vision of the desired future. The vision is wide and involve many issues of a considered system (people, environment, economies, building, infrastructures, food, energies…). To make this complexity easier to understand, the vision shall be as visual and appealing as possible.

Storytelling is the main *activity* to elaborate your vision. It is simple and help to visualize your ideas that often are radically different from present configuration. This may cause barrier and limits: the vision needs a positive and strong story to be accepted and discussed without prejudices. The vision-telling is often alternative to the present. Therefore, the future story visualization helps to open mind and thought, buy should be as accessible and easy as possible.

The visioning process should be a participatory tool. The involvement of large diversity of stakeholders provides richer and broader ways of thinking and points of view. The workshops and meetings are a useful *activity* to debate on the perspective of the vision with an open and participatory approach (also invite some stakeholders from the outside of your territory to open the field of discussion and try to exchange roles and responsibility within the dialogue).

Figure 7 Storytelling and graphic representations are two important tools to transform ideas into images and scenarios of the desired futures (Creative Commons Image)

2.3.3 ACTIVITY 9: Elaboration of the roadmap

Roadmap means literally route: *"what is your path from present to the desired future? How and when do you reach it? How many and what pathways do you have to achieve your goals?"*

The roadmap gathers a set of pathways from present to future, aiming to improve the local adaptation capacity and more widely the sustainability of the considered system. Considering all the pathways you can start building strategies for different stakeholders. The roadmap is a crucial step between the vision and the plans-projects-actions and it helps to prioritise the choices and the pathways to the future expected in the vision. Identify, prioritise and plan your future actions, including resources, partners and calendar.

The project roadmap works both as a map and as a schedule for planning. It is a manifesto and a framing *activity*. It lists the tasks of your plan in an iterative and perfectly integrated way, transforming the vision in packages of actions and projects. The roadmap offers a realistic, logical

and structured definition and projection of the main phases of the plan, analysing the evolution and the life cycle.

The important of the roadmap stands in the long-term perspective and in the farsightedness of the process. The roadmap allows you to identify the direction of the plan and the action to achieve the goals of the vision. With actions and specific objectives, you will be able to identify the right indicators to later evaluate and monitor what you have planned and the outcomes of the actions.
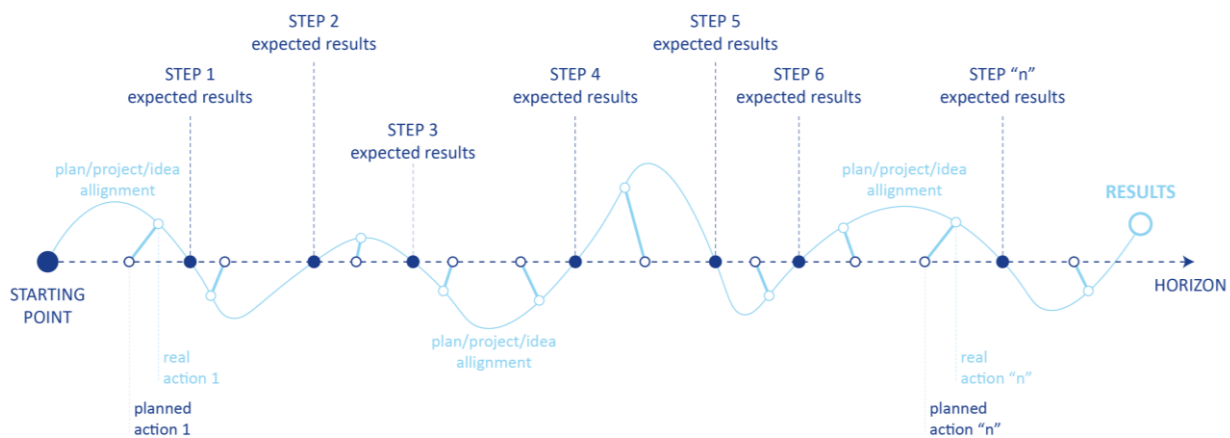
Figure 8   The roadmap is a graphic tool to explain where you are starting the process and where the process is expected to arrive

2.4 Monitoring and management

The questions "are we doing it?" and "how are we doing it?" are important for the success of a climate change planning process (and the relative plan and planning instrument that come from it). The answers of these two questions indicate *what and how* need to be adjusted to better meet the objectives and the expected results (how and how much we addressed climate change impacts, how and how much the vision and the plan are bringing the expected outcomes). The definition of a set of monitoring indicators is the starting framework for tracking the climate change action plans or policies. The monitoring process in is not an end-checking step: the monitoring process is a fundamental part of the planning process and helps to measure the quality and the quantity of what the process is producing. Therefore, the indicators and the checking system needs to be periodically revised and updated to adequately measure the final plan actions.

If this phase turns some alarm on, the plan should be integrated and aligned to produce the expected results. Sometimes, some action does not bring the expected results and some other does: the plan monitoring team should decide to maintain the working action and to cancel those not providing expected benefits. This enables focusing energies and resources on the right direction.

One major activity is included in the Monitoring and management phase: : Evaluate and monitor the outcomes (10).

2.4.1   ACTIVITY 10: Evaluate and monitor the outcomes

"How can the project be tracked to ensure the expected impact and agreed actions by the stakeholders? How should the tracked information be incorporated in the project?" In order to monitor both plan processes and outputs, you may need established or new indicators. The monitoring programme helps to determine *what, how, when and by whom* needs to be monitored. The monitoring programme also push you to understand how and how much the stakeholders are involved in the project, how they feel it and how they see the future over it.

Monitoring is not a matter of guilt and criticism. It is rather the way to make the outcomes accountable and turn them into adaptive solutions for the overall framework of the project. It should be active regularly and not only at the end.

Monitoring implies:

- Updating key variables, including those related to climate change vulnerability, exposure, sensitivity and adaptation capacity and enabling to assess change in time (climate action is a dynamic process).

- checking and tracking the stakeholders (cross-check of all type of actors) tasked with specific activities (time, ways, updates).

- checking what is not working or need adjusting or it is not effective.

- checking what is missing.

Finally, evaluation analyses determine if the project (plan, policy, or other instrument) are meeting initial community objectives (efficiently, effectively or at all) and if there are opportunities for improving the project (new or aligned actions, new stakeholders or partners to be involved…). Monitoring is a very important and technical part of the process and needs technical knowledge and expertise.
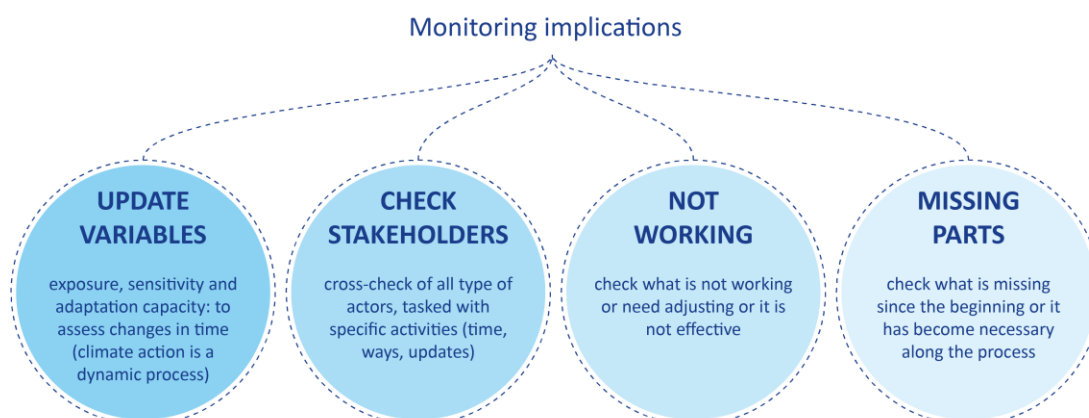
Figure 9 Monitoring helps to update variables, check the stakeholders, assess what is not working or missing

3 Conclusion

A climate change adaptation strategy or plan is primarily expected to **increase the resilience and reduce the vulnerability** to climate change impacts of a given territory or community. However, this objective must be pursued ensuring the **long-term sustainable development of the society**. Therefore, it must be ensured that choices made for the sake of adaptation will not compromise aspects of sustainability (e.g. environment, social and economic well-being and intergenerational equity). At the same time, investments made for adapting a community and making it more resilient should **maximise synergies and co-benefits** (e.g. increasing or protecting biodiversity and habitat conservation, reducing air pollution, improving health conditions, creating new job opportunities, improving the quality of life).

Sustainable development of the society means **creating better perspectives** for inhabitants and communities and improving several aspects of socioeconomic territorial framework.
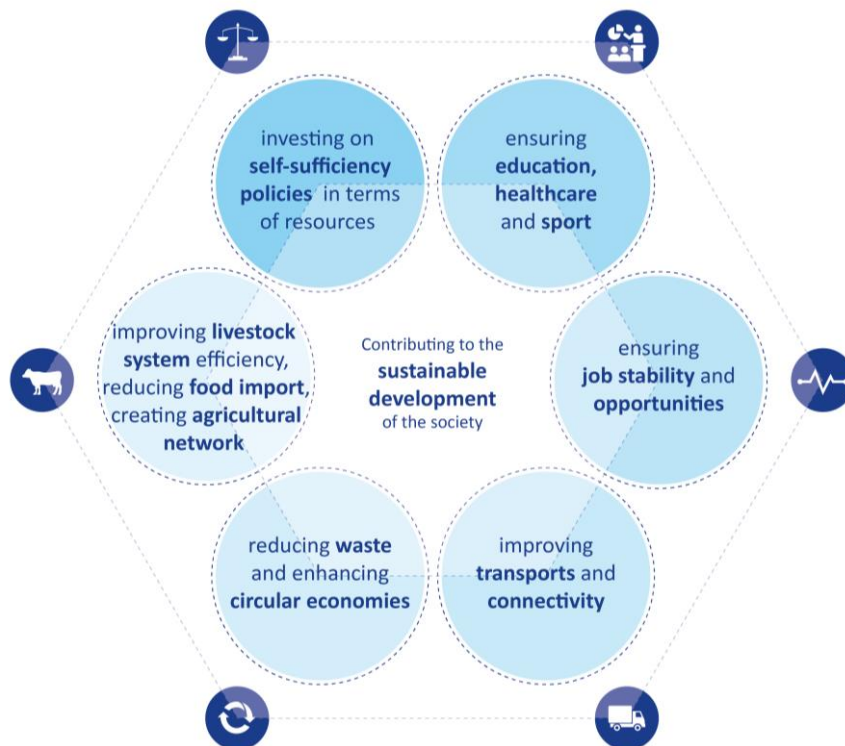

Figure 22 - Adaptation planning contribution to sustainable development of society

The **Toolkit**, as explained in the introductory pages, **offers a theoretical look** at the recommended *activities* for a planning process for adaptation and the deliverable D.5.2.2. opens **a practical parenthesis** on the specific experiences of the project. The interaction of these two elements (theory and practice) shows how each context follows a different path compared to the others due to the resources and variables involved. The flexibility of the proposed methodological framework (partly applied in the AdriAdapt project) allows to fit into any step, according to the needs of the specific context.

The Toolkit also offers a **guide for teaching the planning process** for adaptation, also in this case by combining the theoretical structure with the practical application (D.5.2.2.). Specifically, in the practical part, the project proves to have a positive impact on the skills and competence of the project partners and all the stakeholders involved. The link between theory and practice is shown in the table below. The table highlights what activities have been carried out in the practical experience of AdriAdapt project.

	Theorical framework	Practical experience
2.1	**STAKEHOLDER MANAGEMENT**	
2.1.1	ACTIVITY 1: Definition of the problem	✔
2.1.2	ACTIVITY 2: Identification and description of the actors	
2.1.3	ACTIVITY 3: Stakeholder's mapping, networks and problem affinity	
2.2	**MULTI-LEVEL PERSPECTIVE (MLP)**	
2.2.1	ACTIVITY 4: Definition of the context map	✔
2.2.2	ACTIVITY 5: Identification of change directions	✔
2.2.3	ACTIVITY 6: Barriers and blocks detection	✔
2.3	**VISIONING**	
2.3.1	ACTIVITY 7: Opportunities map	✔
2.3.2	ACTIVITY 8: Future story visualization	✔
2.3.3	ACTIVITY 9: Elaboration of the roadmap	
2.4	**MANAGEMENT AND MONITORING**	
2.4.1	ACTIVITY 10: Prediction of transition and project elements	

Table 2 - The *activities* used in AdriAdapt training experience

As we see in the deliverable D.5.2.2., from the practical experience of AdriAdapt project, we learn that increasing skills and awareness in terms of adaptation to climate change are the basis for an

effective planning process. The methodological knowledge of a process and the ability to adapt this structure to the reference territorial reality are fundamental elements for planning the territory

In conclusion, a final note should be made on the abnormal conditions caused by the **social and health situation** that we are still experiencing. Especially in terms of training, education and communication, the pandemic situation has forced all the moments of the project to be in remotemode. This has led to a **serious decrease in the possibility of exchange and communication**, interaction and learning, reducing the means of communication and dissemination of the contents of the project. Technology in this sense has helped to keep the project network alive and to achieve excellent results through courses, lessons, seminars and online meetings.