

# Target 8 Joint SECAP plans

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Final Version 30/04/ 2021

Deliverable Number 4.3

Output 2.102

Plans of adaptation measures put in place



Project Acronym	Joint_SECAP
Project ID Number	10047506
Project Title	Joint strategies for Climate Change Adaptation in coastal areas
Priority Axis	2
Specific objective	2.1
Work Package Number	4
Work Package Title	Definition and implementation of Joint Actions for Climate Change Adaptation Plans
Activity Number	4.3
Activity Title	Joint Action Implementation
Deliverable number	4.3
Deliverable Title	Target 8 Joint SECAP plans
Partner in Charge	PP3 Abruzzo Region
Partners involved	ALL
Status	Final
Distribution	Public

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## Introduction

The deliverable of activity 4.3 is organized in two parts:

The first part highlights the governance model and the process that made the partners choose between different actions and measures in order to stimulate a better comparison among the different strategies of other territories. The description will also include the conditions noted by the partners so that the plans are activated concretely.

The second part of the deliverable is a report with the description of the Joint Actions planned in the different target areas of the JOINT\_SECAP project. They will be part of the 9 Joint SECAPs that the 9 target areas are designing.

The following are attached to the report:

**Annex I**, the SECAP template duly filled out for each target area. The completion of this template per each target area has allowed to have the same standards among partners and to compare the methodology, the governance, the type of actions, the sectors involved and other aspects specific for Joints Actions. The template has thus been filled out according with CoM requirements as specified by JRC guidelines and CoM website information, but it focuses, for the purpose of the JOINT\_SECAP project, on adaptation to climate change.

**Annex II**, PART A; PART B, SECAP Plans Target Area PP1; Target Area PP3; Target Area PP5; Target Area PP6; Target Area PP7; Target Area PP8.

## 1. Governance model and Joint Action selection process

### 1.1. The Joint Action process

The assessment of the vulnerability and levels of risk (Activity 3.1), the subsequent development of Scenario '0' and the optimal scenario through the work of Focus groups (Activities 4.1.1 and 4.1.2), and the suggestions in the scoping report (Activity 4.2.2) on adding actions or removing other ones (since they would cause potential environmental damage) led to the identification of joint actions that would be primarily selected in the different target areas.

With reference to the Guidebook 'How to develop a Sustainable Energy and Climate Action Plan (SECAP)' of 2018- *Part 1 – The SECAP process, step-by-step towards low carbon and climate resilient cities by 2030*, the selection of the different adaptation actions is determined considering the vision, the individual or a group of municipalities needs of and the objective of the plan. The actions for adaptation (mitigation and energy poverty) will be uploaded on the Joint\_SECAP Platform specifying, for each action, the timing; the body responsible for implementation; the stakeholders involved (only for adaptation actions); the risk and/or vulnerability tackled (only for adaptation actions); the estimated cost; the modality of financing; the estimated impacts in terms of energy savings, energy production, CO2 emission reduction (for mitigation actions); the means of monitoring.

A fundamental aspect, between several Municipalities is the mandatory presence of JOINT ACTIONS, that are those actions that involve all or part of Municipalities, with a governance and a method as specified below and that are different respect of individual actions.

#### *Individual actions*

The identification of individual actions is carried out by the Municipalities considering the previous analyses and the needs of the territory. These actions are identified and chosen by one or more Municipalities belonging to the group of Municipalities, which in any case can carry out the actions individually, without inter-municipal coordination. These actions cannot be considered joint actions but still are so important because they contribute to achieve the objective (individual one with option 1 or group one with option 2) of the JOINT SECAP.

#### *Joint actions*

These are carried out by the whole group or by the majority of Municipalities involved in JOINT S(E)CAP.

The Covenant of Mayors provides two possible methodological options for the development of a joint S(E)CAP:

*Option 1* – individual CO<sub>2</sub> reduction commitment: each municipality in the group individually commits to reducing CO<sub>2</sub> emissions by at least 40% by 2030. Each municipality is required to report the action plan in the individual profile of [mycovenant](#) platform. Each member of the group has to upload the action plan into their individual profile and each municipal council has to approve the document.

*Option 2* – shared CO2 reduction commitment: the group of municipalities collectively commits to reducing CO2 emissions by at least 40% by 2030. The group is required to provide only one action plan for the whole group in mycovenant. The action plan document to upload is a common one and includes all the members of the group, thus, each municipal council has to approve it.

Based on the selection of actions and their construction, the Joint\_SECAP project provides suggestions and recommendations:

a) To understand if a group of Municipalities is interested in acting to reduce a specific risk, partners are recommended to distribute a questionnaire among all the municipalities in order to understand which of them are interested to act on specific actions like the one of the previous examples.

b) To facilitate the selection of joint actions, Municipalities were suggested to rank the possible measures by importance in a table summarizing the main characteristics of each action: duration, level of required resources, expected results, associated risks, etc. The actions may be broken down in short-term actions (i.e., 3-5 years) and long-term actions (towards 2030).

c) To involve of the same group of stakeholders. There is the interest of all the group of municipalities that would like to act against a specific risk having the same stakeholders. The stakeholders can be involved with meetings like focus groups, or other types of meeting, and through email/phone calls etc. The advantages to have a meeting for a group of municipalities is that the stakeholders are more interested in participating because the action can be stronger, more useful for all the territory and better managed because it reduces individual meetings/methodology/goal/action. A good governance is needed to coordinate this involvement of stakeholders.

d) To select priority actions, suggesting specific methods, such as:

- defining which criteria to consider for the selection of measures (i.e., investment required, reduction of climate impacts and related costs, cross-cutting and infra-sectoral benefits, employment growth, energy savings, political and social acceptability, timeframe, payback, etc.);

- deciding which weight to give to each criterion;

- evaluating each criterion, measure by measure, in order to obtain a 'score' for each measure.

It was also recommended that all Municipalities involved act using the same or similar funds.

There were different means of selecting the joint actions developed by the different PPn, following the selection of adaptation measures and the identification of clear objectives. PP2 (Municipality of San Benedetto), for example, distributed a questionnaire to identify the priorities, selecting 46 objectives of which: 13 for mitigation issues; 23 for adaptation issues. For PP3 (Abruzzo Region), there are five main objectives: tackle the territorial instability, enhance green infrastructure, increase the resilience of the urban environment, reduce land use, set up a resilient community. PP6 (PGKC) identified specific sectors

to concentrate attention for adaptation measures and Joint Actions: Water supply sector – Water management and the environment; Health sector – Health sector and civil protection; Tourism – Economy and tourism, etc. The selection of adaptation measures involved various stakeholders and was organized in different encounters (focus groups) and restricted (bilateral) meetings. A very wide range of measures was often produced, for example, PP2 identified a list corresponding to the risks and vulnerabilities in the field; for PP3, this list came from the existing literature and information on climate change adaptation actions available on the European level from JRC; the national level from PNACC; the local level – Adaptation plans from the Italian municipalities involved in the Life Sec Adapt project, etc. PP1 (IRENA), PP6 (PGKC), PP7 (Split-Dalmatia) and PP8 (VelaLuka) identified some priorities encompassing significance, urgency, feasibility, cost effectiveness, multiple usefulness and synergistic effect; PP3 started with the real competencies of city administrations: communication activities, regulatory activities, design of public works, territorial and urban planning activities monitoring activities and divided the actions in: ‘win to win’ actions (that are able to mitigate the impacts of climate change on the territory, with an effectiveness both in terms of mitigation and adaptation); ‘no-regret’ actions (are cost-effective under the current climate conditions and would be further justified under the increased risks of projected climate change); ‘low-regret’ actions options (including adaptive measures with relatively low associated costs and potentially large benefits under the future climate conditions). PP4 (Municipality of Pescara) selected the most promising activities based on an algorithm that allowed it to understand how it was possible to propose 12 potential joint actions from 35 potential interventions using an algorithm based on a different perception of risk, feasibility, priority, and activation times.

Specifically, the move from adaptation measures to joint actions was specified as follows:

- for Target Area 1 (PP1 IRENA)

Joint Actions were selected based on extensive target area analysis by IRENA’s external expert and feedback from relevant stakeholders. The methodology process used by the external expert determined the optimal joint actions to be used for the designated target area. No real issues were reported when filling out the joint action form/document, but some difficulties were reported during the initial stage of establishment of joint actions due to actions not being properly defined and not including all necessary information.

- for Target Area 2 (PP2 San Benedetto del Tronto)

The actions on which there was the greatest degree of consensus among the stakeholders — and in particular the four local administrations involved in the SECAP — were chosen. In addition, a criterion of actual feasibility of the action in a joint form was also adopted, with reference to the procedures with which the action is carried out and to the subjects and skills it involves. While the specific objectives of the plan arose in the phases of the general participatory process, the choice of the most important actions, according to their specific relevance, was assessed in particular through bilateral meetings with the stakeholders called upon to collaborate.

- for the two Target Areas of PP3 (Abruzzo Region)



The Joint Actions are first all based on the real needs of the territory, and they were chosen considering some criteria: synergy/coherence with other strategic objectives, including the reaching of the sustainable development goals according to the UN 2030 Agenda; feasibility (technical and economical), efficiency and effectiveness. Innovation and replicability are also other key issues. Specifically, the joint actions were chosen considering that some measures implemented together can reach the set climate and sustainability goals and benefit from economies and results of scale. These actions include, for example, information and awareness measures. Other Joint Actions were proposed, because they are part of a regional strategy (i.e., Beach and sea collection for Target Area 2; viticulture project for both target areas) or part of a regional planning (i.e., Intra-municipal control for soil consumption for both target areas) or part of a European planning (i.e., Tiger and AgreeNet).

- for Target Area 4 (PP4 Municipality of Pescara)

The set of actions was then evaluated through a mathematical model that processed the results of the consultations considering the feasibility of the individual actions and their impact capacity. The progressive selection process, has made it possible to select a subset of six actions that appear to be the most performing for the purposes of adapting to climate change in our target area in terms of feasibility, sharing, effectiveness and efficiency.

- for Target Area 5 (PP5 SDEWES)

Firstly, the selection of the joint actions was the result of the risk and vulnerability assessment which identified the main risks. Secondly, experts provided drafts of the actions which would be most suitable based on the previously conducted analysis. Additionally, during the focus groups suggestions from stakeholders were considered. Also, consultations on the final outlook of the actions were discussed via online communication. Finally, in the scoping report, suggestions on additional actions were given while for some actions it was suggested to remove them from the plan since they would cause potential environmental damage. One of the options would be to provide a bigger role for the stakeholders which could provide the initial list of adaptation actions firstly and then the list should be further developed by the experts. This would possibly provide a wider approach to the development of the optimal scenario since with the used approach where experts provide an initial draft of the action's stakeholders could feel limited in their adjustment to their interests.

- for Target Area 6 (PP6 PGKC)

A few weeks before the workshop, PP6 held bilateral meetings with all the involved municipalities, checking what measures from their current Sustainable Energy Action Plans had already been implemented, which are to be implemented, which will most likely not be implemented any why, and what measures they suggest to be implemented in the Joint SECAP document. On the basis of these bilateral discussions, a list of proposed energy and climate measures was developed, to be discussed further during the joint focus workshop. The focus group confirmed most of the measures and proposed some new ones. Finally, the energy and climate experts made a final list of measures taken into account all the previous selection steps.

- for Target Area 7 (PP7) Split-Dalmatia

Main criteria used for the selection of joint actions are: Are administrative borders relevant for the implementation?

Is the adaptation measure interconnected across the entire area in its essence? Does joint implementation facilitate faster and stronger impact for the whole island? Do island municipalities rely on each other and in what aspects?

The selection of joint actions was contributed by the focus group discussion as well.

-for Target Area 8 (PP8) Vela Luka

Focus group discussion was very fruitful also in terms of joint actions. Main reasons that led to the selection of joint actions is whether their joint implementation would accomplish higher and faster positive effect for the whole island, whether and how much do municipalities rely on each other in certain aspects and whether the adaptation measure is interconnected across the entire area in its essence regardless of the administrative borders.

## 1.2. Conditions to promote the activation of JOINT SECAPs

The Joint Actions selected for each Target Area is only one step in the overall JOINT SECAP process.

It should favour flexible, adaptive learning for all subjects involved. 'Learning by doing and adapting based on what is learned' may help local entities to keep different options open when addressing risks and to be more reactive to changes. For this reason, the Joint Coordinator, who will connect the different entities, public administration sectors, and various stakeholders through an attitude of continuous learning (i.e., where even errors and failures are an opportunity to learn), may implement measures to orient Joint SECAP developments over time, promoting new common actions and intercepting financing from various sources.

Currently, the different PPns note some important conditions such that this may occur.

For PP1 (IRENA). The SECAP documents are still in the phase of being approved by Municipal and City Councils, therefore no concrete plans for joint action implementation are currently being performed. Favourable conditions include the target areas having an outline of joint actions which are relatively simple and cheap to implement and provide fast results, unfavourable conditions often include postponement of action implementation leading to some actions and monitoring assessments to be out of date later on.

For PP2 (San Benedetto del Tronto). Once the plan is approved, the promotion and information phase on the territory is deemed fundamental, and the tangible results that will be achieved through solid activities on the territory will be of great importance. The implementation of what is planned and the positive effects on the territories involved will be a stimulus for the implementation of future actions. It is deemed

to be very important to maintain the interest of the stakeholders involved, both on the part of the lead partner and through the identification of funding sources to support the actions.

For PP3 (Abruzzo Region), the favourable conditions for the implementation are identified in: the existence of multilevel governance, the availability of financial and human resources, as well as the mainstreaming of adaptation actions into existing sectoral strategies. Two joint actions Tiger (for target area 1 and 2) and A-GreenNet (for target area 2) will be financed respectively by Horizon 2020 and Life + and they have already the exact timetable for the implementation. These funding programmes help to guide local, footsteps towards adaptation. Other Joint Actions have a period of implementation within 2030.

For PP5 (SDEWES Centre). Favourable conditions are that the local area gravitates to the larger city and that already different projects for the area are developed as agglomeration. The unfavourable conditions are that the agreement between small surrounding municipalities is difficult to secure since they often have different approaches and priorities considering the development of new projects.

For PP4 (Pescara), PP6 (PGK), PP7 (Split-Dalmatia), PP8 (VelaLuka), the construction of Joint Actions, is seen as the first step in adopting the Joint Action Plan, which may truly contribute to achieving the environmental objectives of the Covenant of Mayors, while expressing concern about the joint implementation of the actions, which is a much more complex operation in the planning phase. In fact, the activation of these measures requires significant financing, and not just public funding. The awareness of the need for added funds requires important promotion activities by the Joint Coordinator even in the private sector.

## 2. Joint Actions implementation

### 2.1 Contribution of all Partners

Through the analysis of the SECAP templates, it has been possible to understand the type of actions selected as joint actions by the partners, the involvement of stakeholders, the approach and other information that have been summarized and analysed in the last part of the annex I and which are here reported.

#### **PP1 IRENA – ISTRIAN REGIONAL ENERGY AGENCY L.T.D.**

##### **ACTION 1**

Joint Action: Construction of mini and micro accumulations for irrigation

##### **ACTION 2**

Joint Action: Preparation of the unique Marketing plan for tourism development of the NW Istra cluster

##### **ACTION 3**

Joint Action: Education of employees in tourism sector

#### **PP2 CITY OF SAN BENEDETTO DEL TRONTO**

##### **ACTION 1**

Joint action - A-AGRI-02 - Resilient agriculture help desk

##### **ACTION 2**

Joint action - A-TUR-01 – Tourism all year long

##### **ACTION 3**

Joint action A-EME-01 - Optimization of the Civil Protection system

##### **ACTION 4**

Joint action A-EME-02 - Improvement of the early warning systems

##### **ACTION 5**

Joint action A-PIA-02 - Implementation of Green Infrastructure planning tools

#### **PP3 ABRUZZO REGION**

##### **For Area target 1:**

##### **ACTION 1**

JOINT ACTION: Communication and involvement of citizens, enterprises and touristic sector on issues related to climate change

**ACTION 2**

JOINT ACTION: Promotion of activities for saving, recycling and reusing water, also reducing the use of plastic in schools

**ACTION 3**

JOINT ACTION: Activation of an inter-municipal control for "soil consumption"

**ACTION 4**

JOINT ACTION: Monitoring system of the action plan, extreme events, invasion of invasive species and heat waves

**ACTION 5**

JOINT ACTION: Viticulture project: Region - Wines Protection Consortium agreement to prevent climate change

**ACTION 6**

JOINT ACTION: TIGER project - energy renovation in social- housing buildings and communication activities to tackle energy poverty

**ACTION 7**

JOINT ACTION: Creation of a working group among Joint Secap Municipalities to monitor the impacts of climate change and the effectiveness of the actions of the Plan

**ACTION 8**

JOINT ACTION: Registry of trees affected by weevil, tingide and Tomicus and other alien species

**For Area target 2:**

**ACTION 1**

JOINT ACTION: Communication and involvement of citizens, enterprises and touristic sector on issues related to climate change

**ACTION 2**

JOINT ACTION: Promotion of activities for saving, recycling and reusing water, also reducing the use of plastic in schools

**ACTION 3**

JOINT ACTION: Activation of an inter-municipal control for "soil consumption"

**ACTION 4**

JOINT ACTION: Monitoring system of the action plan, extreme events, invasion of invasive species and heat waves

**ACTION 5**

JOINT ACTION: Viticulture project: Region - Wines Protection Consortium agreement to prevent climate change

**ACTION 6**

JOINT ACTION: TIGER project - energy renovation in social- housing buildings and communication activities to tackle energy poverty

**ACTION 7**

JOINT ACTION: Creation of a working group among Joint Secap Municipalities to monitor the impacts of climate change and the effectiveness of the actions of the Plan

**ACTION 8**

JOINT ACTION: Registry of trees affected by weevil, tingide and Tomicus and other alien species

**ACTION 9**

JOINT ACTION: Beach e sea litter collection

**ACTION 10**

JOINT ACTION: Strengthening and maintenance of cycle paths

**ACTION 11**

JOINT ACTION: Garden of Spontaneous Biodiversity and phytodepuration interventions in the Cerrano area

**ACTION 12**

JOINT ACTION: Life + project Agreeen –Net

**ACTION 13**

JOINT ACTION: Agricultural Park and phytoremediation in the Cerrano area

**PP4 MUNICIPALITY OF PESCARA**

**ACTION 1**

JOINT ACTION: Digitization of administrative procedures in public offices

**ACTION 2**

JOINT ACTION: Energy efficiency of public buildings

**ACTION 3**

JOINT ACTION: Installation of electrical stations for recharging vehicles and other public and private ecological means of transport

**ACTION 4**

JOINT ACTION: Promote sustainable mobility through services, equipment and infrastructures that encourage the use of ecological vehicles with zero impact even in sharing mode

**ACTION 5**

JOINT ACTION: Provide citizens (individuals or groups in association) with the care and maintenance of public areas: parks, gardens, flower beds, roundabouts, etc.

**ACTION 6**

JOINT ACTION: Implement policies to discourage land use

**PP5 INTERNATIONAL CENTRE FOR SUSTAINABLE DEVELOPMENT OF ENERGY, WATER AND ENVIRONMENT SYSTEMS – SDEWES CENTRE**

**ACTION 1**

JOINT ACTION: Construction of green canopies that protect from the sun (and precipitation) at public transport stops

**ACTION 2**

JOINT ACTION: Rehabilitation of water losses in the water supply system and expansion of the water supply and sewerage system in the City of Dubrovnik

**ACTION 3**

JOINT ACTION: Forestation of neglected, degraded, and burned areas

**PP6 PRIMORJE-GORSKI KOTAR COUNTY**

**ACTION 1**

JOINT ACTION (Adaptation): Improvement in water and utility infrastructure in the territory of the Rijeka Agglomeration

**ACTION 2**

JOINT ACTION (Adaptation): Integration of the concept of green infrastructure into spatial and strategic planning processes

**ACTION 3**

JOINT ACTION (Adaptation): Designing and implementing programs to inform and educate the public about the benefits of climate-resistant buildings

**ACTION 4**

JOINT ACTION (Mitigation): Energy renovation of family houses

**ACTION 5**

JOINT ACTION (Mitigation): Modernization of public lighting in the observed area

**ACTION 6**

JOINT ACTION (Mitigation): Development of transport infrastructure in self-government units

**PP7 COUNTY OF SPLIT-DALMATIA**

**ACTION 1**

JOINT ACTION - Incentive system implementation for medical staff

**ACTION 2**

JOINT ACTION - Encouraging the development of agritourism



### **ACTION 3**

JOINT ACTION - Reconstruction of the water supply network

#### **PP8 MUNICIPALITY OF VELA LUKA**

##### **ACTION 1**

JOINT ACTION: Reconstruction of the water supply network

##### **ACTION 2**

JOINT ACTION: Education of decision makers on integrated spatial planning

##### **ACTION 3**

JOINT ACTION: Education of farmers with regards to financial support and entrepreneurial skills.

## **2.2 Comparative analysis of Joint Actions**

This paragraph provides a scientific assessment of CoM regarding the adaptation to climate change and which describes the joint actions submitted by each target area giving an overview on resilience increase. The analysis has been carried out following the structure of CoM template and the results, reported here below, are summarised accordingly.

For a more complete analysis, firstly the actions have been compared at a single target area level followed then by an overall evaluation in order to better highlight the similarities / differences on a single and overall level. From the Italian side, there are 4 target areas:

- PP 2 – City of San Benedetto del Tronto has identified 1 target area including the 4 municipalities of San Benedetto del Tronto, Cupra Marittima, Grottammare and Montepandone.
- PP 3 - Abruzzo Region has identified two target areas. Target area 1 includes 4 municipalities: Penne, Elice, Castilenti and Castiglione Messer Raimondo. Target area 2 includes 5 municipalities: Giulianova, Roseto degli Abruzzi, Pineto, Silvi and Mosciano S. Angelo.
- PP 4 – City of Pescara has identified 1 area target including 6 municipalities: Pescara, Chieti, Francavilla, Spoltore, Montesilvano and San Giovanni Teatino.

From the Croatian side, there are 5 target areas:

- PP 1 - Irena has identified 1 area target including the 4 municipalities of Novigrad-Cittanova, Buje-Buie and Brtonigla-Verteneglio.
- PP 5 - Sdewes has identified 1 area target including the 4 municipalities of Dubrovnik, Župa Dubrovačka, Konavle and Dubrovačko Primorje.
- PP 6 - Primorje- Gorski Kotar County has identified 1 area target including the 5 municipalities of Kastav, Opatija, Čavle, Matulji and Viškovo.



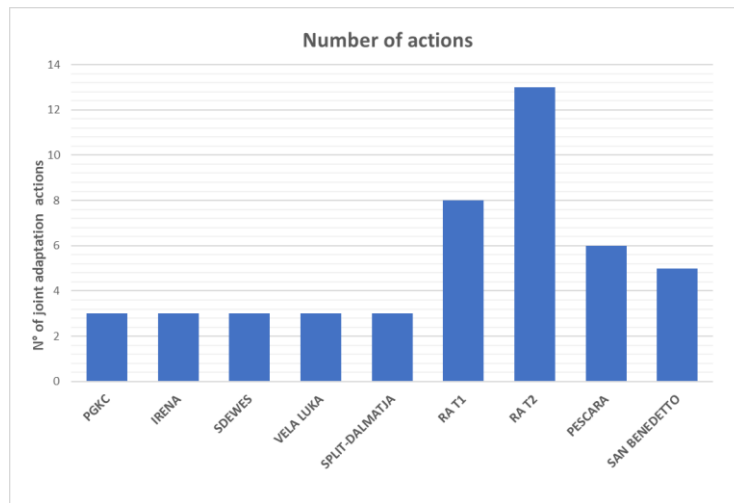
- PP 7 - County of Split- Dalmatia has identified 1 area target including the Brač island and 8 municipalities (Supetar, Sutivan, Milna, Bol, Selca, Pučišća, Nerežišća, Postira).
- PP 8 - Municipality of Vela Luka has identified 1 area target including the Korčula island, with totally 5 municipalities.

The evaluation is based on the comparison among the different compulsory fields of CoM template, that can be selected from the drop-down menu:

- Origin of the action (the local authority; a Covenant coordinator or supporter; national entity; regional entity; mixed origin; other);
- Implementation start / end;
- Implementation status (completed; not started; cancelled; ongoing);
- Stakeholders involvement (e.g. National government and/or agency(ies); Sub-national governments(s) and/or agency(ies) Business & private sector; Trade unions; Academia; Education sector; NGOs & civil society; Citizens;
- Total implementation cost, investment cost and non investment cost;
- Source of funding (eg. local authority's own resources; regional funds and programmes; national funds and programmes; EU funds and programmes; public-private partnerships; private partnerships (e.g. a combination of private investments);
- Climate hazards addressed (eg. Extreme heat, Extreme cold, Floods & sea level rise, Droughts & water scarcity, Storms, Mass movement, Wild-fire);
- Sector(s) (eg. Buildings , Transport, energy, water, waste, Land use planning, Agriculture & forestry, Environment & biodiversity, Health, Civil protection & emergency, Tourism, Education, ICT ).

Some additional information are provided for life expectancy and created jobs and indicators, but the indicators are very specific, not compulsory and not available for all Partners. For this reason, it is impossible to make a comparison.

First of all, totally **50 joint actions** were selected for all 9 target areas (32 for Italy and 18 for Croatia). The proposed joint actions are on adaptation (47) and even mitigation (3) as declared by each partner, but the focus will be on adaptation actions.



The proposed joint adaptation actions vary from actions that build adaptive capacity (e.g. building knowledge base, sharing information, etc) to concrete adaptation measures (e.g. green infrastructure, technical solutions, etc) to minimise, adjust to and take advantage of the consequences of climatic change (delivering adaptation). This means that adaptation actions are addressed to reduce sensitivity and/or exposure to climate change, or to enhance adaptive capacity. These actions include different behavioural, structural and technological adjustments.

The majority of the joint actions belong to soft actions, that correspond to design and application of policies and procedures, land-use controls, information dissemination and economic incentives to reduce vulnerability, encourage adaptive behaviour or avoid maladaptation. They require careful management of the underlying human systems. Some of these measures can facilitate the implementation of grey or green measures.

These actions include:

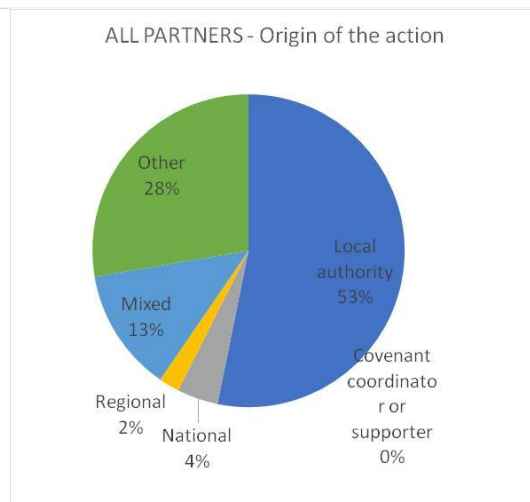
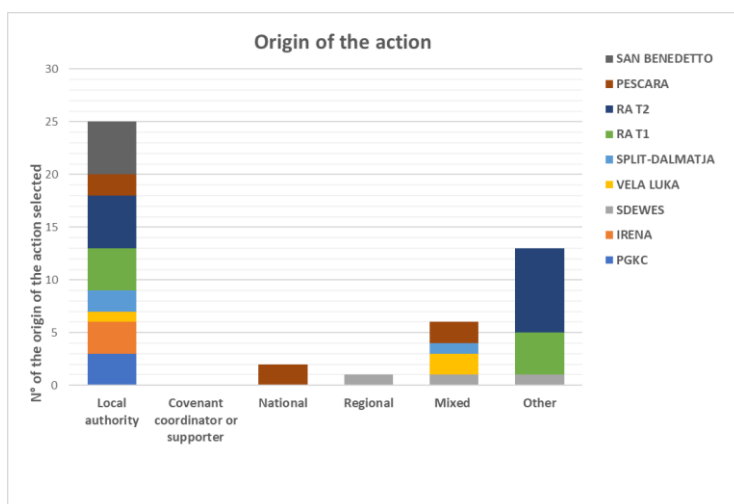
- creating the information (e.g. research, data collection and monitoring, awareness raising);
- supportive social structures (e.g. organisational development, working in partnership, institutions);
- supportive governance (regulations, legislations, and guidance) that are needed as a foundation for delivering adaptation actions.

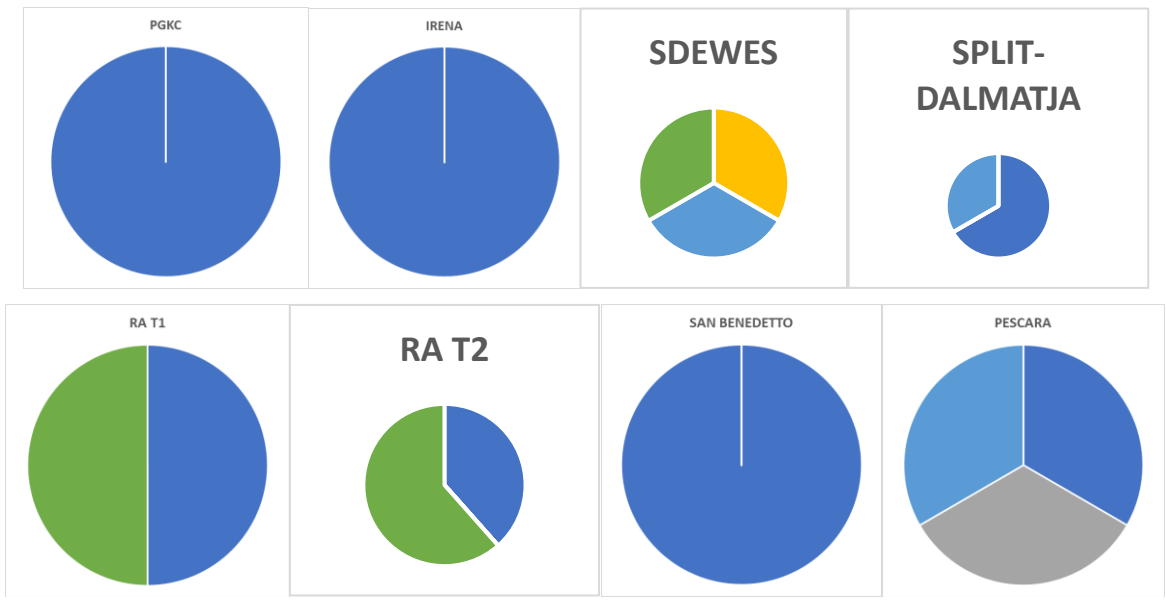
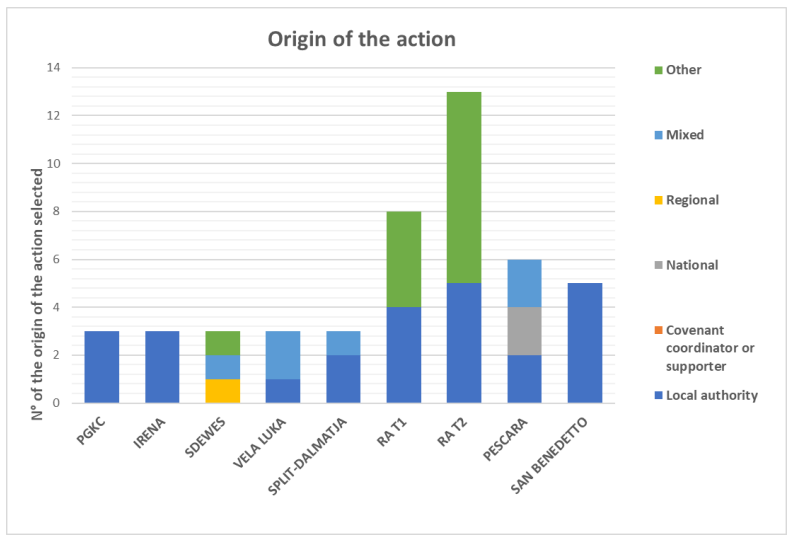
These measures are fundamental to delivering responsive adaptation actions. More information will be given in the next pages.

In the following graph, it is shown that the majority of Joint actions are proposed by Abruzzo Region, respectively 8 for target area 1 and 13 for target area 2. There is a certain overlap of the actions of the two target areas because the focus groups were carried out at the same time and because they were led by the same coordinator. Furthermore, for the Abruzzo Region all joint actions have been included

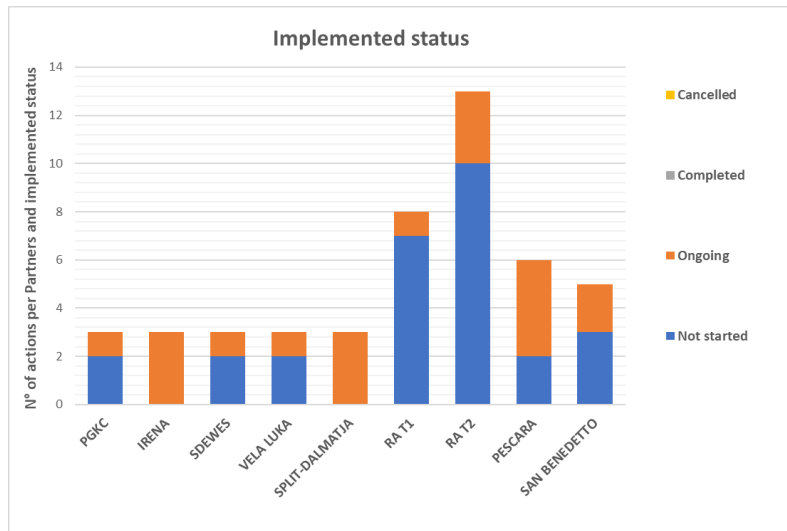
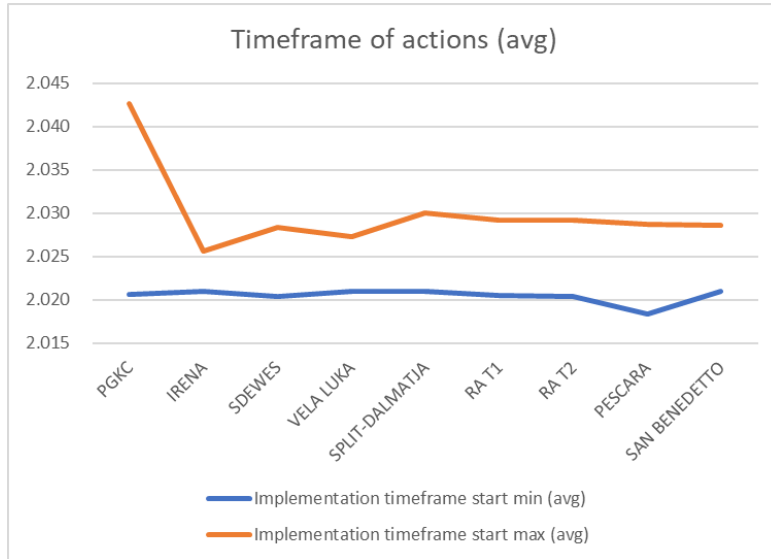
(according to the template) regardless of the unanimous participation of the Municipalities, while other partners have chosen to indicate only joint actions involving all the municipalities of their target areas.

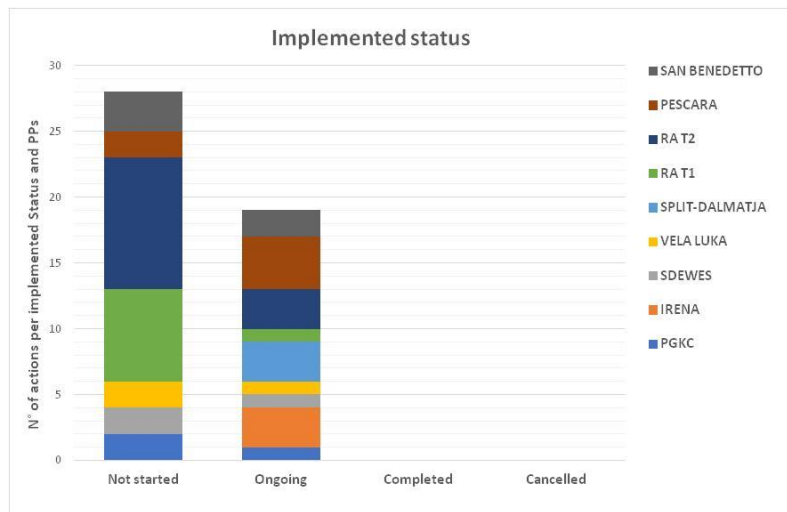
Overall, the majority of the actions are proposed by the local authority (53%), followed by “other” (28%) and mixed (13%) and they involve the majority of the municipalities. At target area’s level, for PGKC, IRENA and San Benedetto all the actions are proposed by local authority. Detailed information are reported in the following graphs.





Concerning the **implementation status**, overall, all the actions either have not started (59,6%) or are ongoing (40,4%) and the **time horizon** for the implementation is by 2030 for the majority of the actions and by 2050 only for some actions by PGPK and City of Pescara. At target area's level only for IRENA and SPLIT – Dalmatja all the actions are ongoing. For the other partners, are both ongoing and not started.

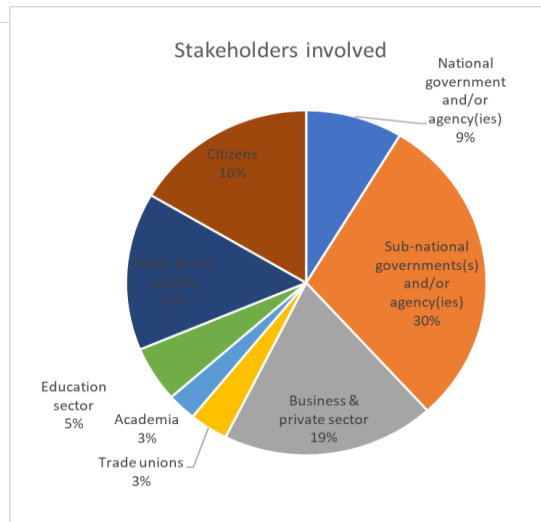
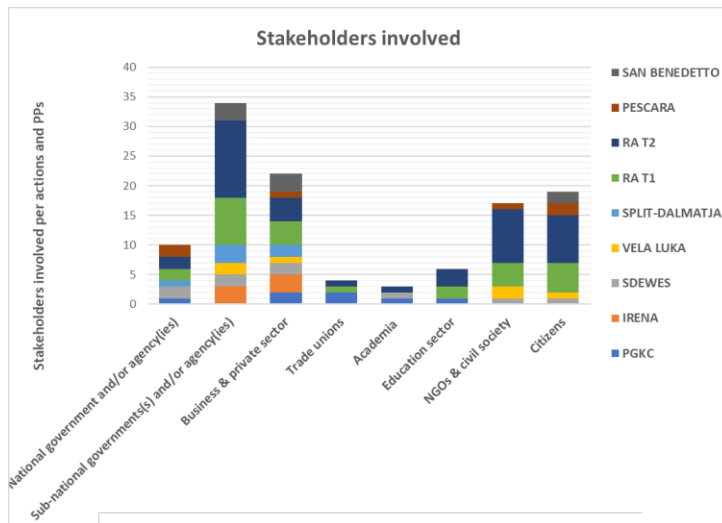


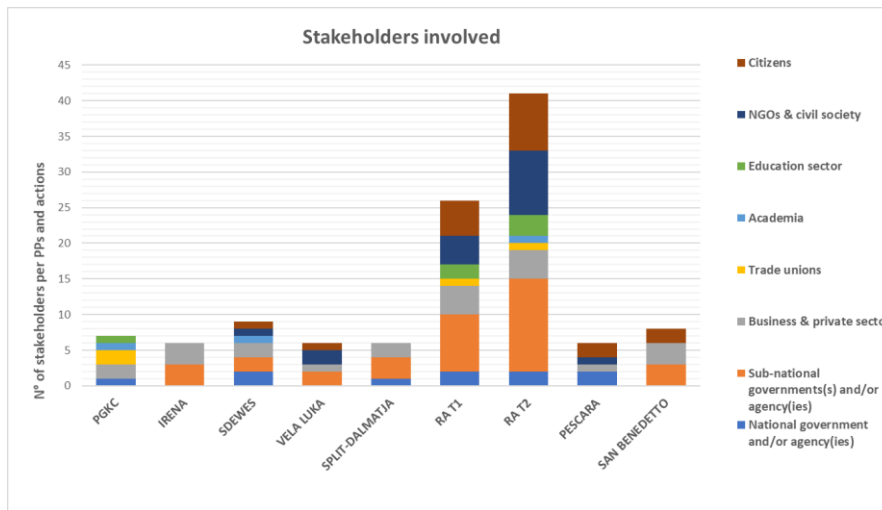


**Stakeholder engagement** entails the process of taking on board sectors and people who are potentially affected by climate change and have concerns in adaptation throughout the policy cycle.

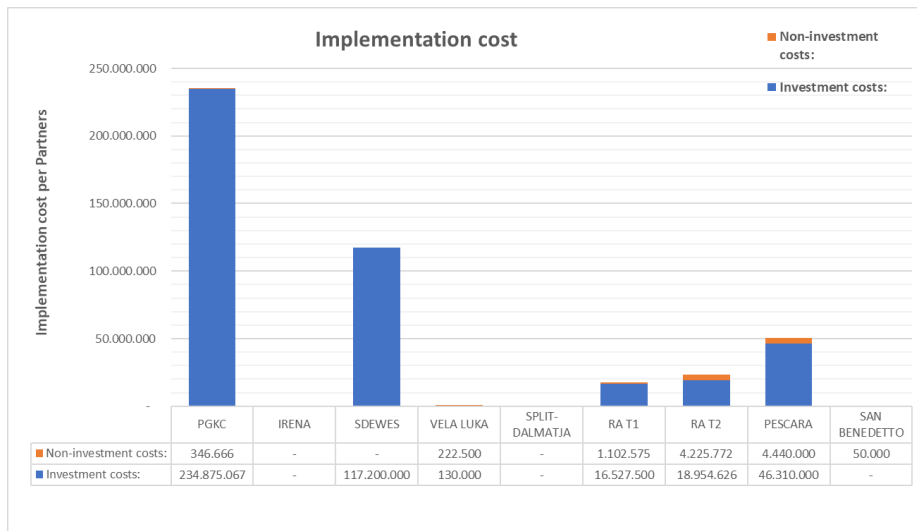
Stakeholder engagement is more effective when stakeholders are involved since the beginning. They were prevalently involved through focus groups, consultation (questionnaires) and mail and phone calls, as described in the section “additional comments”. The benchmark shows that in order to develop successful adaptation planning, multiple stakeholder engagement is required to interact and collaborate coherently across different sectors and levels of government. The range of stakeholders is very wide: 30% of the target areas have reported the involvement of subnational governments and agencies, followed by business and private sector (19%) and by citizens (16%).

Considering the stakeholders involvement, it is stressed their important role in decision-making processes and to cope with the complexities of the issues involved. Climate change adaptation planning needs to include participatory processes in order to look for solutions that reduce vulnerability and increase resilience not only in the short-term, but also in the long one.





According to the data provided to the CoM template for financing, the number of actions that have reported funding is 28 out of 47. Often, partners reported “unknown” for the total cost for the implementation of the action. The total (planned) implementation cost is made up of investment cost and non-investment cost (costs incurred to keep an item in good condition and/or good working order). An estimation of the investment and maintenance costs of all proposed adaptation actions isn’t ever available. Only the partner city of Pescara provides for very detailed investment and non investment costs for all submitted joint actions. In the analysis if the PPs indicated a range we considered the average value and in case of “more than” we considered the minimum value indicated.



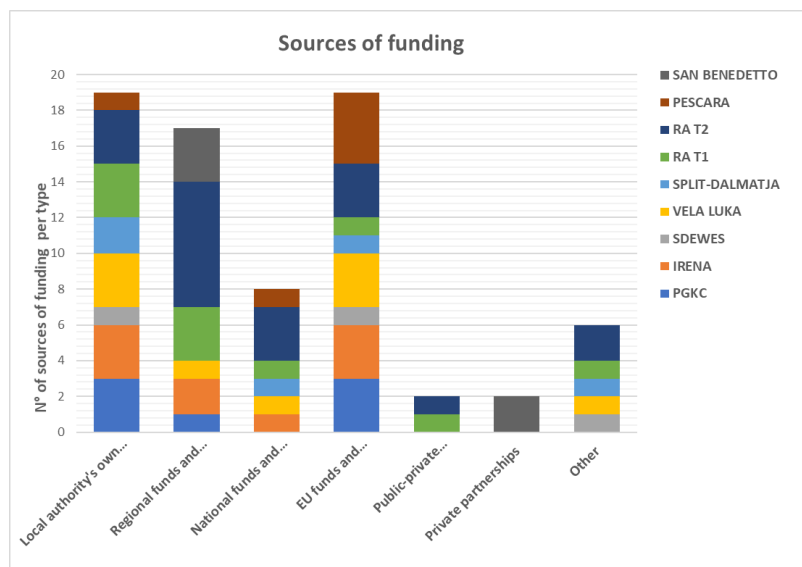


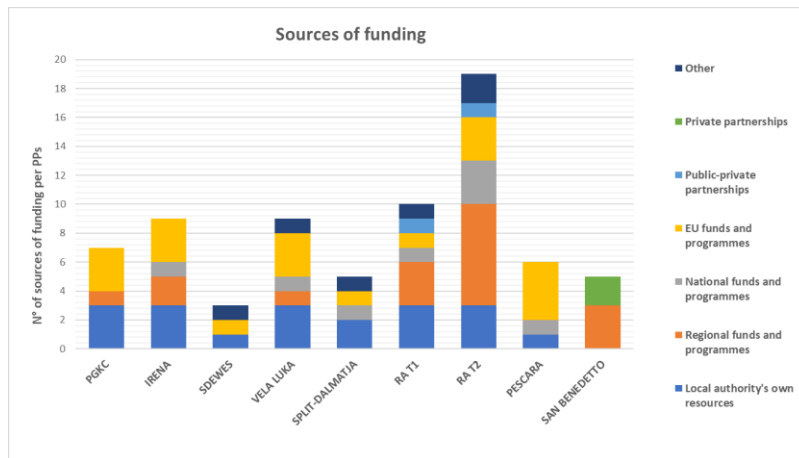
The number of actions is mainly with governmental funding sources (grants, international and EU funding, national, regional and local budgets) and private (foundations, real estate developers, companies). Local budget is the most relevant source of funding as well as EU funding, followed by regional funds and programmes.

Public-private partnership and private partnership are chosen only by PP Abruzzo Region and PP City of San Benedetto.

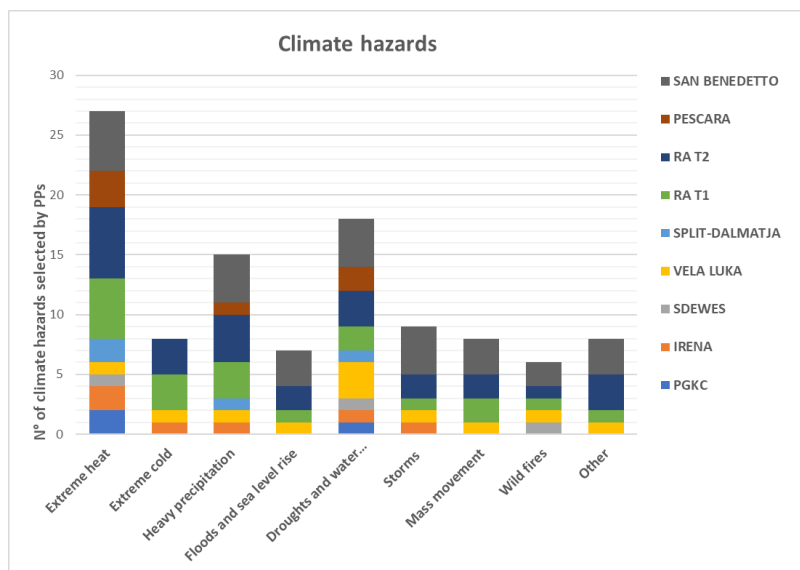
It is important to point out that most of the actions are financed by different sources of funding. This confirms that the best way to guarantee the successfulness of adaptation actions in the target areas is to combine different sources of funding. Furthermore, joint actions confirm that the municipalities of the target areas have to cooperate to bundle together adaptation projects to make them bankable.

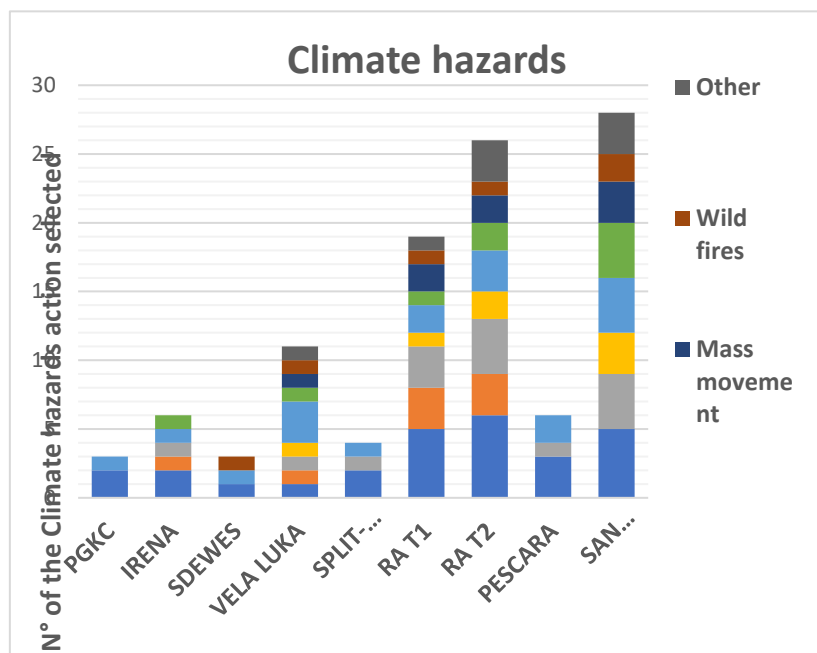
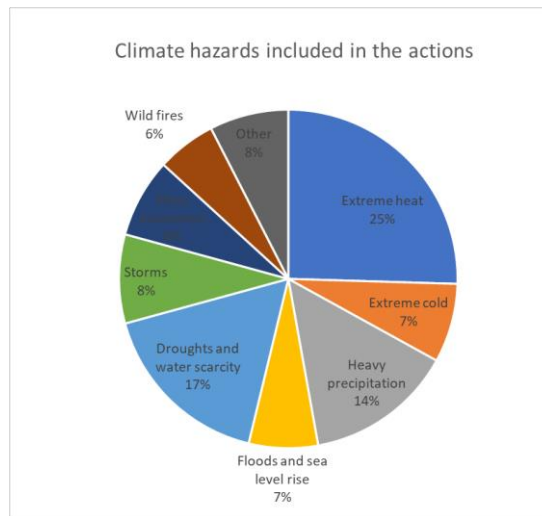
In summary, the selected joint actions are funded through a municipal budget, whether via budget-lines devoted to a specific action or as part of broader work programmes, but also funded by different stakeholders or by EU thanks to specific programs (i.e. Horizon 2020, Life +). The actions that refer to these last two programmes are for example TIGER and A-greeNet for Abruzzo Region Partner.





Concerning the main **climatic hazards** that the Joint actions tackle, extreme heat (25%), droughts and water scarcity (17%) and heavy precipitations (14%) are the most relevant hazards overall. It should be noted that the total number of climate hazard selected does not coincide with the total number of actions because it was possible to select multiple climatic hazards involved for each action.





Concerning the **sectors involved**, the most relevant are overall “agriculture and forestry”, “education”, “environment and biodiversity”, tourism and land planning.

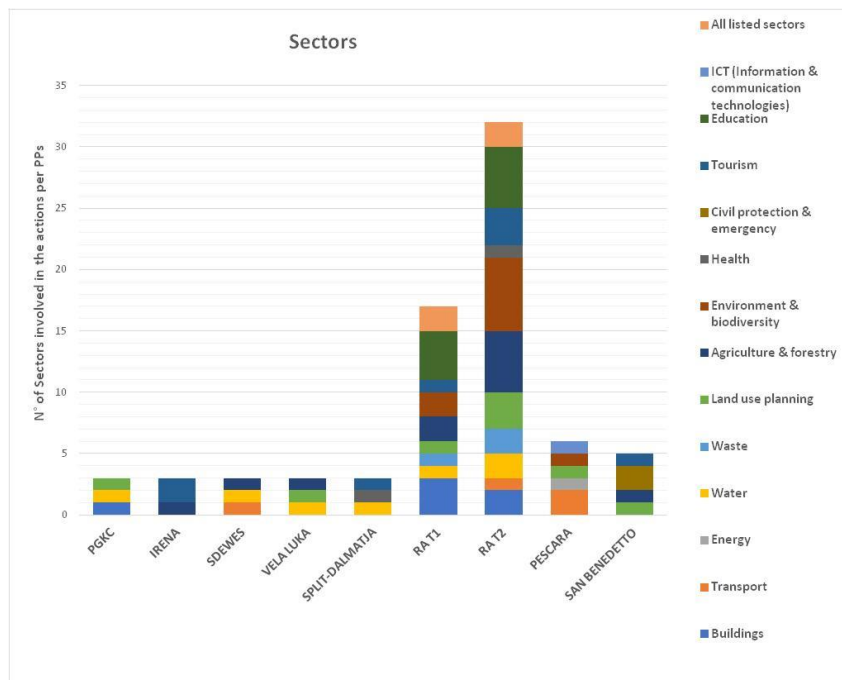
According to the CoM glossary, “agriculture and forestry” includes land classified / designated for agriculture & forestry use, as well as organisations and industries linked to creation and production within and surrounding the boundaries of the municipality. It includes animal husbandry, aquaculture,

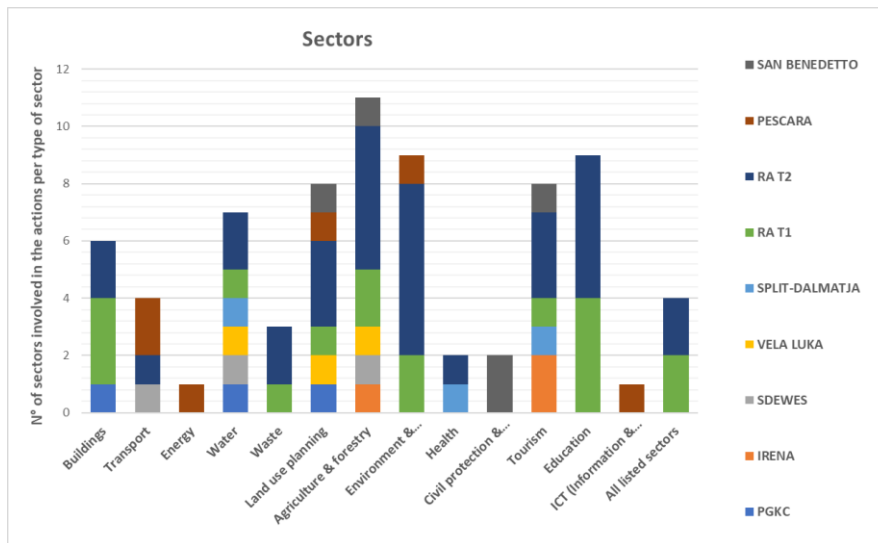
agroforestry, beekeeping, horticulture and other agriculture & forestry management and services in the area. “Education” refers to a variety of educational providers, schools, colleges, universities, organizations, agencies, businesses or form of national, regional or local government that have the agreement, contract, role, responsibility and purpose of providing a form of education to members of the public. “Environment” refers to green and blue landscapes, air quality, including urban hinterland.

“Biodiversity” refers to the variety of life in a specific region, measurable as the variety within species, between species, and the variety of ecosystems.

Prioritized sectors reflected the main local vulnerabilities, identified thanks to the “Risk and vulnerabilities Assessment”.

At target area’s level “water” sector is very popular among PGKC, SDEWES, VELA LUKA, SPLIT –DALMATJA and ABRUZZO REGION.





The outcome indicators aren't ever provided. They represent the mean of the local authorities to measure progress. Fill the cell wasn't compulsory, but suggested.

The lack of some values hasn't been seen as a problem, because, since the beginning, Joint SECAP and therefore Joint Actions are considered a **"living" document**, which means it needs to evolve over time as progress is made, as well as to integrate new knowledge, technological possibilities and financing opportunities as they become available. For the purpose of Joint\_SECAP project, the idea is that there is no need for this phase to give a significant burden on municipalities, but rather to activate an integrated management cycle among municipalities.

Concerning the **classification** of adaptation actions, they can be categorized in grey, green and soft measures. Grey measures refer to technological and engineering solutions to improve adaptation of territory, infrastructures and people. Green measures are based on the ecosystem-based (or nature-based) approach and make use of the multiple services provided by natural ecosystems to improve resilience and adaptation capacity. Soft options include policy, legal, social, management and financial measures that can alter human behaviour and styles of governance, contributing to improve adaptation capacity and to increase awareness on climate change issues.

The majority of the selected joint actions belong (as already said) to the soft category. The most frequently adaptation actions were those related to capacity building, including training/workshops for knowledge/skills development (i.e. communication and involvement of citizens, enterprises and touristic sector on issues related to climate change; resilient agriculture help- desk), public outreach and education (i.e. Designing and implementing programs to inform and educate the public about the benefits of climate-resilient buildings, education of farmers; plastic free campaign for students; education in tourism sector),

dissemination of info to decision makers/stakeholders (i.e. education of decision makers on integrated spatial planning), identification of best practices, training materials; management and planning (I.e. implementation of green infrastructure planning tools; activation of an inter-municipal control for "soil consumption"; integration of the concept of green infrastructure into spatial and strategic planning processes; digitization of administrative procedures in public offices); information and warning or observing systems (Systems for communicating climate information to help build resilience towards climate impacts and implementation of new or enhanced tools and technologies for communicating weather and climate risks, and for monitoring changes in the climate system (i.e improvement of the early warning systems; monitoring system of the action plan, extreme events, invasion of invasive species and heat waves)).

Some examples of green joint actions are related to vegetation, afforestation, woodland management, increased landscape cover (i.e. Forestation of neglected, degraded, and burned areas; construction of green canopies that protect from sun and precipitations at transport stops; Life + Agreen-Net; care and maintenance of public green areas by citizens).

Some examples of grey joint actions include any new or improved hard physical infrastructure aimed at providing direct or indirect protection from climate hazards (i.e reconstruction of the water supply network; climate-resilient buildings with TIGER; energy efficient public buildings; strengthening and maintenance of cycle paths; construction of mini and micro accumulations for irrigation).

Many joint actions integrate into the institutional context in which they are developed and its current policy tools. A strong integration of the adaptation objectives into the sectoral objectives helps to ensure their effective implementation, also exploiting the resources (without creating competition with the sector) and the implementation and monitoring tools already in place.

## Conclusions

The transition from the selection of adaptation measures to Joint Actions required a careful definition of the strategy's objectives by the partners and a careful evaluation of the criteria to define the priorities among the possible joint actions. In this step, the stakeholders and experts played a decisive role within the focus groups and bilateral meetings. In selecting the actions, the Preliminary Strategic Environmental Assessment played an important role in promoting additional actions or removing others because they were inconsistent with the reference environmental matrix.

The possibility of implementing Joint Actions was also investigated in close relation with the progress of the administrative approval process and the ability / opportunity of local public administrations to implement them, highlighting the role of the Joint Coordinator in promoting new common actions, intercepting public funding and private.

With reference to the joint actions presented by each target area, they highlight that:

The hazards reported the most are extreme heat, droughts, water scarcity and heavy precipitations, while the sectors at risk of impacts are reported to be "agriculture and forestry", "education" and "environment and biodiversity".

Municipalities need an internal transformation to fulfil their Climate Change goals which implies a new horizontal cooperation among local stakeholders, including public sector, private sector and citizen networks, but also a vertical cooperation among different levels: European, national, Regional and local one. Creating an "enabling environment" for adaptation is a key-issue at the local level to promote a holistic and integrated approach that could mainstream adaptation into urban sectoral strategies, maximizing resource use and co-benefits.

Results show that the engagement of multiple stakeholders and citizens, particularly at the local level, can significantly facilitate the acceptance of adaptation plans. Moreover, the benefits of stakeholder and citizen engagement can be greater in small municipalities because citizens and stakeholders have more opportunities to participate. Moreover, the stakeholder and citizen engagement also facilitate a common understanding of climate risks and provides a more holistic framework to design climate change adaptation actions.

The comparison shows that a clear multi-level framework and functional governance can guarantee that local authorities connect municipal priorities and strategies with regional and national legislation and programs to match actions and obtain the financial and technical support they need to implement climate action in their territory.

The majority of Joint actions are soft actions, because soft measures have the potential to be relatively flexible and low expensive and they are therefore often considered the most tractable first steps in taking action on climate adaptation.

The key findings show that the Joint Actions are first all based on the real needs of the target areas and the Joint actions are concrete, feasible, inserted into the adaptation framework and coherent with the sectoral strategies at higher levels (climate change, sustainable development, etc...).

Specifically, the joint actions have been chosen considering that some measures implemented together can reach the set climate and sustainability goals and benefit from economies and results of scale.