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RESCCUE

RESILIENCE TO COPE WITH CLIMATE CHANGE IN URBAN AREAS.

SOCIETAL IMPACTS REPORT

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RESILIENCE TO COPE WITH CLIMATE CHANGE IN URBAN AREAS.

RESCCUE - RESilience to cope with Climate Change in Urban arEas - a multisectorial approach focusing on water
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DATE	VERSION	AUTHOR	COMMENTS
10/08/2020	1.0	Marc Velasco	First completed version of D8.9
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1. **Changes with respect to the DoA**
   None

2. **Dissemination and uptake**
   Public

3. **Short Summary of results (<250 words)**
   The update of the Societal Impacts Report (D8.9) intends to identify potential social impacts that the RESCCUE project may imply. This deliverable presents the different types of societal impacts and defines the ones that will be considered within RESCCUE.

   After the definition of the framework, the RESCCUE societal impacts have been identified per work package (WP), presenting the main results and their corresponding impacts. Finally, an aggregation of the global social impacts obtained by the combination of the RESCCUE results is presented.

   The results of this assessment show that the main societal impacts addressed by the project are:

   - the delivery of urban services: main objective of the project
   - the minimization of social impacts of climate change: direct consequence from the increase of city's resilience
   - the capacity building of citizens: accomplished through the dissemination of project results (e.g. climate change scenarios, tools and methodologies for hazard and impact assessment, etc.)

   The updated version of this document mainly consisted on including Table 4, presenting the co-benefits of the strategies defined in WP5 for each RESCCUE city.

4. **Evidence of accomplishment**
   This report

RESCCUE
RESILIENCE TO COPE WITH CLIMATE CHANGE IN URBAN AREAS.

Table of contents

RESCCUE
RESILIENCE TO COPE WITH CLIMATE CHANGE IN URBAN AREAS.

Summary of Tables

RESCCUE
RESILIENCE TO COPE WITH CLIMATE CHANGE IN URBAN AREAS.

Summary of Figures

1 Introduction

This document is developed as part of RESCCUE (RESilience to cope with Climate Change in Urban arEas-a multisectorial approach focusing on water) project, which has received funding from the European Union's Horizon 2020 Research and Innovation program, under the Grant Agreement number 700174.

This update of the Societal Impacts Report corresponds to Deliverable 8.9 of Work Package 8 (WP8) – Project Management. WP8 will ensure an optimal coordination and management of RESCCUE, guaranteeing the effective implementation of the project activities.

The Societal Impacts Report intends to identify potential social impacts that the RESCCUE project may imply. The outputs generated by RESCCUE project aim to enhance citizens' protection and security by enabling a better coordination of the city emergency teams and consequently, a faster response from their side.

In addition, as RESCCUE also takes into account the effects of climate change, different kinds of adaptation strategies will be presented. Many of these strategies do not only focus on solving one problem, but they have transversal effects which can imply a set of co-benefits. In particular, some of these co-benefits may be labelled as social, which is precisely what will be taken into account in this deliverable.

This document is an update of the original Societal Impacts Report (D8.4) submitted in month M24. Although no new societal impacts have been included to the original ones considered, since the adaptation strategies from WP5 have now been defined, the specific co-benefits of these strategies have been included in this document (section 4.2).

After this introduction, the simple structure of this deliverable contains: the context of this societal impacts report, a section presenting the different types of societal impacts, and finally, the RESCCUE societal impacts are presented. The deliverable ends with a set of conclusions derived from the analysis undertaken.

2 Context

Disasters often lead to lower economic growth and also worsen fiscal and external balances, but they can also have a significant impact on environment. Rivers ecological flows are often neglected during drought periods, not complying with EU directives, such as the Water Framework Directive (WFD). Also related to the WFD, is the prevention of water pollution episodes by combined sewer overflows after heavy rainfall events. Environmental protection measures, such as rainfall detention tanks or early warning systems based on radar data, can also prevent important public health issues. Deliverables 5.1 and 5.2 are focused on adaptation strategies and methods to prioritize them, and the previously mentioned are only a few of them taken into account. Indirect positive economic impacts can be also generated, as tourism is likely to be less affected by these events if adequate measures are put in place, such as early warning systems for potential marine water pollution episodes. These are clear examples where a proper adaptation strategy can have a positive role if applied with enough anticipation.

Ecosystem-based approaches utilise ecosystem services, biodiversity and sustainable resource management as an adaptation strategy to increase resilience and reduce vulnerability. They have proven to create multiple societal and environmental benefits, while being robust solutions to multiple hazards and enable social actors to respond to climate change.

In many cases, enhancement of urban ecosystems provides multiple co-benefits for health such as clean air and temperature regulation. Ecosystem based approaches can create synergies between climate change adaptation and mitigation, by assisting in carbon capture and storage, and enhancing various ecosystem services considered beneficial for human health. Green urban design can reduce obesity and improve mental health through increased physical activity and social connectivity. Trees and other urban green infrastructures can mitigate the urban heat island effect (Saaroni *et al.*, 2018), improving the health condition to the most vulnerable population.

In addition, climate change related events can also have significant impacts on poverty and social welfare, being the lower income sectors of a city the most vulnerable. Social damage associated with disasters will worsen over the coming years. This will be largely due to the growing exposure of people and assets, which is the main cause of the growing disaster losses over the past years (IPCC, 2012), but also due to the effects of climate change that will exacerbate these impacts by increasing frequency and intensity of these type of events.

As explained before, in this context, RESCCUE's results main aim is to enhance citizens' protection and security by implementing adaptation strategies and enabling a better coordination of the city services and emergency teams to consequently obtain a faster response from their side. By doing this, the social impacts of the project are expected to be very positive, both in a direct and an indirect way. In order to be able to properly analyse these benefits, a thorough framework describing the several types of societal impacts being expected has been elaborated and it is presented in the following section. Afterwards, in section 4, this framework will be used to clearly specify the RESCCUE societal impacts.

3 Types of societal impacts

The implementation of the RESCCUE framework, implies the adoption of adaptation strategies that help to cope with the current and future risks that may occur due to climate change. The main goal of these strategies is the minimization of all kinds of risks (to citizens, buildings, public assets, vehicles, critical infrastructures, etc.). Nevertheless, as mentioned before, when implementing adaptation strategies not only these direct benefits are obtained.

A co-benefit resulting from an adaptation strategy is an additional benefit, different from the one the strategy was initially targeted on, and which is not necessarily 'climate related'. As explained in D5.1 (Martínez-Gomariz *et al.*, 2018), evidence suggests that citizens are more likely to take action on climate change, or more likely to support governments that take action on climate change, if the wider co-benefits of those actions are emphasised (Bain *et al.* 2015).

At the city level, the potential of co-benefits is particularly great as citizens can often witness the results of policy actions more directly on their daily lives (Floater *et al.*, 2016). Several names for the same definition can be found in literature, such as win-win situations, life-cycle benefits, triple-win scenarios, consequential benefits, ancillary benefits, mutual benefits, consequential life cycle impacts, etc.

Ürge-Vorsatz *et al*. (2014) states that co-benefits should be included in decision-support frameworks. This is precisely why, in D5.1 of RESCCUE, a list of co-benefits, grouped in three different types (i.e. economic, social and environmental), was presented to be used in the strategies framework as a way to complement the risk reduction and cost variables.

These co-benefits are based on those proposed in the report "Co-benefits of urban climate action: A framework for cities", developed by C40 Cities climate leadership group and LSECities (Floater *et al.*, 2016). This report reviewed 13 different sectors (health, water, transport, education, etc.) and 55 sub-sectors in order to identify all the possible climate co-benefits that matter for cities. From this study, a wider framework for co-benefits was presented, considering not only climate change adaptation, but also mitigation.

From this, in D5.1 (Martínez-Gomariz *et al.*, 2018) summarized the most relevant for the RESCCUE approach, which are precisely the ones presented in Table 1, divided in three categories: economic, social and environmental. The co-benefits presented in this table will be the base for the societal impacts identification for RESCCUE presented in next section.

Table 1 – Types of co-benefits proposed to be associated to the different adaptation measures

Economic	Social	Environmental
• Cost savings	• Reduced mortality impacts	• Improved air quality
• Reduced energy losses	• Reduced health impacts	• Improved water quantity
• Job creation	• Reduced mortality from diseases	• Reduced aquifer depletion
• Possible reduction in prices	• Enhanced public amenity	• Reduced water pollution
• Increased labour productivity	• Reduced impacts on vulnerable groups	• Reduced land contamination

Economic	Social	Environmental
• Increased economic production • Increased property values	• Reduced number of householders, businesses forced from homes, places of work • Social inclusion	• Improved biodiversity and ecosystems • Maintained and increased green space • Reduced environmental impacts through associated awareness • Increased biodiversity and ecosystem services • Effective/uninterrupted water collection and security • Erosion control

In addition to the social co-benefits highlighted in Table 1, the C40 report (Floater et al., 2016) also included a few more co-benefits that were not there. These social co-benefits are also listed below so the whole spectrum of plausible social benefits of adaptation can be seen:

- Stable delivery of essential services
- Security for the vulnerable in cities impacted by drought
- Improved access to clean water
- Improved sanitation
- Quality of life
- Increased food security
- Increased physical and mental health
- Improved student performance
- Reduce impact of future climate change events
- Increased thermal comfort
- Recreation

In addition to the global initiatives, it is also interesting to look at how these issues are approached locally. In Barcelona, the Climate Plan (Barcelona City Council, 2018) has become a reference document for climate change adaptation, mitigation and resilience. The plan focuses on the climate hazards and risks that Barcelona may face, but putting special focus on the social impacts part. This is why all the proposed adaptation strategies included have been assessed taking into account the following pillars, on which the city of Barcelona should focus:

- Health: including air quality, an active life of the citizens, high quality green urban areas and guaranteeing health and welfare of the citizens
- Social justice: implementing policies that take into account socioeconomic, gender, spatial and cultural diversity of the population
- Safety and security: allowing the citizens to live in a comfortable way, with green urban areas and safe spaces for all the population
- Low carbon: non-dependence on the fossil fuels for the generation of energy, products or services
- Efficiency and renewable energy: with sustainable mobility systems and taking advantage of circular economy for the use of resources
- Learning capacity: testing new solutions and learning from the past experiences

- Citizens commitment: with involvement of the population to take action to change the city and protect it for the future generations

With these different frameworks and different types of societal impacts in mind, and taking into account the particularities of RESCCUE project and specifically of RESCCUE results, the following categories have been defined in order to assess the RESCCUE societal impacts:

- IMPROVED HEALTH: this category groups all the different impacts that either directly or indirectly contribute to improve the health of citizens.
- NEW RECREATIONAL AREAS: as some of the strategies or specific solutions implemented may imply the creation of new recreational spaces for the citizens, these new spaces positively contribute to the urban living and thus, are considered as a positive social impact
- ACHIEVE SOCIAL JUSTICE: although the RESCCUE framework is not directly tackling at social justice (but focusing on climate change adaptation), some of the generated results can contribute to this in an indirect way given that the most vulnerable people (because of their location, socio-economic situation or health) are, in general, in worse conditions to face climate change impacts and so it is worth considering which of the results can directly or indirectly benefit them in particular.
- DELIVERY OF URBAN SERVICES: within the RESCCUE framework, increasing urban resilience is directly related to guaranteeing the correct functioning of urban services. This is one of the goals of the project and although it mainly has a technical background, the fact of delivering urban services is also a positive societal impact, as it allows the citizens to carry on with their lives without being affected by the impacts that may occur.
- MINIMIZE SOCIAL IMPACTS OF CLIMATE CHANGE: climate change adds pressures to the already vulnerable cities, highlighting the need for adaptation. In many cases, the added pressures mainly affect the urban services and thus, can be solved in a technological way. However, in some other cases these impacts directly affect citizens by increasing their vulnerability, displacing them or affecting their health. In these cases, the solutions must be more social focused rather than service focused in order to minimize the social impacts.
- CAPACITY BUILDING OF CITIZENS: the role of the citizens with regards to climate change adaptation and disaster risk reduction is crucial, as they can have huge impacts on minimizing the negative effects of both fields. In order to do so, changing the climate change and risk culture of the citizens is of paramount importance and so, supporting the capacity building of citizens can have huge social benefits.
- CITIZENS COMMITMENT: in addition to the capacity building of citizens, their commitment is also crucial. Training the population is not enough if, when the event comes, they do not act accordingly. Thus, making sure that the population is committed and taking advantage of the synergies that communities add to the society, has also a huge potential for positive social impacts.

Taking into account the several frameworks of co-benefits and societal impacts presented, in the following section the RESCCUE societal impacts will be described. In order to clearly monitor them and track their progress, the several impacts are presented in a table format with different fields that are key to understand and monitor them.

4 RESCCUE societal impacts

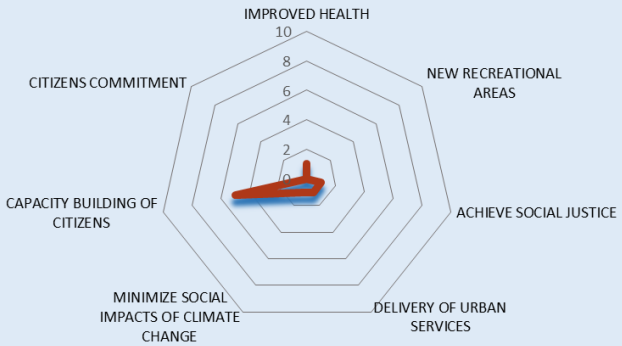
4.1 Global project impacts

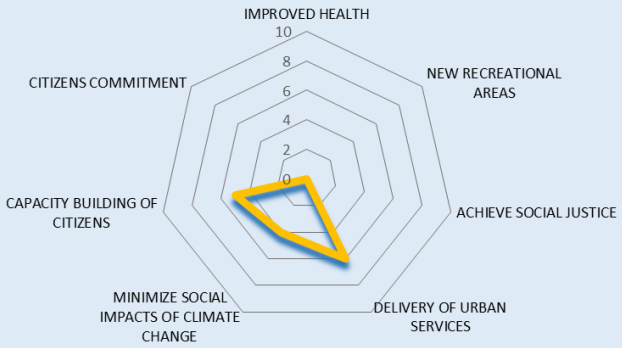
In Table 2, the several RESCCUE societal impacts identified are presented. Societal impacts have been grouped per work package (WP), presenting the main results and their corresponding impacts. At the end of the section an aggregation of the global social impacts obtained by the combination of the RESCCUE results is presented.

RESCCUE societal impacts are presented per WP in table format including the following fields:

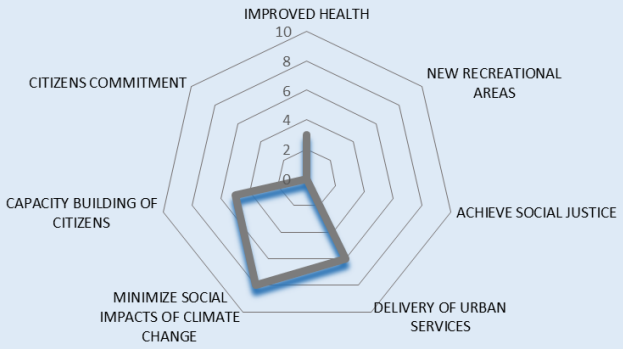
- Work package
- Main result obtained at the WP
- Main societal impacts addressed by the result(s): degree of achievement of the different societal impacts
- Detailed description of the different societal impacts achieved by the main outputs of the WP.

Table 2 – RESCCUE societal impacts

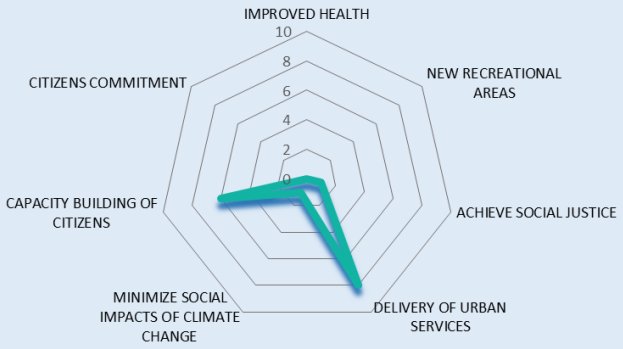
<table>
<tr><th>WP</th><th>Main result</th><th>Societal impacts addressed</th></tr>
<tr><td>WP1</td><td>Generation of climate change scenarios</td><td> 
</td></tr>
<tr><th colspan="2">Outputs</th><th>Societal benefits</th></tr>
<tr><td colspan="2">Generation of climate change scenarios</td><td rowspan="2">The scenarios generated for the different time scales, and for mean or extreme events, offer very valuable information that has been later on used in the RESCCUE project, but does not specifically and directly affect the society. This is why the social benefits, such as improved health or delivery of urban services, haven been ranked very low (1).
On the other hand, climate science and, in particular, the impacts of climate change are often not properly understood by the general public. This is why the results of these WPs (and in particular the guidelines created) can shed some light and raise awareness on this issue, increasing the capacity building of citizens.</td></tr>
<tr><td colspan="2">Prediction of future extreme events affecting the three research sites</td></tr>
</table>

WP	Main result	Societal impacts addressed
WP2	Hazard assessment of strategic urban services	

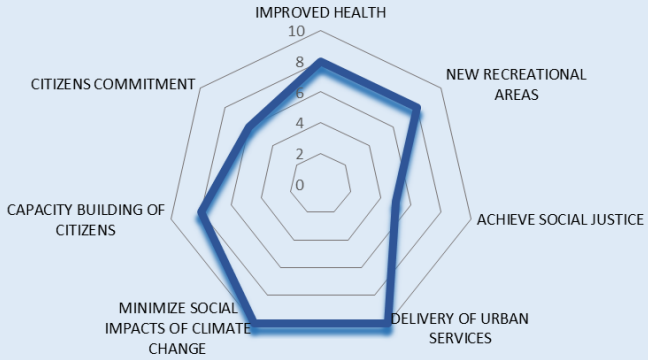
Outputs	Societal benefits
Perform an analysis of the hazards concerning strategic urban services for the current scenarios	Understanding the hazards that strategic urban services face now and in the future, will help increase the delivery of urban services and minimize the impacts of climate change. Nevertheless, these benefits cannot be achieved only with a hazard assessment, as they lack the impact assessment and the implementation of strategies itself. Thus, these benefits are limited at this stage as RESCCUE will achieve them in the coming WPs. The information of hazards, for both current and future conditions, and the improvements that can be obtained by implementing strategies, will also contribute to help communities better understand the hazards they face, and hence prepare them when such events take place. This is why capacity building of citizens will also be reached via the results of WP2.
Perform an analysis of the hazards concerning strategic urban services for the future scenarios	
Assess the hazard reduction due to the implementation of adaptation strategies	

WP	Main result	Societal impacts addressed
WP3	Reduction of climate change impacts in urban areas	

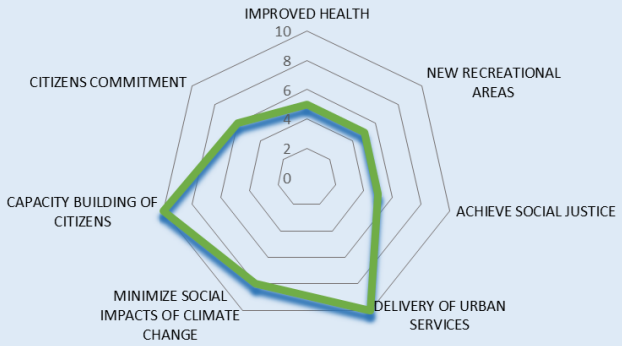
Outputs	Societal benefits
Identification and update of the methods in quantification of impacts of selected hazards in urban areas to be implemented	Methods for impacts quantification, and the assessments themselves, allow to identify the main vulnerabilities of urban services and thus, a lot can be learnt so the delivery of urban services can be improved.
Assessment of impacts for current scenarios	
Assessment of impacts for future scenarios	By combining the impact assessments with climate change scenarios, future impacts can be better addressed and thus, their impacts can be reduced.
Assess the impacts reduction due to the implementation of adaptation strategies	By understanding how adaptation strategies can reduce impacts, climate change impacts can be minimized. Indirectly, this implies that health can be improved and citizens can learn from this.

WP	Main result	Societal impacts addressed
WP4	Creation of a software tool to assess urban resilience	

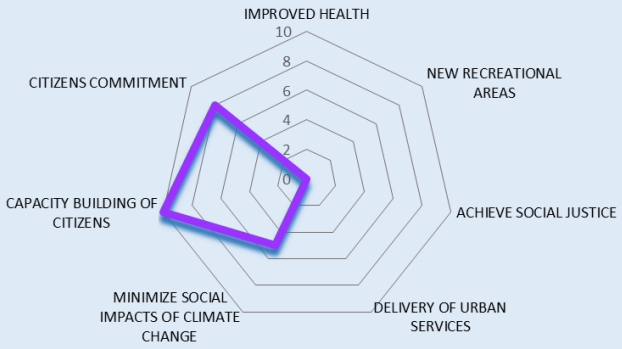
Outputs	Societal benefits
Assess the current level of resilience of the three research sites	The assessment of urban resilience, improvements in the Hazur® tool and the reassessment with it, are part of a learning process from which the cities and its citizens can benefit from. In addition, as the new modules of the tool also take into account climate change, the implementation of this methodology and tool will also contribute to minimizing the impacts of climate change, while ensuring the delivery of urban services.
Develop new functionalities and modules for the Hazur® Assessment	
Undertake a reassessment using the new functionalities and modules of Hazur® Assessment	
Develop and test the Hazur® Manager module to manage urban resilience	Hazur® Manager is a real time management tool, which allows to understand how the city functions in real time, in particular when shocks occur. This is why it is a key tool to increase urban resilience and thus, to ensure the delivery of urban services.

WP	Main result	Societal impacts addressed
WP5	Resilience and adaptation strategies with a multisectorial approach	

Outputs	Societal benefits
Framework to create and promote resilience strategies	Availability of tools to create solutions for minimizing climate change impacts on the society.
Adaptation measures database to be used by other cities. Including structural and non-structural alternatives as well as nature-based solutions and covering the adaptation to different climate change impacts	Knowledge base to develop adaptation measures and strategies that when applied will imply: -Improved health for citizens (e.g. improved air quality, reduced water pollution, reduced impacts from flooding, heat waves or droughts, etc.). -New recreational areas due to adaptation measures such as nature-based solutions -Decrease of the interrupted time for urban services during extreme events
Metrics system to compare and prioritize between resilience strategies based on a multicriteria analysis	Increase capacity building for cities and their citizens in terms of climate change resilience The most vulnerable areas/citizens must be considered during the prioritization process
Enhanced communication system for stakeholder participation	Increase awareness and commitment of society Increase replicability of RESCCUE's results (benefits for other cities and their citizens)

WP	Main result	Societal impacts addressed
WP6	Implementation of a roadmap for resilience to climate change-related events in Barcelona, Bristol and Lisbon	

Outputs	Societal benefits
Assessment framework tools for cities resilience diagnosis	Availability of tools to increase the capacity building of cities and their citizens
Structured resilience diagnosis for each RESCCUE city	Assessment on the city's/urban service's ability to prepare for, respond to or recover from hazardous climate-related events and identification of the most critical aspects to be improved. Together with a proposal of resilience strategies. This assessment and plan will increase the capacity building of the cities and their citizens and the application of the resilience strategies will primarily imply: -An improvement on the delivery of urban services (main focus of RESCCUE project) -A minimization of social impacts of climate change (with partial incidence on achieving global justice) And secondarily or indirectly imply: -An improvement on citizen's health -An increase on its commitment to CC -The availability of new recreational areas (when resilience strategies with that objective were implemented)
Resilience Action Plans for each RESCCUE city	

WP	Main result	Societal impacts addressed
WP7	RESCCUE dissemination and Exploitation	

Outputs	Societal benefits
Communication actions	Increase society awareness and commitment with climate change
Exploitation Plan	Increase the use and replicability of results and thus provide other cities and their citizens with the tools to increase its resilience to climate change and thus minimize its social impacts
Business Plan	

In Table 3, the specific marks given to each of the societal impacts for each WP can be seen. The values represent to which degree each WP contributes to achieve a given societal impact, and this is precisely the information that has been used to draw all the graphs presented in Table 2.

Table 3 – Summary of RESCCUE societal impacts

Societal impacts	WP1	WP2	WP3	WP4	WP5	WP6	WP7
Improved health	1	0	3	0	8	5	0
New recreational areas	0	0	0	0	8	5	0
Achieve social justice	1	0	0	1	5	5	0
Delivery of urban services	1	6	6	8	10	10	0
Minimize social impacts of climate change	1	4	8	1	10	8	5
Capacity building of citizens	5	5	5	6	8	10	10
Citizens commitment	0	0	0	0	6	6	8

In addition, all the individual graphs from Table 2 can be overlaid to create **Figure 1**. In this figure, it is even more important to see where the RESCCUE project as a whole does not contribute rather than where it contributes. The dashed line represents the overlay of the several individual WPs, presenting an overall societal impacts graph that covers almost entirely the seven categories considered.

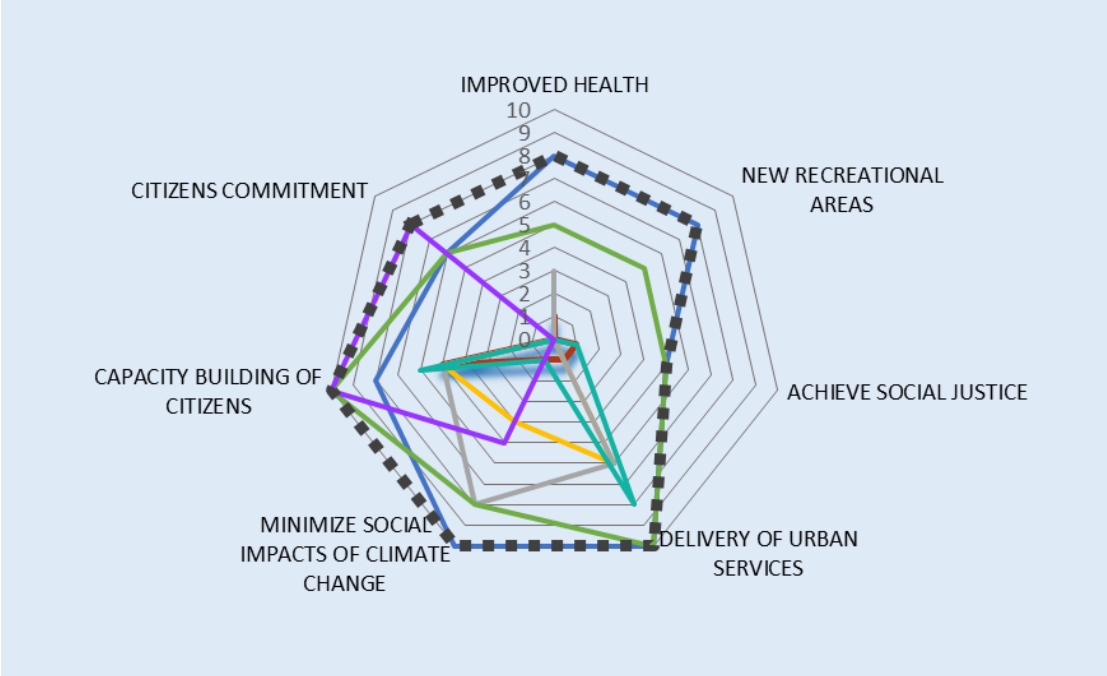


Figure 1 Graph of the overall RESCCUE societal impacts

In particular, RESCCUE really helps to improve the delivery of urban services, minimizing the impacts of climate change and increasing the capacity building of citizens. Additionally, since RESCCUE project has a clear commitment with climate change adaptation, the proposal of adaptation strategies and measures for cities has a direct impact on citizen's health and well-being. And the dissemination of the acquired knowledge (e.g. climate projections, impact assessment, etc.) and the developed tools, methodologies and dissemination guidelines has contributed to increase the capacity building and commitment of citizens.
On the other hand, where the project lacks involvement is in the achievement of social justice. This is rather understandable as RESCCUE is a technological based approach that focuses more on urban services and their interdependencies rather than on climate justice.

Nevertheless, although RESCCUE was not mainly focusing on citizens, the degree of accomplishment of social benefits related to them such as citizens' commitment, improved health or social justice (partially), is remarkable. The rest of actions to reach a complete social justice should be analysed in detail through local instruments, such as the Climate Plan developed in Barcelona where social justice is clearly addressed.

4.2 Impacts of strategies to implement

As presented in the previous section, within the global RESCCUE societal impacts analysis, WP5 is the one that contributes more positively to the social impacts. However, what was considered in the previous section was not the result of the implementation of specific strategies, but the methodologies and tools generated in WP5, such as the adaptation measures database or the methodology for the prioritization of strategies.

It is obvious that these methodologies and tools contribute to the implementation of adaptation strategies and hence, have positive effects in terms of risk reduction, environmental and socio-economic indicators. This is precisely why in WP5, a detailed analysis of the positive impacts generated by the strategies selected in each city was carried out. From that analysis, a factsheet for each strategy described what should be done and how, a timeline for implementation, budget, etc.

Finally, each strategy also contained a table presenting the co-benefits of the implementation of that strategy (Table 4).

Table 4 – Example of the economic, social and environmental co-benfits obtained by the implementation of the strategy "S001 – Flood impacts reduction in a context of Climate Change" in Barcelona. The ones highlighted in bold imply a relevant contribution.

ECONOMIC	SOCIAL	ENVIRONMENTAL
Cost savings	**Reduced mortality impacts**	Improved air quality
Reduced energy losses	**Reduced health impacts**	**Reduced aquifer depletion**
Job creation	**Reduced mortality from diseases**	**Reduced water pollution**
Increased labour productivity	**Enhanced public amenity**	**Reduced land contamination**
Increased economic production	**Reduced impacts on vulnerable groups**	**Improved biodiversity and ecosystems**
Increased property values	**Reduced number of householders, businesses forced from homes, places of work**	**Maintained and increased green space**
		Reduced environmental impacts through associated awareness
		Increased biodiversity and ecosystem services
		Effective/uninterrupted water collection and security
		Erosion control

As it can be seen, the social co-benefits identified here are not exactly the ones considered for the RESCCUE societal impact analysis in section 4.1, although they are pretty similar and in a way, all of them fit inside the categories considered in the previous section. As an example, the category described as IMPROVED HEALTH could be assigned to the following three co-benefits considered: Reduced mortality impacts; Reduced health impacts; and Reduced mortality from diseases.

Taking advantage of the work done in WP5 (and the summary of this work done in the Resilience Action Plans for each city in WP6), Table 5 has been created to present how the strategies selected for each city within RESCCUE, also contribute to the global RESCCUE societal impact analysis, just by using the social co-benefits achieved in each case.

Table 5 – Summary of the social co-benefits obtained with the planned strategies in the three RESCCUE cities. Green means relevant contribution of the strategy to this co-benefit, orange is slight contribution and grey is no contribution.

Strategies	City	Co-benefits: Reduced mortality impacts	Reduced health impacts	Reduced mortality from diseases	Enhanced public amenity	Reduced impacts on vulnerable groups	Reduced num. of displaced household., businesses, etc.	Social inclusion
Flood impacts reduction in a context of Climate Change	Barcelona							
Environmental improvement of receiving water bodies	Barcelona							
Not a single drop wasted. Alternative water resources	Barcelona							
Guarantee security of services provision	Barcelona							
Adaptation of green infrastructure	Lisbon							
Promoting urban rehabilitation as a tool to increase resilience: sewer systems	Lisbon							
Promoting urban rehabilitation as a tool to increase resilience: facing climate change	Lisbon							
Strengthening collaboration within AML, parishes and municipality departments	Lisbon							
Lisbon urban drainage monitoring and early warning system	Lisbon							
Building protections for urban electrical infrastructure, exposed to estuarine flood	Lisbon							
Develop community flood plans	Bristol							
Build riverside flood defence walls	Bristol							
Keep identification of high-risk areas updated by conducting studies involving flood-modelling analysis	Bristol							
Adding rain gardens before sewer inlet points	Bristol							

5 Conclusions

As it has been detailed, seven categories of societal impacts have been identified in order to assess the main societal aspects addressed by RESCCUE's results.

The results of this assessment, done per WP and for the RESCCUE project as a whole, show that the main societal impacts addressed by the project are:

- the delivery of urban services: main objective of the project
- the minimization of social impacts of climate change: direct consequence from the increase of city's resilience
- the capacity building of citizens: accomplished through the dissemination of project results (climate change scenarios, tools and methodologies for hazard and impact assessment, etc.)

Other remarkable societal impacts achieved are:

- improved health: potential consequence of the adaptation strategies being suggested
- new recreational areas: also a potential consequence of the implementation of some of the adaptation strategies being suggested
- citizens commitment: direct consequence of the dissemination of project results

Finally, the societal impact accomplished in a minor degree is the societal justice given that this is not one of the main objectives of RESCCUE project. Societal justice is a transversal question that should be locally assessed with other instruments (considering the social, economic, gender, territorial and cultural diversity of citizens) and so, transversally addressed by specific policies and measures.

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