



**ADAM MICKIEWICZ UNIVERSITY IN POZNAN**

Faculty of Geographical and Geological Sciences

Department of Integrated Geography

# Fostering innovative action towards climate change adaptation and mitigation – approach of TeRRIFICA H2020 Project

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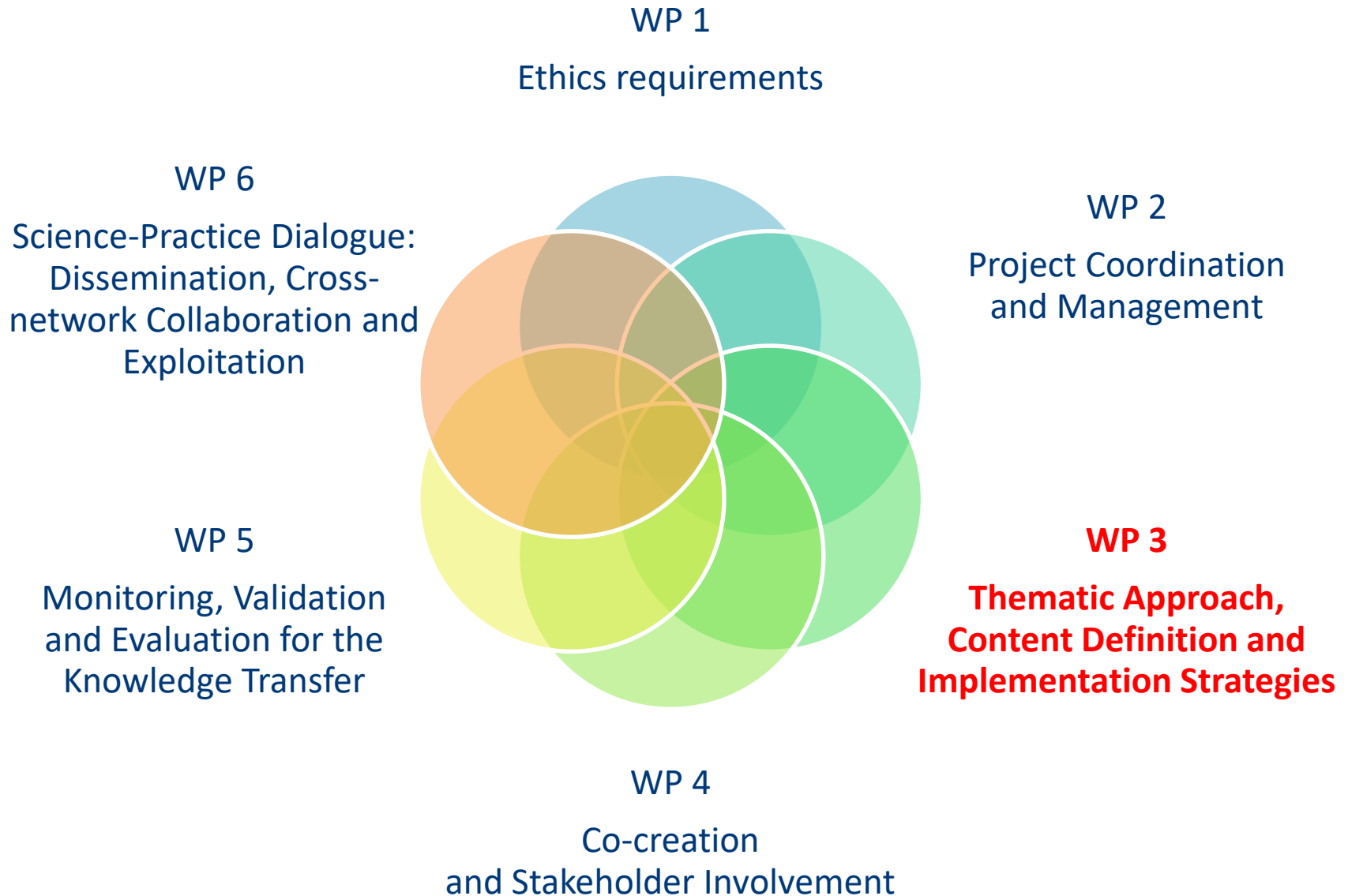
# Objectives

- ✓ Involve **citizens in agenda-setting processes** corresponding to climate change challenges;
- ✓ Develop **Climate Change Adaptation Plans** that will lead to institutional and governance change;
- ✓ Develop **test and evaluate concrete actions (pilots)** focused on mitigation of and adapting to climate change issues;
- ✓ Make the environment of Responsible Research & Innovation **more inclusive to society** and include it in **regional policy**.

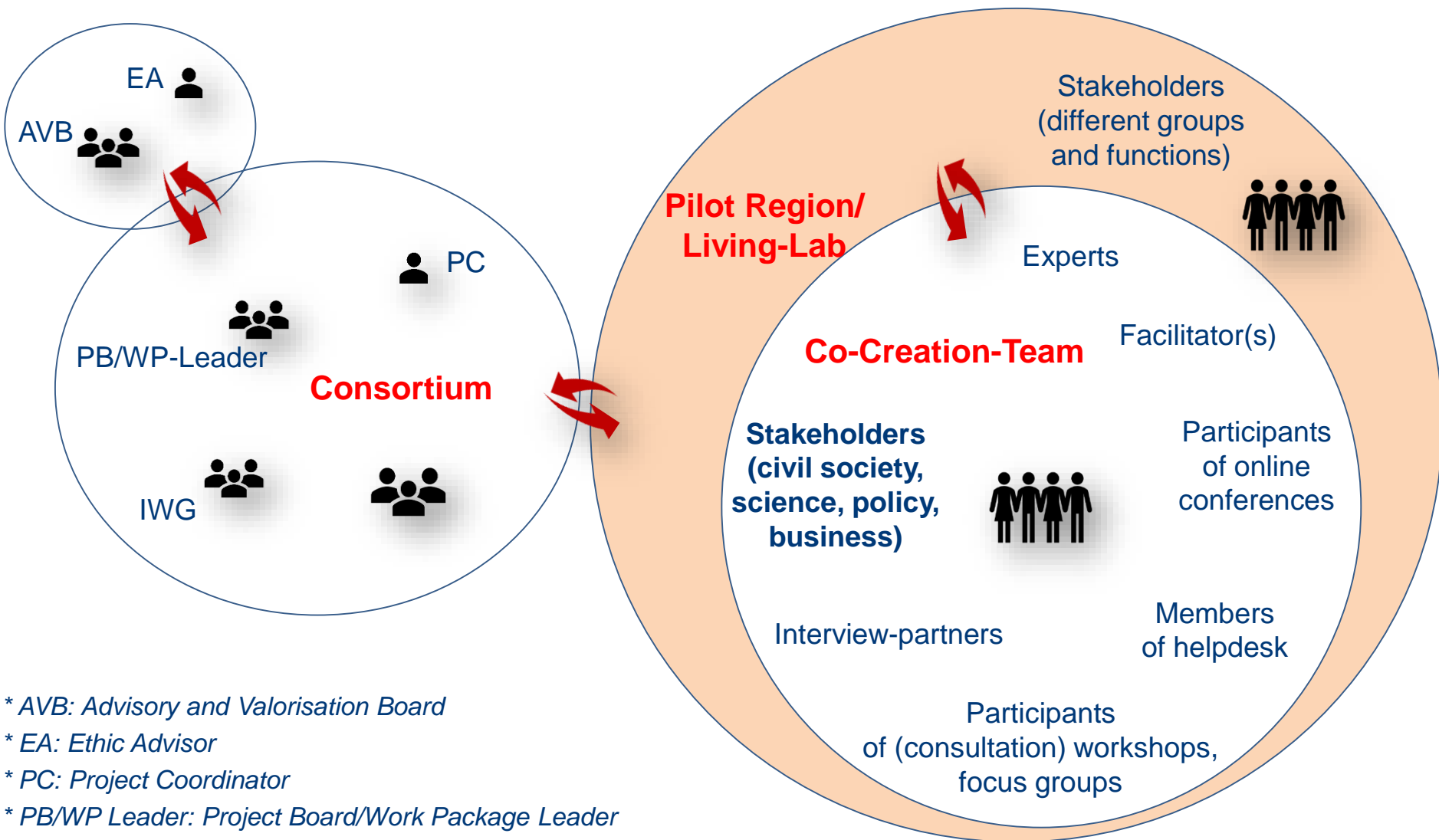
1	Wissenschaftsladen Bonn (Bonn Science Shop)	DE
2	ACUP, Barcelona	ES
3	Sciences Citoyennes, Paris	FR
4	Adam Mickiewicz University, Poznań	PL
5	University of Vechta	DE
6	Center for the Promotion of Science, Belgrade	RS
7	Association Education for Sustainable Development, Minsk	BY
8	Rhine-Waal University of Applied Sciences, Kleve	DE



# Work packages (WPs)



# People in TeRRIFICA Living Lab approach



\* AVB: Advisory and Valorisation Board  
 \* EA: Ethic Advisor  
 \* PC: Project Coordinator  
 \* PB/WP Leader: Project Board/Work Package Leader  
 \* IWG: Innovation Working Group

- ✓ Kick-off Meeting in Bonn, Germany (February 2019)
- ✓ 1st Reflective Workshop and Consortium Meeting in Bonn, Germany (February 2019)
- ✓ TeRRIFICAs 1st Online Conference (June 2019)
- ✓ 2nd Reflective Workshop and Consortium Meeting in Belgrade, Serbia (July 2019)
- ✓ TeRRIFICAs 2nd Online Conference (upcoming - September 2019)
- ✓ Consultation Workshop in Poznań, Poland (upcoming - September 2019)
- ✓ 3rd Reflective Workshop and Consortium Meeting in Paris, France (upcoming - October 2019)
- ✓ Summer Schools (2020-2021)
- ✓ Consortium Meetings (2020-2022)
- ✓ Online calls/meetings:
  - Pilot regions call – on each first Wednesday of a month;
  - Consortium call – on each second Wednesday of a month.

## 2nd Online Conference

**More and more people get in touch with climate action  
and realize that it's time for a change!**

With our TeRRIFICA project we support the people in six European pilot regions to get on the “change track” and **develop innovative climate actions**. But this is easier said than done:

What is important for a newly designed project in this field?

How do we guarantee a fruitful collaboration of different partners?

Our **2<sup>nd</sup> TeRRIFICA Online Conference** will offer the opportunity to learn more and discuss about the insights of case studies and the essentials for future projects.

**Save the date to be part of this international event:**

**Thursday, 19<sup>th</sup> September 2019  
10 am – 2 pm (CEST)**

For free and online!

Detailed information regarding the program and the registration  
will follow soon.

## TERRIFICAS RELEVANT SECTORS

**Science**

**Civil society**

**Local government**

**Business**

### Identification of knowledge, stakeholders and documents

Challenges identified by scientists (literature, reports, expertise, scientific projects)

Identification of key-role NGO's and CSO's dealing with climate change (data base)

Identification of relevant policy documents (strategies, programmes, plans)

Identification of entrepreneurs and business projects (data base, CSR)

### Interviews with stakeholders and other partners (detailed investigations)

Interviews with scientists dealing with climate change to ensure identification of the most relevant knowledge and dissemination mechanisms

Interviews with stakeholders - recommendation of the most active NGO's and CSO's

Detailed interviews with NGO's and CSO's selected by stakeholders

Interviews with local authorities - recommendation of the most relevant policy documents

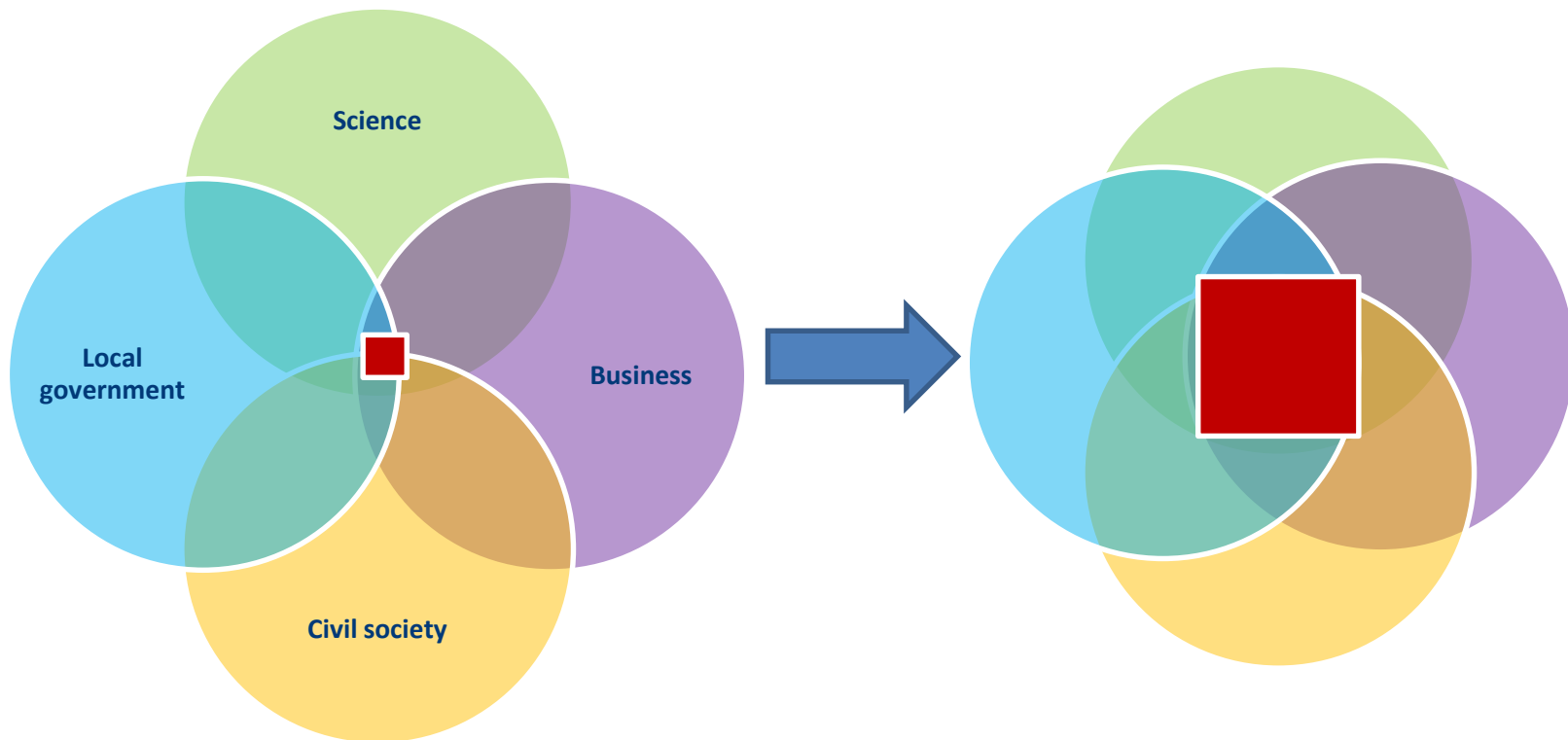
Interviews with stakeholders - recommendation of the most relevant project leaders

Detailed interviews with entrepreneurs (project leaders) selected by stakeholders

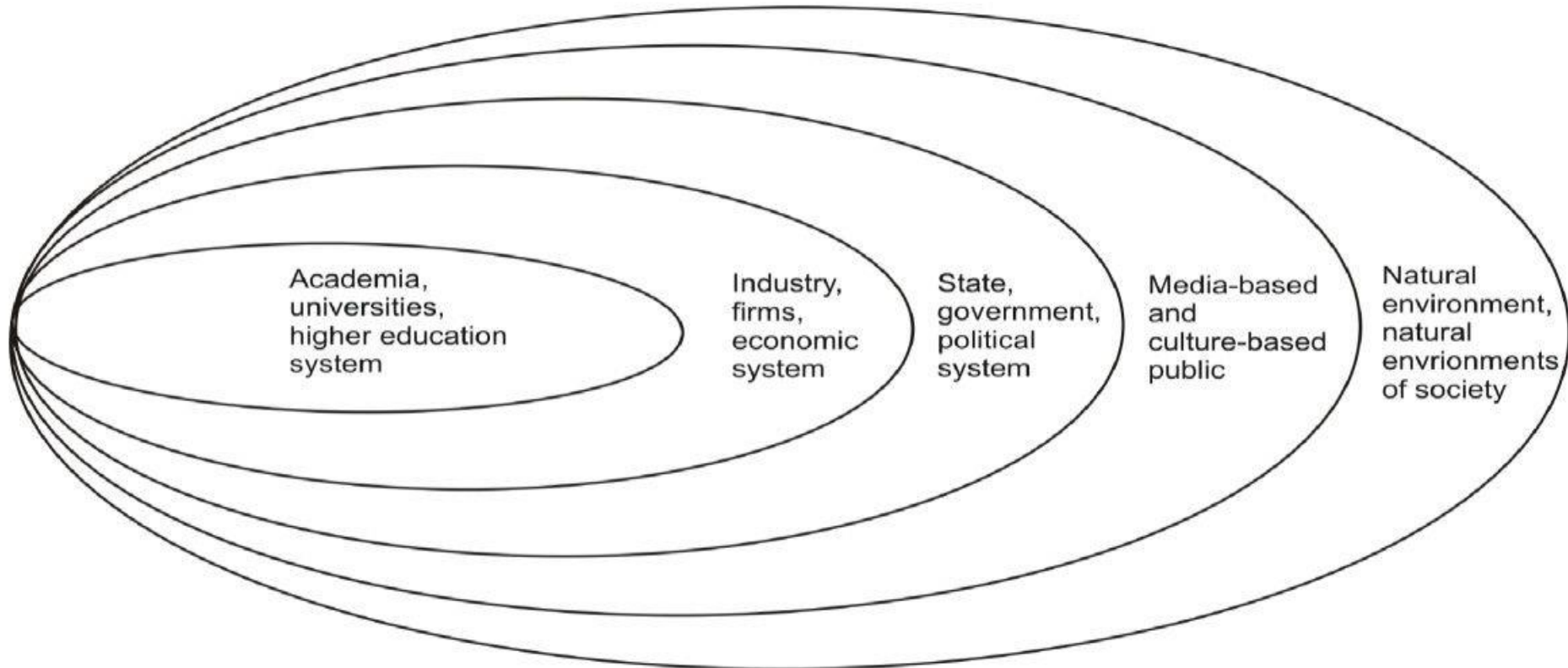
**Capturing and storing relevant data in a database and „data mining” regarding development of Methodological Case Study Guidelines (Subtask 3.2.1) for needs of Subtask 3.2.2 Compilation, Synthesis and Analysis of Case Studies)**



## Co-creation in the field of climate change adaptation and mitigation – relevant sectors in TeRRIFICA



 Co-creation between 4 relevant sectors



## Conceptual approach of the Triple, Quadruple and Quintuple Helix model

Source: Carayannis, Barth, Campbell (2012, p. 6)



# Intangible outcomes and tangible deliverables

## Intangible outcomes

- Raising public awareness about climate change
- Increased cooperation between all stakeholders regarding prevention and mitigation climate change
- Improving adaptability of cities to climate change

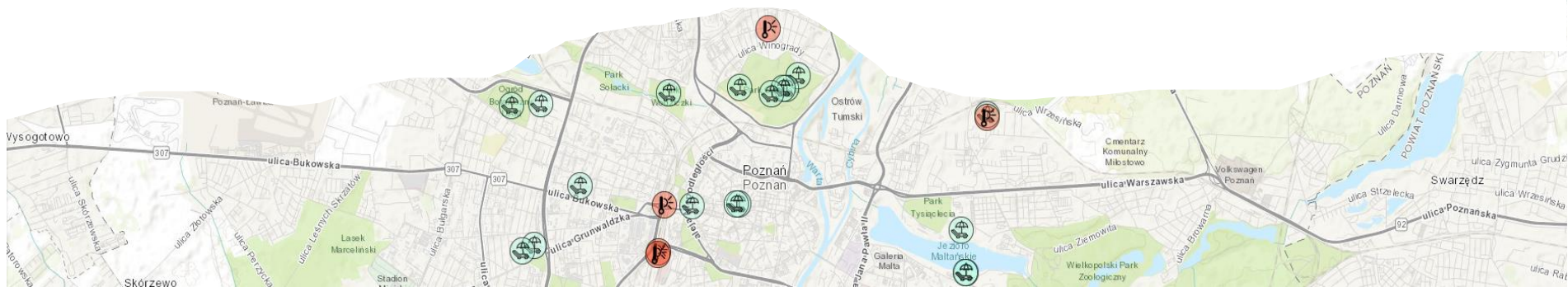
## Tangible deliverables



- **Crowd-mapping tool**
- Communication framework
- Case studies report
- Report on institutional framework conditions, relevant regional and local processes, instruments and co-creation factors related to or adaptable for climate action
- Guide on engagement and co-creation
- Stakeholders Mapping Report

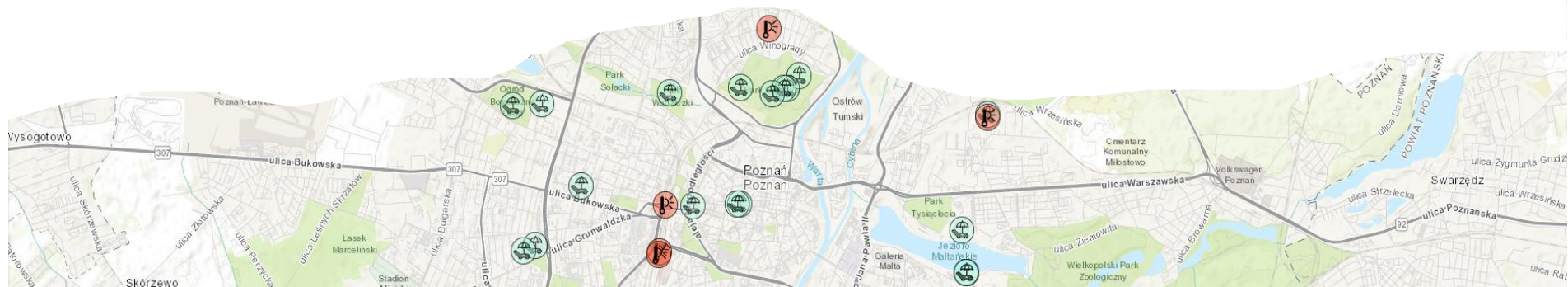
- ✓ GEO-QUESTIONNAIRE is mostly considered as an **online questionnaire coupled with an interactive map** facilitating collection of answers together with their spatial references.
- ✓ In GEO-QUESTIONNAIRE, the **geographical features** (e.g. important places, points of interests) **are sketched by participants or selected from an interactive map**. The features may be sketched as points, lines, or polygons.
- ✓ CROWD-MAPPING is a **method of crowdsourcing** strictly related to the themes of public participation in Geographic Information Systems and Web Mapping.

*Goodchild et al. 2010, See et al. 2016, Czepkiewicz et al. 2018, Rzeszewski and Kotus 2019.*



## PROS:

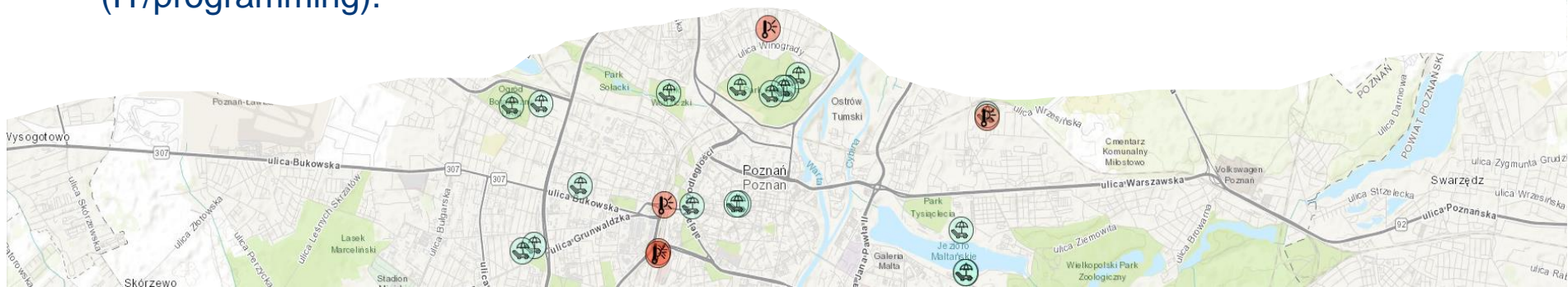
- ✓ possibility to work with large group of stakeholders;
- ✓ possibility to identify local key actors;
- ✓ use of tool can initiate stakeholders engagement and process of co-creation;
- ✓ possibility to incorporate a “learning by doing” model;
- ✓ inclusive approach (accessibility);
- ✓ enthusiasm for using and interacting with web mapping tools;
- ✓ possibility to use free/open tools and background maps;
- ✓ broad spectrum of uses;
- ✓ possibility to collect not only geographical data but also information without an explicit spatial reference (descriptive information).





## CONS:

- ✓ issues of trust and data quality and usability (e.g. inaccurate locations) which can be partially overcome or managed by proper design of tool including a well-prepared tutorial, clear interface, check questions, conducting a pilot study, other (use of methodological guidelines described in the literature);
- ✓ digital exclusion;
- ✓ challenging introduction of map editing tools (they change browser experience and require accessing spatial knowledge, which is a cognitively demanding task, especially for older people);
- ✓ costs of tool licenses, maps and server renting (especially if the tool will be used for commercial purposes);
- ✓ in case of design a new tool the workforce with technical skills is needed (IT/programming).




- ✓ is dedicated to the identification of **green**, **grey** and **blue** infrastructure linked to CCA&M;
- ✓ will support identification of places on the map where users have observed **positive** and **negative** phenomena linked to climate change;
- ✓ will help future users to identify the local/ regional key players and stakeholders involved in climate action;
- ✓ will include „learning by doing” approach – stakeholders/users will be encouraged to learn and participate;
- ✓ will be developed in 7 language versions adequate to participating regions.







## Main climate change categories included in geo-questionnaire:


### Temperature -

 Comfortable during heat waves


 Negative effects during heat waves


### Water -

 Low risk related to water


 High risk related to water


### Wind -

 Low risk related to extreme winds


 High risk related to extreme winds


### Air -

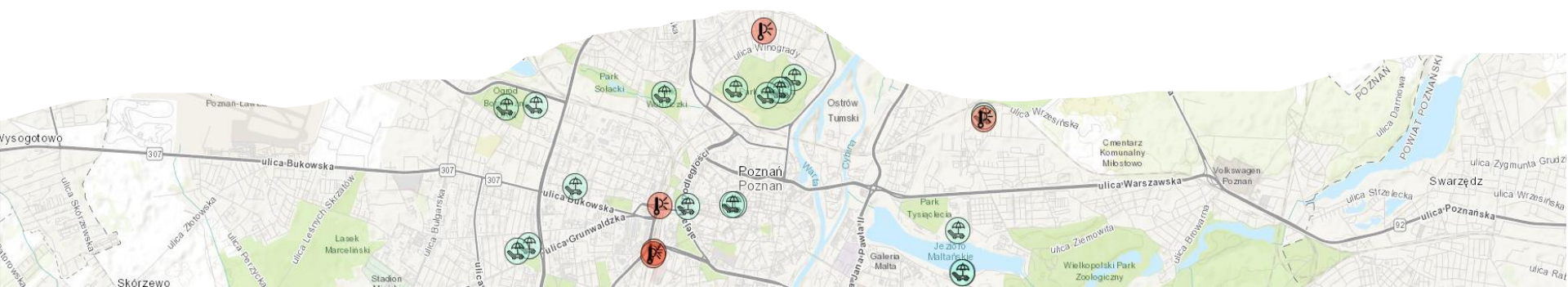
 Good air quality

 Air pollution

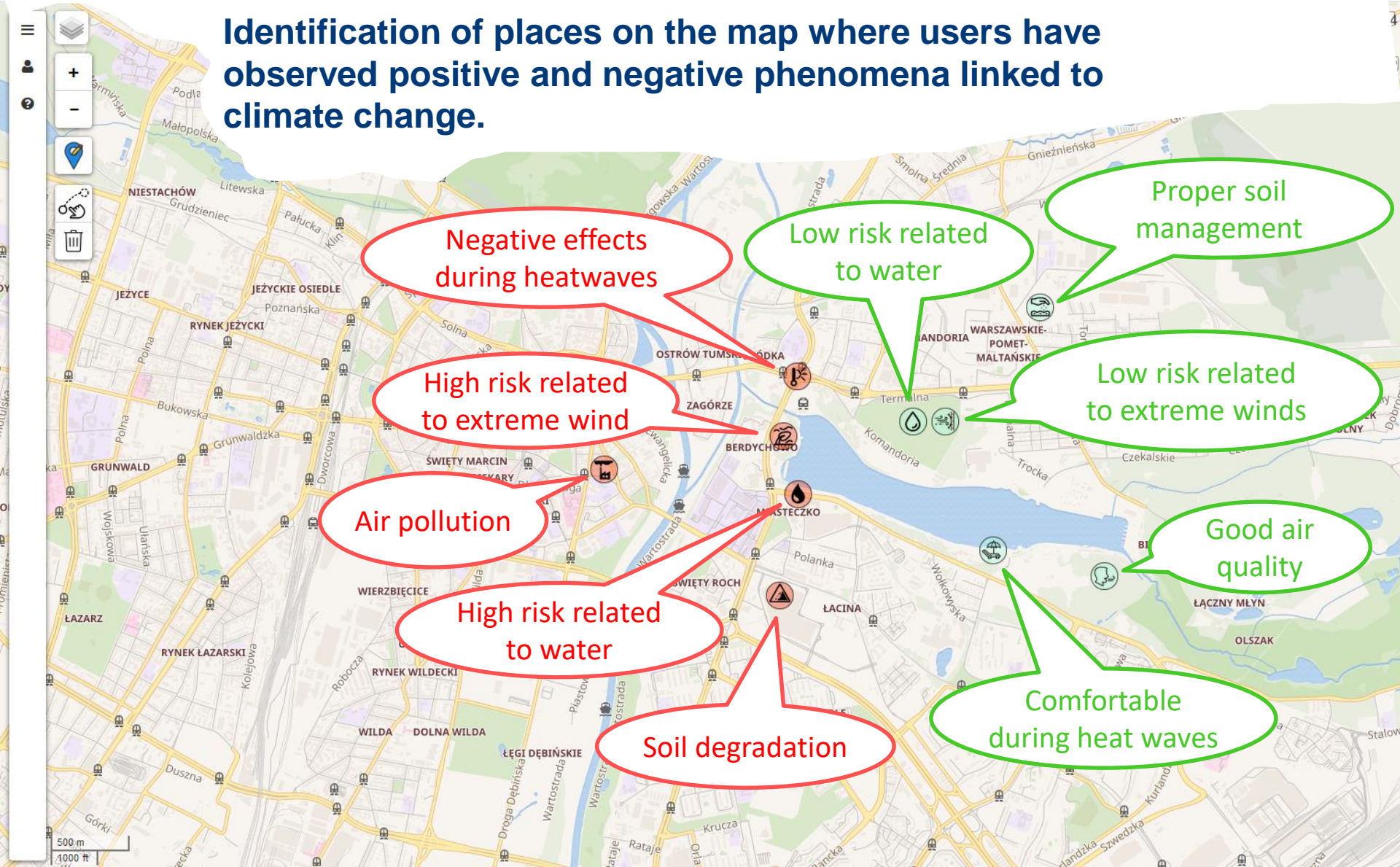
### Soil -

 Proper soil management

 Soil degradation



Identification of places on the map where users have observed positive and negative phenomena linked to climate change.







**Justification: During extreme heat waves I feel particularly comfortable here because of**

trees and green areas (lawns, parks, bushes) that give shade

are non existent   are barely present   are present   are numerous   are very numerous

water bodies (lakes, ponds), rivers, streams and other watercourses

are non existent   are barely present   are present   are numerous   are very numerous

water devices (fountain, swimming pool, water curtain, other)

are non existent   are barely present   are present   are numerous   are very numerous

devices or installations that give shade (umbrellas, temporary roofs, others)

are non existent   are barely present   are present   are numerous   are very numerous

ventilation corridors

are non existent   are barely present   are present   are numerous   are very numerous

other reasons specific to this area (Please explain below what are they)

**How would you name this place?**

Malta

**Save** **Cancel**



Comfortable  
during heat waves

# Conclusions

- ✓ The TeRRIFICA Project is a quite representative example of projects oriented on the payer demands: science has been subordinated to practical requirements of the policy makers (tax payer?);
- ✓ The project requires crosscutting cooperation within science (between social and environmental aspects) as well as between science, civil society, administration and business;
- ✓ These circumstances disturb our normal routine, since we are convinced to set objectives on our own manner, to practice our own methods and to use our own vocabulary;
- ✓ It causes significant challenges for the project consortium to understand each other during the co-creation of new knowledge and preparing common actions towards Climate Change Adaptation&Mitigation;
- ✓ Projects like TeRRIFICA establish a unique occasion to strengthen linkages, sometimes even to build bridges between divided points of view, not only among scientific disciplines but also between science and civil society.



# Thank you

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# CITIES AS SOCIAL ECOLOGICAL SYSTEMS

The 3rd World Conference of the Society for Urban Ecology

6-8 July 2020 - Poznań, Poland

[Register](#)

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