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CICADA4CE

D.1.3.2 Transnational Quadruple Helix Informal Network and Expertise Pool.

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D.1.4.1 Transnational Quadruple Helix Informal Network and Expertise Pool.

1. Contexts and backgrounds

Important part of the project CICADA4CE is the activity of the establishment and development of a transnational quadruple helix network involving public authorities, industry, academia and citizens which is promoted by transnational platform. This activity is based on bottom-up approach in the living labs, where the local workshops address social and natural capital for effective and economically efficient measures for climate change adaptation activating local communities and building-up the capacities for co-creation, co-design, co-decission making and co-implementation as the inherent part of the way towards self-learning and self-organising communities development. These activities of local communities are supported by local experts as well as expertize from external environment represented by CICADA4CE parnters and other experts involvement via the transfer of knowledge and best practices mediated by all, especially academic, partners of the project.

The formation of transnational quadruple helix informal netwoork is linked to the Activity 1.3. Development of self-learning CICADA4CE community – capacity building and Activity 1.4. Formulation of the common CICADA4CE strategic conceptual ECbA framework and its adaptation to national and local specifics in the partner cities.

The Activity 1.3. aims at the development of creative environment for mutual- and self-learning, know-how transfer, co-creation and dissemination addressing different groups of stakeholders in the project`s living labs and in broader view stakeholders representing quadruple helix in European cities. The environment for the development of informal transnational quadruple helix network and expert pool is provided by web-based transnational platform supporting the transfer of know-how, best practice expertise into the co-creation processes. The informal platform and expert pool

supports the transfer of experience, good /wrong practice, and solutions inside of the CICADA4CE consortium and has ambition to address the European auditorium as well.

The implementation of the quadruple helix concept in the architecture and composition of the network supports the cities in engaging the whole range of stakeholders – academia, public governance, business representatives and civil society actors in co-creation processes offering them partners from network as relevant holders of expertize.

The Activity 1.4. focuses on building up strategic framework for implmentation of the CICADA4CE conceptual framework. Based on this the creation of the transnational quadruple helix informal network supports the partnter cities and their communities in pilot areas in their formulating/further developing their action plans and implementing activities addressing the problems related to climate change and urban resilience.

The development of the transnational quadruple helix informal network and expert pool has the ambiton to go beyond the project consortium aiming to mediate the expertize to the broader EU auditorium supporting its transferr to the cities across the EU, interlinking

a. Shared academic knowledge with reflection of national and local specifics

b. Tacit knowledge from CICADA4CE pilot areas gained in the co-creation, co-design and co-implementation processes by local communities

c. Newly developed knowledge in reaction to identified gaps and needs in partner cities and countries.

1.1. Quadruple Helix as a Conceptual Framework for Informal Transnational Network and Expertise Pool

The concept of ecosystem and community-based adaptation (ECbA) as strategic framework of the CICADA4CE project integrates 4 main development pillars understood as integrative objectives of the strategy with the ECbA concept as its core:

- PILLAR 1: Strengthening of internal development capacities of urban community (development of self-learning and self-organizing community - awareness, knowledge,

human resources, financial resources, capacities, technical and social infrastructure for social engagement)

- PILLAR 2: Development of permanent open flexible external cooperation networks (work division, exchange, sharing, joining)
- PILLAR 3: Strengthening of resilience of urban socio-ecosystem (city including its urban community) as an ability to continue its sustainable development facing the climate change based on the development of its adaptability (evolutionary aspects), flexibility (responsiveness to disturbances) and robustness (change absorption)
- PILLAR 4: Development, strengthening and sustainable use of ecosystem services (provisioning, regulating, cultural, supporting services) in facing the climate change challenges.

All 4 above listed pillars are directly linked to the implementation of the quadruple helix concept as this concept of permanent interplay between 4 main groups of stakeholders is the base for the development of community capacities to face the complex challenges as climate change, for permanent open flexible cooperation, for ability to safeguard resilience of community building its robustness and flexibility as well as for effective, efficient and sustainable use of ecosystem services and for just distribution of their benefits.

The quadruple helix concept implementation in the development of transnational network and expert pool reflects the aim of the project to support the development of the community as urban socio-ecosystems with following qualities:

SMART and INNOVATIVE able to derive place- and evidence-based solutions (in respond to challenges and problems, climate change incl.) capitalizing innovations and synergies between different kinds of innovations developed in the community or transferred with support of experts

SUBSIDIARY activating and developing potential of self-organizing and self-learning inclusive communities used in permanent process of co-creation, co-design, co-implementation in the communities as living labs (in reflection to challenges as

climate change) as a main approach of community adaptation and development of self-learning communities supported by experts and top-down activities.

INTEGRATIVE, INCLUSIVE and JUST based on cross-sectorial, multilevel, multi-actors' collaboration and polycentric territorial governance/management based on the quadruple helix concept as a base for the trans-disciplinary development and implementation of place and evidence-based strategies and solutions capitalizing internal capacities of urban communities and external collaboration networks

SUSTAINABLE AND ECO balancing 3 dimensions of sustainability (ecologic, economic, social) and preferencing sustainable use of nature- close/nature-based solutions.

To achieve these qualities and to develop capacities of the communities to cope multiple challenges, especially complex challenges as climate change means to develop communities as innovation-oriented ecosystems representing the networks of relationships between different actors (e.g. firms, universities, research institutions, government and startups) that collaborate to create and disseminate innovations. Such systems support the dynamic exchange of knowledge, resources and technologies, which leads to the development of new products, services and business models. Innovation ecosystems function most effectively in environments with the support of public and private investments, as well as access to education and research. These ecosystems enable technological innovations to emerge through the effective coordination of resources and knowledge sharing, thereby supporting the economic growth and competitiveness of cities, municipalities and regions. (Autio, et al., 2014).

The transnational quadruple helix network and expert pool of the CICADA4CE project consortium follows the structure of key factors in quadruple helix and in the same time of such innovation ecosystem including the representatives of academia – educational system and R&D representatives, economy representatives, government, governance and regulatory environment representatives, infrastructure and services providers, civil society actors and NGOs.

The Quadruple Helix is a useful framework for understanding the interactions that form the core of self-organising communities. In cities that apply this model, technological, economic and social developments are interconnected, with innovations being created not only to achieve technological progress, but also to address social challenges such as climate change,

inclusive development and improving the quality of life. An important factor in the Quadruple Helix system is the active participation of the public in the creation of innovations, which leads to greater acceptance and successful implementation of new technologies and services.

Main principles of the Quadruple Helix are:

• Public participation: Civil society is not just a passive recipient of innovations, but plays an active role in formulating societal challenges and needs.

• Social innovation: Innovations aimed at solving complex problems such as climate change, sustainability, social justice or healthcare.

• Knowledge economy: Emphasizing that knowledge and innovation are key drivers of economic growth and prosperity.

The concept of Quadruple Helix implemented in the development of transnational informal network and expert pool as well as in the development of communities capacities is crucial for implementation of the ECbA approach as it:

a) promotes a more holistic approach to innovation by involving a wider range of stakeholders,

b) increases the social acceptability of innovative solutions, as the public participates in shaping them, leading to greater legitimacy and success of implementation,

c) develops the connection between technological, social and environmental challenges. (Carayannis, et al., 2012),

d) brings advantages supporting public involvement which can lead to the solutions that are balancing the needs of climate change adaptation with the needs of local economy and communities.

1.2. Development and Architecture of the Quadruple Helix-based Transnational Informal Network and Expertise Pool

The development of the Transnational Informal Network is an activity which will continue during the whole time of the project implementation. In particular it contents:

- Establishing the urban quadruple helix informal network by initial nomination of the experts by project partners using their own capacities. The consortium of the CICADA4CE

project itself represents the quadruple helix architecture including the academia, cities and municipalities with local governance representatives, NGOs, local activities representatives, local business actors (activity finished in May 2025 with initated more than 50 experts).

- Developing the web-based environment for safeguarding access to the required expertize for the communities in living labs mediating the communication between them and experts from transnational informal networks and accumulated knowledge in the form of documents, best practices collection (available and futher develop in Period 5 under Activity 1.3.1 already more than 15 documented best practices). The identification of the experts includes their affiliation (academia, governance, NGOs, business, civil society actors), field of expertise, identificaion of specific expertise (e.g. links to best practice examples), contact information, availability information. The structure of the expertise pool covers collection of documents and links to the best practice examples, theoretical knowledge structured by scientific fields, methodological materials, examples of planning documents learning/teaching materials, library of tools and solutions and other materials)
- Extanding the transnational informal network by the local experts involved in the action in living labs and by mapping available knowledge and collecting best practices examples across Europe (started with Activity 1.2 including the identification of expertize and its holders and continuing via activities in WP 2 and WP3)
- Extending the pool of expertize by developing the methodology documents, handbooks, collections of solutions and monitoring the activities in WP2
- Consolidating available knowledge and including the Transnational Report summarising experience, good examples and practices from the co-creation process of urban action plans for climate adaptation and strengthening resilience, the Overview of Solutions and Capacity building syllabus on jointly developed solutions, Descriptions and critical review of jointly developed solutions
- Interlinking public and private sector, civil society, academia supporting the self-government in developing and implementing development strategies (with the just green transformation of society and economy as a core) by permanent exchange between experts form the transnatinal network as well as their involvment into the learning-by-

doing process in urban living labs on climate change adaptation and resilience strengthening

- Identifying additional experts for transnatinal network (in the participative process using quadruple helix network)
- Safeguarding legal and institutional environment for existence and work of the network and pool of expertize (DGPR and authors rights protection, ethical regulations)
- Efficient use of the community potential to develop and to document innovative solutions and to provide them for broader use in European cities
- Extending the network by the living labs based pools of experts from city communities and external environment to support action in living lab(s) implementation of adaptive strategies and action plans for resilience improvement and climate change adaptation, permanent monitoring and assessment

1.3. Safeguarding Sustainability of the Quadruple Helix-based Transnational Informal Network and Expertise Pool

As reported in the previous paragraph, the development of the Transnational Informal Network is an activity which will continue during the whole time of the project implementation. Moreover the aim of the project is to extend action ability of the network and permanent access to the expertise collected in the pool beyond the time slot of the planned project activities and CICADE4CE project as a whole. The following measures are taken in order to safeguard sustainable continuity of the existence and action of the Network and Expertise Pool:

- Allocation of the web-base environment at the partner who will in the harmony with it`s main function in public sector guarantee continuity of the environment (UIRS)
- To link the Network and Pool to the continual activities of the partners providing supportive activities and services for municipalities and building capacities to cope climate change challenges in public sector (IETU, SPECTRA CE EU, UIRS, IURS, LINKS)
- To link the Network and Pool to The Network Cooperation Charter (Deliverable D 3.3.1) with goals, membership rules, obligation and other parameters of the Network cooperation.

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ANNEX

CONSENT FORM FOR INCLUSION IN THE POOL OF EXPERTS ON CLIMATE CHANGE ADAPTATION – Project CICADA4CE

Data Controller Information:
Project CICADA4CE
Address: [e.g., Street 1, 1000 Ljubljana, Slovenia]
Email: [e.g., info@climateadapteu.eu]
Data Protection Officer (if applicable): [e.g., dpo@climateadapteu.eu]

Purpose of Data Collection:
We are collecting your personal data for the purpose of including you in a publicly accessible pool of experts on climate change adaptation within the framework of the project [e.g., ClimateAdaptEU]. The data will be published on the project website [e.g., www.climateadapteu.eu] and in other project materials, making it accessible to the public, partners, and stakeholders.

Personal Data Collected:

- Full name
- Area of expertise (e.g., climate policy, water management)
- Institution or organization (e.g., University of Ljubljana)
- Contact details (e.g., email address) – optional, if you agree to its publication
- [Add other data if applicable, e.g., short CV or photograph]

Consent for Data Processing and Publication:
☐ I agree that my personal data listed above may be collected, processed, and publicly published as part of the [e.g., ClimateAdaptEU] project. I understand that providing this data is voluntary and that I may withdraw my consent at any time.
☐ (Optional) I agree to the public disclosure of my email address:
_____
☐ (Optional) I agree to the public disclosure of my [e.g., short CV or photograph]: [attach or specify].

Data Retention Period:
Your data will be stored for the duration of the project [e.g., until December 31, 2027] or until you withdraw your consent, which you may do at any time by emailing [e.g., info@climateadapteu.eu].

Your Rights:
You have the right to:

- Request access to your data,
- Request correction or erasure of your data,
- Restrict the processing of your data,
- Withdraw your consent at any time (this does not affect the lawfulness of processing prior to withdrawal),
- Lodge a complaint with a supervisory authority (e.g., the Information Commissioner of the Republic of Slovenia at gp.ip@ip-rs.si).
  To exercise your rights, contact us at [e.g., info@climateadapteu.eu].