



D8.8 Report on clustering activities

Funding scheme	EU-H2020-Grean Deal, H2020-LC-GD-2020-3		
Project	ECF4CLIM, European Competence Framework for a Low Carbon Economy and Sustainability through Education		
Project number	101036505		
Project Coordinator	CIEMAT, Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas		
Start Date of the Project	01.10.2021	Duration of project	51 months
Contributing WP	WP8: Clustering, outreach and dissemination activities		
Tasks	T8.4. Clustering Activities Plan		
Dissemination Level	Public		
Due date	2025 November 30		
Submission date	2025 December 19		
Responsible partner	CIEMAT		
Contributing organizations	MedaResearch		
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Version	1.0		



The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036505

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WHO WE ARE

The ECF consortium consists of ten partners. The project is coordinated by Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas-CIEMAT.

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Instituto Superior Técnico. University of Lisbon. IST	PT	
Universidad de Sevilla USE	ES	
University of Jyväskylä JYU	FI	
Universitat Autònoma de Barcelona UAB	ES	
Meda Research Ltd MedaResearch	RO	
Instituto de Soldadura e Qualidade ISQ	PT	
Trebag Szellemi Tulajdon Es Projektmenedzser Korlatolt Felelossegu Tarsasag TREBAG	HU	
ENLITIA S.A. ENLITIA	PT	
Que Technologies Kefalaiouschiki Etaireia QUE	GR	

ABOUT THE PROJECT

Through a multidisciplinary, transdisciplinary and participatory process, ECF4CLIM develops, tests and validates a European Competence Framework (ECF) for transformational change, which will empower the educational community to take action against climate change and towards sustainable development.

Applying a novel hybrid participatory approach, rooted in participatory action research and citizen science, ECF4CLIM co-designs the ECF in selected schools and universities, by:

- 1) elaborating an initial ECF, supported by crowdsourcing of ideas and analysis of existing ECFs;
- 2) establishing the baseline of individual and collective competences, as well as environmental performance indicators;
- 3) implementing practical, replicable and context adapted technical, behavioural, and organisational interventions that foster the acquisition of competences;
- 4) evaluating the ability of the interventions to strengthen sustainability competences and environmental performance; and
- 5) validating the ECF.

The proposed ECF is unique in that it encompasses the interacting STEM (Science, Technology, Engineering, and Mathematics)-related, digital and social competences, and systematically explores individual, organisational and institutional factors that enable or constrain the desired change. The novel hybrid participatory approach provides the broad educational community with: an ECF adaptable to a range of settings; new ways of collaboration between public, private and third-sector bodies; and innovative organisational models of engagement and action for sustainability (Sustainability Competence Teams and Committees).

To encourage learning-by-doing, several novel tools will be co-designed with and made available to citizens, including a digital platform for crowdsourcing, IoT solutions for real-time monitoring of selected parameters, and a digital learning space. Participation of various SMEs in the consortium maximises the broad adoption and applicability of the ECF for the required transformational change towards sustainability.

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1 EXECUTIVE SUMMARY

This document is the Deliverable 8.8. 'Report on clustering activities', of the ECF4CLIM project funded by the European Commission under the H2020 - European Green Deal Call, under the grant agreement no. 101036505.

The objective of the report is to update on the activities performed within the Clustering Plan (see Deliverable D8.2).

The deliverable presents the activities performed in the following clustering activities: (1) Coordination with JRC common reference framework on Sustainability Competences (GreenComp), (2) Coordination with our sister project GreenSCENT, (3) Coordination with other projects funded under Green Deal call, topic 10.3, and (4) Clustering activities with Green Deal projects.

2 OBJECTIVES

The clustering activities undertaken in ECF4CLIM are planned to ensure the liaison and coordination with other projects funded under the GD 10.3 call and, more generally, with projects funded under the Green Deal call.

The objective is to stimulate the synergies and to create the optimal appropriate conditions for a common work.

Additionally, it is intended to stimulate the participation of the educational communities working in this project in the European Climate Pact.

3 ACTIVITIES UNDERTAKEN

3.1 Coordination with JRC common reference framework on Sustainability competence (GreenComp)

The JRC in coordination with Commission's Directorate General for Education, Youth, Sport and Culture has developed a common reference framework on Sustainability competences (GreenComp)¹. GreenComp is a reference framework for sustainability competences and provides a common ground to learners and guidance to educators, advancing a consensual definition of what sustainability as a competence entails. Following the indications of the EC, Greencomp has been one of the key starting points

¹ <https://publications.jrc.ec.europa.eu/repository/handle/JRC128040>

of the competence framework developed in ECF4CLIM, together with our hybrid participatory approach.

As part of the coordination activities with GreenComp, ECF4CLIM participated in the second expert workshop on a European competence framework on sustainability held on September 15th 2021. The workshop objectives were to gather feedback on the European Commission's draft competence framework on sustainability.

Also, as part of these coordination activities, JRC and DG EAC representatives were invited to participate in the ECF4CLIM kick off meeting held on October 18th 2021.

After this first contact, another meeting was held on November 19th 2021 in order to explore possible synergies between ECF4CLIM and GreenSCENT, our sister project. Representatives from JRC and DG EAC, as well as from ECF4CLIM and GreenSCENT engaged in a preliminary dialogue on the conceptual and methodological approaches in both projects.

A follow up meeting was held on 15th February 2023 also with the participation of JRC and DG EAC, and ECF4CLIM and GreenSCENT representatives. In this meeting the progress made on both projects on the ECF development was reviewed.

As suggested in the above-mentioned meeting, ECF4CLIM joined the **GreenComp Community of practice**² and attended the launching event on the 22nd March 2023. Since then, ECF4CLIM has been an active participant in the *GreenComp Community*. ECF4CLIM was represented in the following events: Community cafés (peer-sharing events) such as the "GreenComp café" (2023 December 6, 2024 January 24, 2024 September 18, 2024 October 16, 2025 June 4, 2025 August 2025, 2025 October 8)

In the GreenComp Café on Assessment Tools held on 16 October 2024, a community member (Eduquem+B) presented "Be Ready for Now", a GreenComp-based self-assessment tool available in Catalan, Spanish and English. Eduquem+B is a Barcelona+B project that is supported academically by EADA Business School. Created with the aim of bringing sustainability into the classroom, it offers resources and activities based on the European Union's GreenComp framework.

This self-assessment tool is designed to measure sustainability competences and currently is being piloted in high schools, universities and vocational training centres in Barcelona.

The event provided an opportunity to learn about the tool, exchange experiences and engage in discussion with other GreenComp community members. As a consequence of the participation in this GreenComp café, coordination meetings were held with

² <https://education-for-climate.ec.europa.eu/community/GreenCompCommunityGroup/about>

representatives from B Lab Spain (Barcelona+B project) to explore potential synergies between the GreenComp self-assessment tool and the ECF4CLIM project. As a result of these exchanges, partners were invited to formally join the initiative through an adhesion form, granting access to the assessment tool and its pedagogical guidance materials. Partners were encouraged to disseminate the form among participating educators and to provide feedback after using the tool.

On 21 January 2025, a dedicated meeting was organised with ECF4CLIM project partners to assess the feasibility and potential contexts for implementing the GreenComp self-assessment tool. Partners shared reflections and country-specific perspectives. The tool was generally considered suitable for higher education contexts, while being perceived as too complex for secondary education.

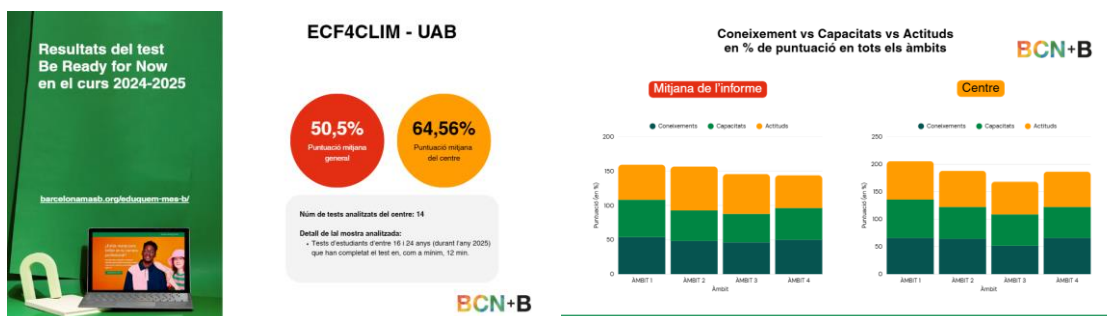
Different implementation strategies were discussed across countries:

- In Spain, the tool was planned to be applied with university students involved in Sustainability Competence Teams (SCTs) in small groups, as well as in selected classes whose lecturers volunteered to collaborate. Individual results were intended to serve as a basis for collective discussion, with an expressed interest in accessing group-level reports.
- In Romania, the questionnaire was planned to be completed collectively within a university course on Energy Systems, involving both SCT and non-SCT students.
- In Finland, possibilities were explored to link voluntary participation in the survey with an intervention on interdisciplinarity and sustainability, as well as to disseminate it through the student union.
- In Portugal, implementation at university level was constrained by institutional changes and limited capacity to assume additional workload.

Finally, the GreenComp self-assessment questionnaire was implemented at the Autonomous University of Barcelona (UAB) and in Romania, completing the planned pilot experience within the project framework.

In **Spain**, the Eduquem+B method was piloted in two distinct contexts: (i) with students engaged in Sustainability Competence Teams (SCTs), working in small groups, and (ii) with students from a full class where the teacher volunteered to collaborate. In both cases, the approach aimed to use individual results as inputs to stimulate collective debate, with the added objective of producing group reports to consolidate insights.

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In **Romania**, the tool was applied during an Energy Systems course, involving both SCT members and other students. Unlike in Spain, the activity was carried out collectively, allowing the class to engage in a shared reflection process around sustainability competences.

Alongside these practical applications, discussions with Eduquem+B explored possible synergies, identifying pathways to strengthen collaboration and stimulate mutual benefits. These included the potential for joint methodological refinements, cross-validation of competence frameworks, and leveraging results to enhance both projects' capacity to inform policy and educational practice.

3.2 Coordination with our sister project GreenSCENT

Another project was funded under the Green Deal call topic 10.3 "Enabling citizens to act on climate change, for sustainable development and environmental protection through education, citizen science, observation initiatives, and civic engagement", subtopic 1: "Enabling citizens to act on climate change and for sustainable development through education". This project is **GreenSCENT** and it is coordinated by the Università Telematica Internazionale UNINETTUNO (Italy).

A detailed Action Plan for the Interaction with our sister project GreenSCENT was developed already in the GA preparation phase. The two projects agreed a shared strategy for continuous and mutual updates, synergies development and definition of Joint activities.

GreenSCENT and ECF4CLIM agreed to setup a set of mechanisms for collaborating on a regular basis. One or two "project ambassador" were nominated by the two projects to take care of:

- Organize regular meetings for synchronization, updating and joint activities development among the two projects,
- Create a shared platform and calendar of events so that each project can keep up to date with events and invite where possible members of the other sister project,
- Proposing new ideas for publications,

- Organizing panels for future conferences.

The two projects discussed the possibility of using the “Advisory board” as the tool supporting the mutual participation of Coordination team members in the respective sister project.

Furthermore, both projects had a similar approach in drafting the 1st release of their ECFs that can be summarized as follows:

- Meta-analysis/desk research, performed by consortium experts;
- Co-design/Citizen Engagement/participatory approach
- Advisory board involvement; as a bridge for the two projects

As GreenSCENT has ended a year earlier, ECF4CLIM committed to consider their findings and proposals in the elaboration of recommendations on key components and requirements for the final version of the ECF.

Finally, both projects already foresaw, at the proposal level, specific activities and tasks focused on the interaction with the sister project. GreenSCENT Task 6.2 “SCENT clustering and peer learning activities” defines a clear strategy for the interaction with the sister project, while ECF4CLIM Task 8.4. “Clustering Activities Plan” is dedicated to liaison and coordination with other projects funded under this call.

As part of these coordination activities, the GreenSCENT Project coordinator, Alessandro Caforio, was invited to participate in the ECF4CLIM kick off meeting held on October 18th 2021. ECF4CLIM coordinators participated in the GreenSCENT kick off meeting on the 1st of February 2022.

On February 17th, a first coordination meeting with GreenSCENT was scheduled short after the GreenSCENT kick off meeting to start organising the work on the development of the competence framework.

Another unofficial meeting with GreenCENT to discuss each project’s approach and conceptualization of the ECF was held on June 16th 2022. In this meeting both projects presented a brief description of what they had done so far in terms of developing their ECFs, and what they envision the final product will look like.

Additionally, ECF4CLIM participated in an online workshop organized by GreenSCENT to receive external feedback on their competence framework using a dynamic knowledge graph in November 22nd 2022.

Between 28 and 29 November 2023, the GreenScent project coordinator was invited to participate in the 5th ECF4CLIM project meeting in their capacity as a member of the

project's Advisory Board. Alessandro Pollini represented GreenScent and actively participated in the meeting.

On 24 July 2024, a meeting was held with Vanni Resta, who had recently been appointed as the new Project Coordinator of GreenScent. The meeting served to introduce the new coordination role and to discuss ongoing activities and future collaboration within the project.

On 16–17 December 2024, ECF4CLIM participated in the Final Conference of the GreenScent project. During the second day of the conference, the ECF4CLIM coordinators delivered a presentation entitled “Achievements of the ECF4CLIM Project”, highlighting the main results and outcomes achieved.

On 11-12 December 2025, the coordinator of the GreenScent project participated in the Final Conference of the ECF4CLIM project and delivered a presentation entitled “Our sister project GreenScent. Main project outcomes and recommendations”.

3.3 Coordination with other projects funded under Green Deal call, topic 10.3

There are other projects funded under the Green Deal call, topic 10.3: “Enabling citizens to act on climate change, for sustainable development and environmental protection through education, citizen science, observation initiatives, and civic engagement” in Subtopic 2: “Enabling citizens to act on climate change and for sustainable development through better monitoring and observing of the environment and their environmental impacts”

These projects are the following:

- SOCIO-BEE. Wearables and drones fOr City Socio- Environmental Observations and BEhavioral Change, coordinated by the ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS (Greece).
- PSLifestyle. Co-Creating Positive and Sustainable Lifestyle Tool with and for European Citizens coordinated by SUOMEN ITSENAISYYDEN JUHLARAHASTO (Finland).
- CompAir. Community Observation Measurement & Participation in AIR Science coordinated by VLAAMSE GEWEST (Belgium).
- I-CHANGE. Individual Change of HABits Needed for Green European transition coordinated by Centro Internazionale in Monitoraggio Ambientale -Fondazione CIMA (Italy).
- AURORA. Achieving a new European Energy Awareness coordinated by UNIVERSIDAD POLITECNICA DE MADRID (Spain).

A common event to facilitate the coordination and exploitation of synergies among these projects was organized on February 14th 2022. In a follow up meeting held on February 22nd, 5 clusters were identified. A coordinator was selected and the development of 5 Action Plans was started. The clusters are presented in Table 3.3.1.

Table 3.3.1 Clusters identified in GD 10.3

Cluster ID	Cluster description	Coordinator
1	Carbon footprint calculator	Yolanda Lechón from ECF4CLIM
2	Air quality	Andria Nicodemou from GreenSCENT
3	Key sensors	Antonio Parodi from I-Change
4	Citizen engagement	Alessandro Caforio from GreenScent
5	Dissemination and links with broader initiatives	Martin Brockelhurst from AURORA

Other elements having potential interest were identified as: (1) sharing knowledge on ethical issues (including working with children), (2) Green Deal ambassadors.

Within the Cluster #1, “Carbon footprint calculator”, coordinated by ECF4CLIM, the following activities were included in the Action Plan:

1. Share/Compare databases. Responsible project: ECF4CLIM in cooperation with PSLifestyle
2. Common labelling approach. Responsible project: AURORA in cooperation with PSLifestyle. A progress meeting with AURORA and PSLife Style was held in which the methods of labeling used by AURORA and PSLifeStyle were shared.
3. External review process. Responsible project: AURORA. In this respect, AURORA project has already implemented a peer-review process for the labeling and the footprint calculator. An external review by 4 experts is completed.
4. Joint exploitation. Responsible project: ECF4CLIM
5. Common hosting of the tools. Responsible project: CompAir
6. Inter-comparability exercise. Responsible partner: I-CHANGE

The Action Plan for the Cluster #1 “Carbon footprint calculator” is presented in Annex1, including some details for the implementation.

During the period of the activity of the involved projects several carbon footprint calculators were developed and are public available at the following web address:

- ECF4CLIM : <https://ecf4clim.smartwatt.net/simulators-space/>
- AURORA: <https://www.aurora-h2020.eu/aurora/ourapp/#newsletter-popup>
- PSLifestyle: <https://pslifestyle-app.net/selections>

The representatives of the involved projects decided to meet twice per year by videoconference to monitor the development of each other's calculators and to review the status of the clustering activities planned.

Other than the Cluster #1 "Carbon footprint calculator", ECF4CLIM participates in the other clusters together with other projects as follows:

- (1) "Citizen engagement strategies and collaboration on pilot areas", participants: ECF4CLIM, GreenSCENT, CompAir, I-Change, Socio-Bee, AURORA, PFLifeStyle.
- (2) "Air quality", participants: Socio-Bee, CompAir, ECF4CLIM, GreenSCENT, I-Change,
- (3) "Synergies for Dissemination and links with broader initiatives", participants: AURORA, Socio-Bee, CompAir, ECF4CLIM, GreenSCENT, I-Change, PSLifestyle.

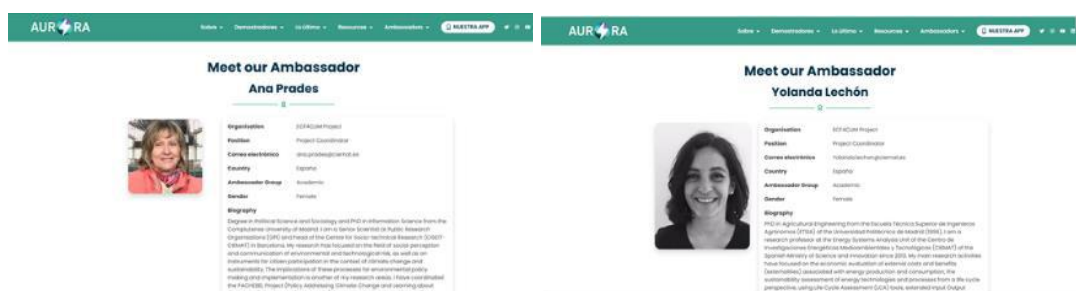
For these three clustering areas the Action Plans are presented respectively in the Annex 2, Annex 3, and Annex 4.

In September 23rd 2022, another meeting was held with the European Commission to monitor the progress made in the Action Plans.

ECF4CLIM contributed to:

- (1) Coordination of the clustering activities of Cluster #1,
- (2) Sharing the concept of CFC with the other participants in order to select the common valuable elements and to use the complementarities in the development,
- (3) Sharing the experience of the development of hybrid participatory approach targeting a large participation of the educational communities,
- (4) Communicating the methods and sensors for the monitoring of Air Quality in the demonstration sites

The ECF4CLIM coordinators are AURORA ambassadors.



ECF4CLIM representatives participated in some of the events of AURORA project, such as Aurora/CSGP Climate Change Mitigation WG - 23rd July 2025, Aurora Citizen Science & Climate Change Mitigation Working Group, 27 August 2025.

3.4 Clustering activities with Green Deal projects

The European Commission (DG RTD) set up this activity to increase synergies, coordination and collaboration among the 73 projects funded under the Horizon 2020 Green Deal Call and maximize their positive impact in the longer term.

The support office is managed by a consortium led by Ecorys and operates until November 2026, with the aim to support Green Deal projects in effective collaboration, provide networking and knowledge exchange opportunities to develop synergies, and help projects boost communication, dissemination and exploitation efforts of their results

A first informative meeting was held on 2nd March 2022, and the first Board of Coordinators meeting took place on 22nd June 2022. The second Board of Coordinators meeting organised in the context of the Green Deal Projects Support Office (GD-SO) took place on 5 June 2023 from 13:00-18:00 CEST in Brussels, Belgium.

ECF4CLIM belongs to the Knowledge & Citizens (K&C) Working Group. The Knowledge and Citizens WG includes 16 projects (RI-URBANS, CIRCULAR FOAM, ILIAD, PHOENIX, SHARED GREEN DEAL, GreenSCENT, AURORA, PSLifestyle. PAUL, FRONTSH1P, ACCTING, REAL_DEAL, ECF4CLIM, I-CHANGE, SOCIO-BEE, CompAir) covering six different Green Deal Calls:

- Behavioral, social, and cultural change for the Green Deal (LC-GD-10-2-2020)
- European capacities for citizen deliberation and participation for the Green Deal (LC-GD-10-1-2020)
- Enabling citizens to act on climate change, for sustainable development and environmental protection through education, citizen science, observation initiatives, and civic engagement (LC-GD-10-3-2020)
- European Research Infrastructures capacities and services to address European Green Deal challenges (LC-GD-9-1-2020)
- Demonstration of systemic solutions for the territorial deployment of the circular economy (LC-GD-3-2-2020)
- Transparent & Accessible Seas and Oceans: Towards a Digital Twin of the Ocean (LC-GD-9-3-2020)

On 2022 June 15 the on-line meeting of the Knowledge and Citizens Working Group discussed the possible clustering activities. The following categories of synergies were identified: (1) Technical/ impact synergies, (2) Procedural/methodological synergies.

In the first category the following actions were proposed for the clustering activities: (1) Reduce the gap between citizens' awareness and individual actions, (2) Provide citizens with information systems and tools to support decision-making in both pollution monitoring and circular economy solution adoption. ECF4CLIM has contributed (together with CompAir, GreenSCENT, I-CHANGE, PSLifestyle, SOCIO-BEE, AURORA) to the first action.

For the second category the following actions were identified: (1) Planned events/types of methods aiming at enhancing citizens engagement, (2) Policy recommendation and influence, (3) Development new methodological approaches/tools, (4) Interdisciplinary approaches. ECF4CLIM has contributed to the first actions together with I-CHANGE, AURORA, CompAir, REAL_DEAL, SHARED GREEN DEAL.

A second K&C WG meeting took place on 18th November 2022. The aim of this second workshop was to increase collaboration and coordination between the WG's constituent members in order to identify synergies that increase project impacts. This aim is to be achieved through the adoption and implementation of an Action Plan embodying common activities carried out by the projects with the support of the WG Facilitator's team and GD-SO.

In this regard, an Action Plan has already been developed. In this Action Plan, 4 focus areas (organizational and geographical coordination, policy influence, methods for engaging stakeholders and citizens and case studies) and 8 concrete actions were identified. A dedicated informal consultation with ECF4CLIM was held on the 3rd of February 2023.

In the framework of the Green Deal clustering activities, ECF4CLIM participated in the workshop "Dialogue on selected European Green Deal Policy Priorities Workshop" that was held on 12th January 2023. The main objective of the workshop was to provide information about the Commission policy priorities related to the implementation of the selected European Green Deal policies, and to outline the ways in which projects supported by the Green Deal Projects Support Office (GD-SO) can contribute to the implementation of these policies. Further aims were enabling project coordinators to have an open discussion with policy officers, and gaining a better understanding of the possible ways their project results can feed into the Commission policy processes.

In April 2023, the ECF4CLIM project participated in the EU Green Week Partner Events training, presenting the session entitled "Empowering the educational community to take action towards sustainability: the ECF4CLIM participatory roadmap." The session provided an opportunity to showcase the project's participatory approach and to engage with the broader EU Green Week community.

Also, in the framework of these activities, ECF4CLIM has participated in the EU Green Week Partner Event on June 8th 2023 entitled: "Empowering and skilling citizens to become drivers towards a climate neutral and sustainable Europe through citizen

science»³, presenting “ECF4CLIM: changing the conditions, the people and the systems. An innovative hybrid participatory approach to education”.

The ECF4CLIM project actively participated in the Knowledge & Citizens Working Group meetings held on 17 April 2023, 5 December 2023 and 13 November 2024, contributing to discussions and exchanges related to citizen engagement and knowledge-sharing activities.

In addition, in April 2025, ECF4CLIM took part in a GD-SO interview led by the Work Package 8 (WP8) Leader, during which feedback from ECF4CLIM was provided on Green Deal (GD) common activities, contributing to their assessment and improvement.

ECF4CLIM participated in the following workshops and Webinars: GD-SO Mission on Adaptation to Climate Change webinar 24th October 2023, GD-SO: Collaborative Session on Project Challenges 11 December 2023, Unlocking investment and funding opportunities for Green Deal projects 23 January 2024, GD-SO Mission on Adaptation to Climate Change webinar, 24th October 2024, GD-SO Communicating Effectively with Policymakers 5 December 2024, Green Deal: Support services to help maximize your project's impact 4 February 2025, Network of Multipliers webinar on the 30th April 2025 (easy contact with GDSO stakeholders), GDSO-Media relations essentials may 2025, Re-connecting with the community, 29 August 2025.

4 CONCLUSIONS

The clustering activities carried out within the ECF4CLIM project have proven to be a key instrument for strengthening collaboration, fostering synergies, and maximizing the impact of project results at European level. Through systematic coordination with the Joint Research Centre (JRC) and the GreenComp framework, ECF4CLIM ensured strong conceptual alignment with the European reference framework on sustainability competences, while simultaneously contributing practical insights derived from its hybrid participatory approach.

The sustained interaction with the sister project GreenSCENT enabled meaningful knowledge exchange and mutual learning throughout the project lifecycle. Regular coordination meetings, reciprocal participation in key project events, and joint reflections on competence framework development facilitated coherence between both initiatives and reinforced the scientific and methodological robustness of ECF4CLIM. The continuity of collaboration, even after the formal conclusion of GreenSCENT, further demonstrates the long-term value of these synergies.

³ https://green-week.event.europa.eu/partner-events-list/empowering-and-skilling-citizens-become-drivers-towards-climate-neutral-and-sustainable-europe-2023-06-08_en

Clustering activities with other projects funded under the Green Deal call, particularly those under topic LC-GD-10-3, resulted in concrete and structured collaboration through the establishment of thematic clusters and shared Action Plans. ECF4CLIM played a leading role in the Carbon Footprint Calculator cluster and actively contributed to other clusters focused on citizen engagement, air quality, and dissemination. These collaborative efforts enhanced complementarity among tools, methodologies, and engagement strategies, while avoiding duplication and reinforcing interoperability across projects.

Participation in the Green Deal Projects Support Office (GD-SO) and the Knowledge & Citizens Working Group further expanded ECF4CLIM's reach, embedding the project within a broader ecosystem of Green Deal initiatives. Through active involvement in working group meetings, workshops, interviews, and training activities, ECF4CLIM contributed to collective reflection on citizen engagement, methodological innovation, and policy relevance, while gaining valuable insights to strengthen its own outcomes.

Overall, the clustering activities successfully supported ECF4CLIM's strategic objectives by reinforcing alignment with European policy priorities, enhancing cross-project learning, and amplifying dissemination and exploitation potential. These activities have laid a solid foundation for sustained collaboration beyond the project's duration and for the long-term uptake of the European Competence Framework for sustainability across educational contexts.

ANNEX 1. ACTION PLAN - CARBON FOOTPRINT CALCULATOR

Scope of carbon footprint calculators clustering area is to develop CFCs. The following specificities are identified: (1) **AURORA** is developing a carbon footprint calculator focused on **energy consumption** (electricity, heat and mobility), (2) **PSLifestyle** develops a **lifestyle** carbon footprint covering consumption-based GHG emissions of housing, transport & tourism, food, other consumption, (3) **I_CHANGE** is developing a **Smartphone Application for personalized Carbon footprint calculator** with a focus on Household Energy consumption, Transport, Food consumption, Water and wastewater consumption, etc., (4) **COMPAIR** will develop a **Carbon Footprint Dashboard** designed to support specific experiments around carbon footprints, (5) **ECF4CLIM** is developing an **environmental footprint calculator** thought for the self-assessment of **students** and **educational institutions**.

Actions:

		Coordinated by	Purpose
1	Share/Compare databases The projects will share the databases used in their tools to the extent possible (open source data). When data come from proprietary databases (those coming from Ecoinvent for example), a comparison of data will be performed to identify major discrepancies.	ECF4CLIM in cooperation with PSLifestyle	Use common/comparable background data for carbon footprint calculations
	Next steps: Create and share a template to be filled by the projects		
2	Common labelling approach The projects will share the methodology employed to define these labels and a possible common approach on labeling will be studied	AURORA in cooperation with PSLifestyle.	Adopt a common approach for a simplified communication of CF results oriented to laypeople
	Next steps: Sharing of the methods for labelling by AURORA and PSLifestyle and planning of discussions among projects on the possibilities to implement similar approach in the other 3 projects		
3	External review process An open peer-review processes within our "cluster" can be performed once the various calculators are finalized	AURORA	Review of approaches, methods and underlying data used in the tools
	Next steps: Select the volunteers for the peer review among the projects' partners		
4	Joint exploitation The projects will develop a common exploitation strategy based on the following elements: (1) offer a package of applications (2) identification of the well fitted audiences (3) identify the best ways	ECF4CLIM	Maximize the impact

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	to reach the audiences, (4) define the common rules for the exploitation		
5	Common hosting of the tools The projects will host a link to their calculators in a common platform. A possible option would be https://living-in.eu/ .	CompAir	Facilitate the use of the package of applications
	Next steps: Check possible options for this common platform		
6	Intercomparability exercise The projects will perform an intercomparability exercise when all the calculators are ready	I-CHANGE	Make sure that the tools provide comparable results

- The projects will meet **twice per year** by videoconference to update on the development of each other's calculators and to make a review of the status of the 6 clustering activities planned.
- Next meeting will be organized after the summer 2022.

ANNEX 2. ACTION PLAN - CITIZEN ENGAGEMENT STRATEGIES AND COLLABORATION ON PILOT AREAS

Scope of Citizen Engagement area: exploitation of the potential of all seven projects to engage citizens in experimenting the EU Green Deal in order to: (1) emphasize the role of participatory design and citizen engagement in the definition/adoption of a policy, (2) enable projects to share practices and lesson learned (and possible data collected by the research participants), (3) start the definition of a EU user research repository.

Actions:

		Coordinated by	Purpose
1	Map the projects' activities involving citizens/users in the different projects in terms of: characteristics of actors involved, geographic scope, nature of information/feedback requested/collected Define an online form to be shared with the projects, mapping the activities involving citizens/users during the project lifetime, and the expected level of engagement	GreenSCENT	Exchange of the experiences in involving citizens/users, identify good practices
	Next actions: (1) form preparation and launch (mid of April 22), (2) collect the data (June 22), (3) online meeting (June 22)		
2	Elaborate a short template (2 pages) for the exchange of information between projects (short reports on feedback gathered) The following elements will be included: (1) geographical regions involved, (2) number of participants and their characteristics, (3) methodology, (4) key results, (5) difficulties and risks prevention measures to be incorporated in lesson learned	GreenSCENT	Enhance the knowledge exchange and strengthen the collaboration possibilities
	Next actions: Template to be circulated in September 22, Short reports – start the circulation in Fal 22		
3	Establish a basic user exchange data process Develop a minimum protocol for the exchange of user research data among projects (variables, type). Establish a EU user research repository.	tbd	Increase the capacity of projects to exchange data from engagement activities

ANNEX 3. ACTION PLAN - AIR QUALITY

Scope of Air Quality synergy area: explore how to better communicate air quality to citizens and young students in order to educate, raise awareness and promote behavioural changes, e.g. how to visualise scientific data in a way that is understandable to non-experts (for example by developing augmented reality app).

Actions:

		Coordinated by	Purpose
1	Map activities and initiatives related to air quality Create a list of relevant activities planned by each project that are related to air quality. The activities list will be updated regularly.	tbd	Understand the nature, timings and geographical distribution of activities planned in each project; better identify specific areas for synergy and opportunities for collaboration
Next steps: Create and share activity template / form; all projects to fill this in			
2	Regularly share lessons learnt Share the lessons learnt from the air quality activities and interactions with schools and citizens; oral presentation or written summary during cluster meetings scheduled at the end (or beginning) of each school semester - approx. every 3 months	tbd	Exchange knowledge on the methodology used and good practices; learn from each other and avoid repeating errors; have a larger pool of knowledge and feedback to help shape and improve future actions
Next steps: meetings March/April, September, December...			
3	Draft a pathway for synergies Through the regular interactions, identify and create a plan for collaboration (such as organize a joint event, convene a joint session or share a booth at a conference, participate in the planned activities of other projects, joint communication activities...)	tbd	
Next steps: Identify any collaboration opportunities by the end of 2022			
4	Legal aspects of air quality Investigation of the legal frameworks and identification of the common legal aspects and peculiarities to be considered	tbd	

ANNEX 4. ACTION PLAN - DISSEMINATION AND LINKS WITH BROADER INITIATIVES

Scope of the Dissemination and Links with Broader Initiatives is to develop common actions in support of the communication, dissemination and exploitation of the projects' results.

Actions:

		Coordinated by	Purpose
1	Briefing sessions for DGs and the EU Parliament Build support for the integration of our work in the EU Directives and subsequent implementation	AURORA, SOCIO-BEE, and COMPAIR	Political and policy briefing
2	Briefing sessions with MS representatives and EU representatives on UN Standing Committees multi-lateral agreements for UNEA Develop champions able to argue for the replication of the cluster findings into UNEA multi-lateral agreements	AURORA, SOCIO-BEE, and COMPAIR	Political and policy briefing
3	Headline speakers at critical UN events To illustrate the values of the cluster work in delivering UN objectives. To create champions for replication of the cluster work	AURORA, SOCIO-BEE, and COMPAIR	Political and policy briefing
4	Bi-monthly meetings to share project progress and brainstorm common issues Sharing the best practices, brainstorming on common problems, fostering cooperative working, developing a common agenda	tbd	Developing common materials
5	Brainstorm/Hackathon events to develop a suite of common tools and methods Developing low-cost tools and procedures to meet common objectives of the cluster	tbd	Developing common materials
6	Develop a common Green Deal Cluster website with EU-Citizen Science Developing a value for money solution building on the existing EU investments in EU Citizen Science avoiding proliferation of websites on similar topics. Developing strong links to the global citizen science community to support replication activities	tbd	Developing common materials

D8.9. Report on clustering activities and participation of the educational communities in the European Climate Pact

7	Developing common approach and methodology to measure citizen science impact on society Developing a standard best practices procedure to measure the societal impact of citizen science	SOCIO-BEE	Promoting long-term programmes and data systems
8	Building regional and global replication programmes with DG INTP, the GSCP, and the UNSPBF Developing and replicating model that would support uptake of the outputs as part of EU overseas aid development programmes. Identifying business opportunities supporting global replication in support of the delivery of key SDG's and Climate change targets with UNSPBF partners	tbd	Promoting long-term programmes and data systems