ECF4CLIM Project

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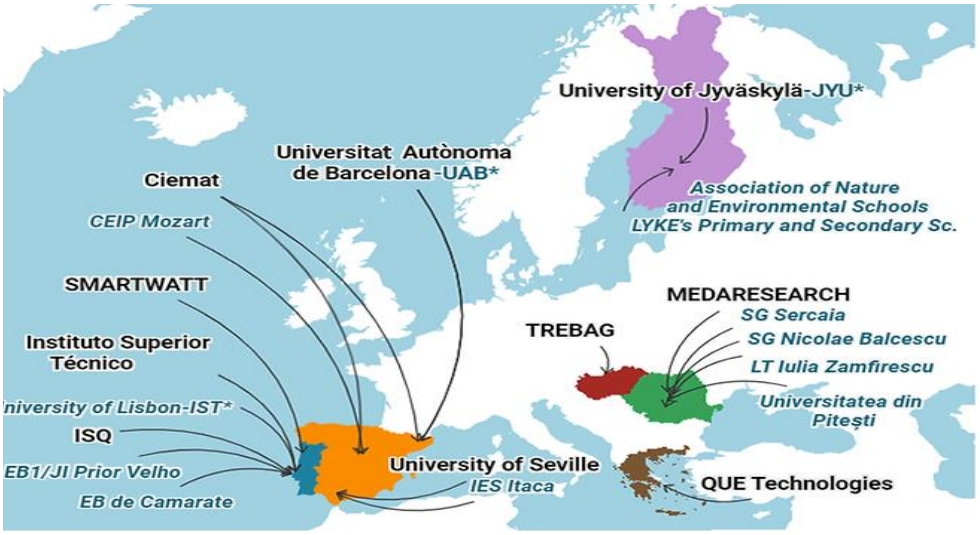
ECF4CLIM Newsletter 1



Our mission: Preparing and Testing a European Competence Framework (ECF) for sustainability

We seek to strengthen knowledge, skills, attitudes, practices and social norms conducive to sustainable development and combat against climate change by:

1. Identifying challenges & opportunities by co-designing an ECF,
2. Testing the ECF at demonstration sites (individual and collective competences),
3. Engaging the broader educational community in evaluating the ECF, and
4. Empowering the broader educational community to trigger and sustain transformational change.

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

Our team: CIEMAT (coordinator), UAB, US, IST, ISQ, JYU, Smartwatt, MedaResearch, QUE, TREBAG, and associated partners (schools and universities from Spain, Portugal, Finland, and Romania).

The project is divided into 8 **work packages:** Ethics Requirements (WP1), Management and Coordination (WP2), Development of an ECF for Climate Change and Sustainability (WP3), Testing the ECF: Baseline assessment (WP4), Testing the ECF: Interventions (WP5), Testing the ECF: Participatory evaluation (WP6), Digital Platform to Promote Active Learning and Citizen Involvement (WP7), Clustering, Outreach, and Dissemination Activities (WP8).

Coordinators Ana Prades & Yolanda Lechon, CIEMAT, Spain

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Crowdsourcing to collect views on sustainability education in schools

The general aim of the ECF4CLIM project is to find out how education can foster sustainability in society, whether in the sphere of economy and production, or in people's daily life and work. To gain a broad understanding of the current sustainability practices as well as the constraints and enablers of sustainability education, ECF4CLIM invited the education community to take part in crowdsourcing exercises designed to facilitate collaborative meaning-making for sustainability in schools and universities.

The crowdsourcing process, comprised of two types of activities, was designed by WP3 (University of Jyväskylä) and conducted in the partner countries and internationally.

First, a set of **national online and face-to-face workshops** were organised to enable teachers, students, education experts, and a diverse range of stakeholders to discuss what prevents and/or enables schools to implement sustainability education. Second, an **eDelphi online platform** was used to facilitate both national and international discussions.

A total of 29 national and international crowdsourcing workshops were carried out in Finland (14), Portugal (3), Romania (6) and Spain 6). The Method of Empathy-Based Stories (MEBS) was applied in the workshops (Wallin et al., 2019). The participants were asked to imagine, based on their real-life experiences, two fictional stories about a day at a 'nightmare school' and a 'dream school', in which sustainable education was realized in the worst and the best possible way. The imagining was guided by following questions: *What happens in the school and why does it fail or succeed in sustainability education? What do teachers and students, the principal, other school staff and parents do and why? How do the school owner and the surrounding society hinder or enable sustainability education?*

The online discussion on the eDelphi platform among more than 200 participants was designed to deepen the collective understanding emerging from the workshops. The discussion, in multiple languages, is still ongoing, and the relevant stakeholders are invited to participate. The discussion focuses on the following questions: 1) how to engage people in sustainability education? 2) how have the sustainability competences outlined in the European sustainability competence framework GreenComp been promoted through education? and 3) what should be the next concrete steps for schools to promote sustainability education in different countries.

The analysis of the results of crowdsourcing practices is in progress. According to the preliminary findings, successful education for sustainability needs to implement solutions in the areas of 1) Knowledge of sustainability issues and quality of education, 2) Collective culture including attitudes and social relations among and between teachers, students, parents, and other staff 3) Technical and organizational measures and practices related to consumption of energy, water, waste/recycling, and 4) Configuration of green spaces and transportation.

Together with a literature review of sustainability policies, frameworks, and curricula around Europe, the crowdsourcing exercise will form a basis for the development of a first draft of the operationalized European Competence Framework. It will also contribute to the hybrid participatory action research process through which the sustainability interventions at the demonstration sites will be designed.

Terhi Nokkala, Niina Mykrä, Anna Lehtonen, JYU, Finland

Analysis of the Policy Frameworks

The ECF4CLIM consortium already delivered the Analysis of Literature and Existing Policy Frameworks (**www.ecf4clim.net/deliverables**).

The main purpose of the report is to review and analyse the relevant literature and policy frameworks that can provide a basis for the elaboration of a European Competence Framework (ECF).

To achieve this, three main tasks were undertaken.

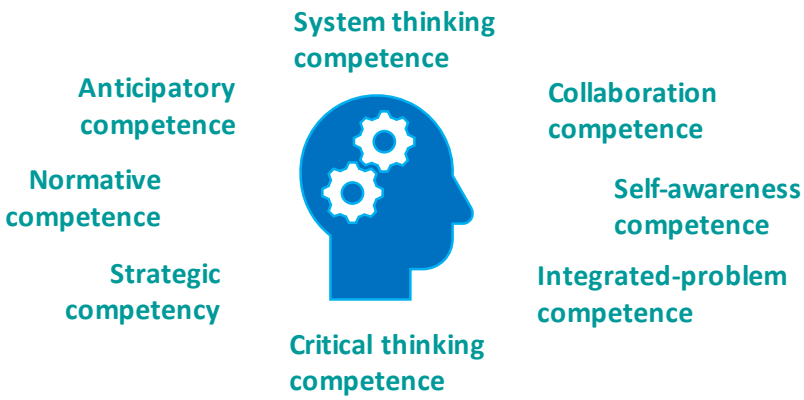
- A review of relevant scholarly literature regarding sustainability competences, competence development, and education for sustainable development.
- An overview of international and European policy frameworks for sustainability, to identify ways in which formal education has been strategically assigned to define and implement the necessary skills for sustainability and the future of societies. This also includes a short description of the main policies related to environmental protection and education in the case study countries. The roles of educational systems in the achievement of environmental and sustainability goals were identified and described, for Finland, Hungary, Portugal, Romania, Greece, and Spain.
- An analysis of national curricula in the partnership project countries. The results show the environmental concerns are present in each country and these concerns are addressed through a perspective approaching the ideas of the role of nature, and via a curriculum design that establishes targets for students' knowledge, skills, and attitudes.

A benchmark for comparison of national curricula in selected key countries (Norway, Netherlands, and the UK) was designed, with focus on four aspects that distinguish between types of curricula: the definition of sustainability and type of knowledge, a policy-driven versus school-driven approach, the subject matter, and a content-based versus outcomes-based curriculum design.

A comparison with the national curricula of partner countries with GreenComp – The European sustainability competence framework – shows that this framework proposes a broad, holistic, and balanced view of sustainability competences.

GreenComp goes beyond the national curricula by moving beyond the usual tendency to focus on lifestyle issues and rely on technological optimism. The framework presents sustainability as a cognitive challenge, combining individual development and a cognitive approach by placing "values", "critical thinking", and "problem framing" as the first competences.

Tânia Alves & Lara Ramos, ISQ, Portugal



Exploring environmental sustainability of demonstration sites

In the ECF4CLIM project the environmental performance of the pilot schools from Portugal, Spain, Romania, and Finland are assessed through technical audits. These audits are in progress, with the objective to characterize the environmental performance baseline of each school. The audits consist of three major parts: (A) pre-audit; (B) site assessment (audit); and (C) consumption and cost analysis.

Environmental and energy performance are assessed through surveys and audits focused on resource consumption, the associated costs, and CO_2 emissions. Seven environmental topic areas are considered: Transports, Green Procurement, Green Spaces, Indoor Air Quality, Energy, Water and Waste. The assessment process for each topic area is summarized as follows.

- **Transports**: Transport audits analyze the CO_2 emissions generated by travel between home and school, for each the transport mode used. Other criteria of assessment include the parking space available for low-carbon transport modes, and the public transport network near the schools.
- **Green procurement:** Green procurement audits evaluate the electric and electronic equipment labelling, the consumption of recycled paper, the training in green procurement and eco-driving, and the preference for food with biological certificate together with the existing local suppliers.
- **Green spaces:** Green space audits assess the amount of green areas, as well as the use of chemicals, resource consumption, and the CO_2 emissions and sequestration associated with the maintenance of green areas.
- **Indoor air quality:** Indoor air quality (IAQ) and comfort are evaluated by selecting for the analysis school classrooms that are representative, in terms of size, number of occupants and activities, furnishings and equipment that can release pollutants to the indoor air. The main indoor pollutants are identified and analyzed.
- **Energy:** Energy audits evaluate the energy consumption and the associated CO_2 emissions in the last five years.
- **Water:** Water audits evaluate the water consumption in the last three years.
- **Waste**: Waste audits quantify the volume of waste produced, by category: waste produced (non-recycled), waste recycled, and waste reused.

Marta Almeida, IST, Portugal

Synergies stimulation and Clustering process

Tackling the complex challenge of climate change requires the involvement of a broad spectrum of stakeholders, through a large variety of methods, tools, and actions.

Dedicated activities to enhance the cooperation between relevant stakeholders (researchers, professionals, universities, business, civil society, and other research and innovation actors) are included in various European R&D programmes. Such cooperation is designed to accelerate the transfer of knowledge, methods, tools, and practices for climate action, and to stimulate synergies between different groups and between different initiatives.

In the ECF4CLIM project, four types of activity were identified to stimulate collaboration and synergies: (1) identification of the projects, actions, and initiatives with a potential to create synergies, (2) organizing meetings with different teams to discuss progress made and the expected results, and to identify the suitable actions to stimulate the synergies, (3) jointly planning actions to support the synergies, (4) cooperation between the teams, including monitoring of the joint actions.

A procedure was designed to create an appropriate framework that would stimulate initiatives and activities capable of creating synergies and empower citizens.

Furthermore, the ECF4CLIM website, the Digital platform and social media pages (ECF4CLIM Facebook, YouTube, LinkedIn) are used to spread information on the activities of the initiatives, and thereby encourage the participation of various stakeholder groups and to strengthen the synergies with ECF4CLIM activities.

The clustering activities are designed to stimulate the collaboration and synergies. ECF4CLIM and GreenSCENT, both financed by the Green Deal programme Sub-topic 1 "Enabling citizens to act on climate change and for sustainable development through education", operate as sister projects, with jointly agreed activities.

In a series of meetings with projects financed in the **Green Deal LC-GD-10-3-2020**, four areas of synergies/ cooperation with similar projects were identified: (1) **"Carbon Footprint Calculator, Evaluation of people's environmental impacts",** coordinated by ECF4CLIM, participants: ECF4CLIM, AURORA, PFLifeStyle, I-Change, CompAir, (2) **"Citizen engagement strategies and collaboration on pilot areas"**, participants: ECF4CLIM, GreenSCENT, CompAir, I-Change, Socio-Bee, AURORA, PFLifeStyle, (3) **"Air quality"**, participants: Socio-Bee, CompAir, ECF4CLIM, GreenSCENT, IChange, (4) **"Synergies for Dissemination and links with broader initiatives"**, participants: AURORA, Socio-Bee, CompAir, ECF4CLIM, GreenSCENT, I-Change, PSLifestyle.

Two further elements having potential for clustering activities were identified: (1) sharing knowledge on ethical issues, including those related to work involving children, and (2) Green Deal ambassadors.

Synergies will also be sought with the European Climate Pact (ECP) (an EU-wide initiative inviting people, communities and organizations to participate in climate action and build a greener Europe). Three categories of activities are targeted: (1) Connect and share knowledge, (2) Learn about climate change, (3) Develop, implement, and scale up solutions.

C.C.Constantin, MedaResearch, Romania

Consortium Meetings

The official Kick-Off Meeting of the ECF4CLIM project was held on 18 October 2021, on line due to the COVID restrictions. We met with our Project Officer Gaëlle Le Bouler, the project partners, the representatives of our demonstration sites and the members of the Advisory Board. The discussions focused on how best to implement the actions foreseen in the project work plan.

National kick-off meetings were organized in the participating countries. On 2 December 2021, the local Spanish kick-off meeting was held at the premises of CIEMAT, in Madrid. The interactive face-to-face event took place in a friendly atmosphere, with 27 participants, including representatives from the demonstration sites, the Local Advisory Board, and the research team (CIEMAT, UAB, USE).

Next Meetings

General Assembly and Steering Committee meeting of the ECF4CLIM project, Umbralejo (Spain), 8-9 June 2022

The General Assembly includes representatives from the demonstration sites and the members of the Advisory Board. We are convinced the meeting in Umbralejo, an abandoned village in Spain, at a two-hour drive from Madrid, will create a very inspiring atmosphere for reflection concerning education for sustainability and action against climate change. In Umbralejo, a very successful program for sustainability education is underway: the Program for the Recovery and Educational Use of Abandoned Towns (PRUEPA).

First ECF Workshops

The **ECF workshops** will target a broad range of the potential users of the ECF. The first ECF Workshop (to produce a first outline of the ECF) is planned for **September 2022**. It will be organized by JYU and will explore the outcomes of the crowdsourcing process, and identify possible common actions amongst diverse educational communities.

TDS Seminars

Two seminars are planned for the **summer of 2022**. The participants in the development of the ECF are invited to jointly identify needs for transdisciplinary collaboration. The synergies between a range of disciplines and fields of expertise (e.g., physics, geography, ecology, biology, chemistry, mathematics, data management) will be explored through a truly holistic and inter- and transdisciplinary approach.