

Disclaimer: This document does not present a draft of the Green Deal call to be part of the Horizon 2020 work programme update, nor any future position of the European Commission. It aims to support the development of the call and its content is subject to change.

Title: Enabling citizens to act on climate change and environmental protection through education, citizen science, observation initiatives, and civic involvement

Individual level action

Specific Challenge:

The **active role of citizens and their direct involvement** is essential to **address climate change and other human actions harming the environment on land and sea**. Changes in citizen's and consumer's behaviours towards more sustainable patterns can happen through **education, awareness raising, citizen science, observation and monitoring of their environmental impacts, and civic involvement**. It is essential to directly involve citizens and communities in contributing to climate action and protecting the environment, thereby encouraging them to **change their personal behaviour**, reducing their carbon and environmental footprint and taking action at the individual and collective level. This would lead to a more sustainable lifestyle and relationship to the environment, by promoting biodiversity protection, nature-based solutions for climate resilience, sustainable energy consumption, waste management, etc.

A strong emphasis is placed on strengthening environmental awareness of **the young generation through education and other forms of youth engagement**. Pupils and students have the potential to become ambassadors for climate action and environmental protection by sharing their knowledge, experience and engagement with their families, local communities, and with public and private decision makers. As recommended in the **European Green Deal Communication**, schools, training institutions and universities are well positioned to engage with pupils, parents, and the wider community on the changes needed for a successful

transition to a green economy. **A European competence framework** is needed to help develop and assess knowledge, skills and attitudes on climate change and sustainable development.

Citizen science is a powerful tool for climate action and environmental protection through civic involvement. Citizen science should be understood broadly, covering a range of different levels of participation, from raising public knowledge of science, encouraging citizens to participate in the scientific process by observing, gathering and processing data, right up to setting scientific agenda and co-designing and implementing science-related policies. It could also involve publication of results and teaching science. Citizen science activities should be based on a robust scientific methodology ensuring the quality of the data collected and a fair representation of all stakeholders involved. Citizen science will help to raise awareness and to educate in science. It will also provide new tools and data for environmental monitoring, covering a broad European geography. Citizen science can strongly contribute to the delivery of environmental data with a significant potential for further broad use. It will have real-life impact through adaptations in citizen/consumer personal behaviours.

Initiatives should be coherent with the objectives of the European Green Deal and of the European Climate Pact to engage citizens and communities in action addressing climate change and environmental protection. The proposed activities will build on existing initiatives and practices that demonstrate innovation teaching and learning methods and how to engage the wider community in the changes needed for a successful and just transition, as for example the European Ocean Literacy platform¹, the European Atlas of the Seas², the citizen science platform³, the Horizon 2020 project TeRRIFICA⁴, EUSchoolnet⁵, Scientix⁶, resources for nature-based solutions in education⁷, as well as cultural, creative and artistic activities as a tool for empowering citizens.

¹ <https://webgate.ec.europa.eu/maritimeforum/en/node/4484>

² <https://webgate.ec.europa.eu/fpfis/wikis/display/AtlasOfSeas/>

³ <https://eu-citizen.science/>

⁴ <https://cordis.europa.eu/project/id/824489>

⁵ <http://www.eun.org/>

⁶ <http://scientix.eu/>

⁷ <https://oppla.eu/>

Scope:

Actions under this topic should address one the following two areas:

1. **Area 1: Enabling citizens to act on climate change and for sustainable development through education**

Based on the recommendations of the European Green Deal Communication, actions will foster the development and implementation of a multidisciplinary **European competence framework** within the context of **lifelong learning** for the development and assessment of **knowledge, skills and attitudes of citizens and in particular young people on climate change and sustainable development**. This framework shall be built on the best available research and rooted in the Council Recommendation on Key Competences for lifelong learning⁸, especially natural science, technology, mathematics, as well as social, entrepreneurial and citizenship competences. The participation of natural scientists, technology specialists, citizen science professionals and social sciences and humanities researchers is essential for the development of the framework. Taking into account our natural resistance to behavioural changes, as well as the gender gap observed in attitudes towards ecology and sustainable practices, contributions and practical knowledge provided by non-academic stakeholders, and international best practices, will be important.

2. **Area 2: Enabling citizens to act on climate change through better monitoring and observing of the environment and their environmental impacts**

Actions in this area will target the involvement of citizens in climate- and environment-related issues and domains, such as biodiversity, marine and freshwater pollution and sustainable food. They will focus on the active participation of citizens through **citizen science, environmental observation and civic consortia**. Projects should be conducted on a broad scale, in cooperation with businesses, civil society organisations and public authorities to ensure that these actions will lead to examples on how to engage the wider community in the effective behavioural changes needed for a successful and just transition. The key component of this area is to raise awareness, engage and empower citizens and consumers with concrete tools to monitor **their impacts on the environment**, to collect information enabling them to **change their behaviour and to reduce their personal carbon and environmental footprint as user and consumer**. Actions should include the **development and/or improvement of devices** (low-cost sensors, consumer apps, etc.) taking into account the interoperability and exchange of future and existing data collected. Attention should be paid to promoting gender-equal participation and deconstructing gender stereotypes.

⁸ https://ec.europa.eu/education/education-in-the-eu/council-recommendation-on-key-competences-for-lifelong-learning_en

Expected Impact:

Area 1:

- a multidisciplinary **European competence framework** within the context of lifelong learning for the development and assessment of the knowledge, skills and attitudes of citizens and in particular young people on climate change, sustainable development and environmental protection;
- the framework will serve as a **reference tool** for the Member States, stakeholders and NGOs to help citizens to become engaged actors in the green transformation of society;
- based on the framework, the development of **specific educational programmes, curricula, trainings, networking activities and exchange of good practices**;
- by undertaking a process of consultation and **implementation of this framework by schools, universities, municipalities**, public authorities in cooperation with the private sector, teachers, trainers, students, pupils, parents and the wider community will engage and realise the **behavioural changes** needed for a successful transition;
- the participation of pupils and students, supported by scientists and educators, in **intergenerational dialogues and exchanges** on climate action, environmental protection and behavioural changes for sustainable development;
- testing of the framework at **concrete demonstration sites** (e.g. in schools, universities and identified education communities) and in **innovative activities** (e.g. incubators for citizen, informal youth city councils...).

Type of Action: Research and innovation action

Area 2:

The project results are expected to contribute to:

- the development or strengthening of citizen science initiatives to engage citizens in the **active collection of environmental and socio-economic data through individual new or improved devices** (such as wearable sensors, a trusted user-friendly app with robust carbon footprint calculations, extreme weather community app, for the purposes of early warning, marine and freshwater litter watch, etc.);
- the provision of **personalized information** to citizens and consumers about their environmental impact;
- a **better monitoring of the environment** (land, sea, air, etc.);
- **behavioural change** processes on the part of citizens and consumers towards more sustainable patterns in reducing their carbon and environmental footprint, changing their

consumption and lifestyle choices to achieve goals of a climate-neutral, sustainable Europe through concrete and targeted advice.

Type of Action: Innovation action