

**Tool 4.4**

Designing for resilience and regeneration

CLARITY Competence Area:

Opening up to diverse climate-resilient and regenerative futures

GreenComp Competence Area:

Envisioning sustainable futures

Why use this tool?

This tool helps learners engage with the design of solutions to address climate change impacts on themselves, their communities and their ecosystems. It invites the group to go beyond the disaster risk reduction approach, which means working on reducing the risks related to extreme events associated with climate change. It fosters a more transformative approach to addressing the root causes of climate vulnerability. Hence, this tool can facilitate the design of solutions that cover social innovation, as much as technical and political solutions.

Activity 4.4.1

Investigating projects contributing to resilience and regeneration

Overview

This activity consists in researching and learning about various projects that take place locally and around the world to foster climate adaptation and resilience. Particular attention should be given to projects that go beyond “disaster risk reduction” (i.e. limiting risks associated with extreme events), and focus on “designing for resilience and regeneration” so as to limit and address multiple climate change impacts, in the long run. These projects could include community-based adaptation projects and lo-TEK projects (i.e. projects mobilising local and traditional ecological knowledge).

Curriculum linkage

Natural Science (Biology, Physics), (Human) Geography and Sustainability & Climate Education

Competences built

Adaptability, regenerative thinking, imagination and innovation

Prep Work

Familiarizing oneself with the concepts of climate adaptation, climate resilience (including transformative/transformational adaptation/resilience) and regeneration.



BASIC INFO

Age range:

6+

Duration:

From a few sessions of 45-60 minutes to a longer term project

Group size:

Flexible

Level of difficulty:

Intermediate

Materials/space required:

Access to libraries, internet and different stakeholders locally to carry out research

Location:

Flexible

Engagement of external stakeholders:

Yes, for the research taking place locally



Levels in the activity

1. Exploration
2. Project

Level 1: Exploration

1. Introduce the concepts of climate adaptation/climate resilience (including transformative/transformational adaptation/resilience) and regeneration to learners (see the teacher's guide for information and guidance). Make clear that climate adaptation and resilience is meant to complement climate mitigation measures. Pursuing adaptation does not mean that we have given up reducing carbon emissions. It merely means that as the climate crisis intensifies, we need to be equipped to anticipate, deal with and recover from the impacts of climate change so as to stay alive and well, and continue doing all we can to limit global warming and restore the health of ecosystems.
2. Explain the interconnection between climate resilience and the regeneration of both relationships between individuals in communities, and of local ecosystems. Healthy ecosystems are essential to sequester carbon, but they can also help with heat waves, storms and heavy rainfalls, including through water absorption, cooling, air filtration...
3. Highlight the potential of regeneration for both marine and terrestrial ecosystems with the right techniques and species, including through local initiatives, and initiatives building upon local and traditional ecological knowledge.
4. During the first session, invite learners to undertake research on the initiatives that are implemented locally to build the climate resilience of their city, or village. Such information can be gathered through public sources and interviews with local officials. Invite learners to look for what scientific foundations the initiatives are based on. The research can be carried out individually or in groups.
5. Invite learners to learn more about the adaptation plan for their region and country, as well as the different actions/activities it covers, including for cities/regions bearing similarity to theirs in terms of geography and demographics.



6. Invite learners to complement this research with research about climate adaptation/climate resilience initiatives, projects or programs from different parts of the world bearing similarity with theirs in terms of geography, or demographics. Invite learners to pay particular attention to projects focusing on community-based adaptation, nature-based adaptation, and projects integrating local and traditional ecological knowledge. Projects focusing on transformative or transformational approaches to fostering climate adaptation, as well as projects at the intersection of resilience and regeneration should also be highlighted.
7. During a second session, after the learners carry out their research, invite learners to present their findings to the class and discuss the initiatives or projects that most inspired them and/or that they feel could be most relevant to inspire action in their locality.
8. Invite learners to reflect on what they feel may be missing in the initiatives, projects or programs they have surveyed, or what they would have liked to see more of. Invite them to suggest ideas or experiments to respond to those needs or fill out those gaps, and to present them to local authorities, if relevant.

Level 2: Project

1. Following this first exploration, invite groups of learners to focus on a specific type of climate resilience project or initiatives, a specific sector, or a specific climate vulnerability issue so as to carry out more in-depth research, including comparative research.
2. Invite learners to develop an original approach to designing for resilience and regeneration in relation to this specific type of project, sector or climate vulnerability. Such projects would need to be tailored to the context and cannot be merely replicated. Examples of such projects include:
 - a. Planting a dense and diverse food forest, including the most climate-resilient mix of species, in the school courtyard
 - b. Creating a climate-resilience and regeneration experimentation lab or club for children and youth to discuss and experiment with new inventions
3. Invite learners to prototype their design in the school, university or in the locality. Learners should be encouraged to be bold and to fail when designing and testing out pioneering ideas and approaches.



4. Invite the local government, parents and other community members to see the prototypes and discuss local designs for climate resilience and regeneration.
5. Look for funding, including crowdfunding at local level, to better develop promising prototypes and test them more accurately.



Dos and don'ts

Do

- Come prepared to respond to technical questions on climate change adaptation, resilience and regeneration.
- Provide learners with some recommendations on how to conduct interviews locally.
- This activity should be implemented before engaging with the following activity 'Drafting a guide book or manifesto' (4.4.2.)

Don't

Don't limit the geographical scope of the learners' exploration as many promising projects and initiatives focusing on climate change adaptation and resilience are happening in Asia, Africa and Latin America.

- **Adaptations:**
- Offer learners different options for presenting the findings of their research from traditional presentations in front of the class, to multimedia projects and more creative formats.
- We invite you to adapt this activity to the specific needs of your learners, including by taking into account their neurodiversity. When adapting tools and activities for neurodivergent learners, please note it is not about treating others how *you* want to be treated, but how *they* want to be treated. Ask, listen, and stay open to different ways of learning and engaging.

References

Activity designed by One Resilient Earth based on activities implemented with various stakeholder groups and communities.



Regarding climate adaptation and resilience:

- The UNFCCC [introduction to climate adaptation and resilience](#)
- The difference between [climate adaptation and resilience](#) (LSE)

Some resources on regeneration:

- <https://regenerationinternational.org/resources/>
- <https://www.regeneration.io/resources>

Chung Tiam Fook, T. (2015). Transformational processes for community-focused adaptation and social change: a synthesis. *Climate and Development*, 9(1), 5–21. <https://doi.org/10.1080/17565529.2015.1086294>

Fedele G, Donatti CI, Harvey CA, Hannah L, Hole DG (2019) Transformative adaptation to climate change for sustainable social-ecological systems. *Environ Sci Pol* 101:116–125

Schreuder, W., Horlings, L.G. Transforming places together: transformative community strategies responding to climate change and sustainability challenges. *Clim Action* 1, 24 (2022). <https://doi.org/10.1007/s44168-022-00024-3>



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