



EnviroCitizen: Citizen Science for Environmental Citizenship

D5.10 Policy Brief 2

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Policy brief

Volunteer work, citizen science, and learning for environmental citizenship EnviroCitizen Policy Brief no. 2

Introduction

A starting point of EnviroCitizen is that, since many nature-related citizen science activities such as birding combine playing an active role in scientific inquiry with being outdoors in nature, they could have the potential to stimulate or strengthen environmental citizenship. Environmental citizenship concerns more than just recycling or turning off the lights—it instead requires new ways of thinking and acting in all aspects of life to promote environmental sustainability. It follows from this perspective that lasting changes in thinking and acting can best be reached through explicitly incorporating a more reflective level into citizen science activities. This policy brief focuses on how citizen scientists learn and how that learning can create care for the environment.

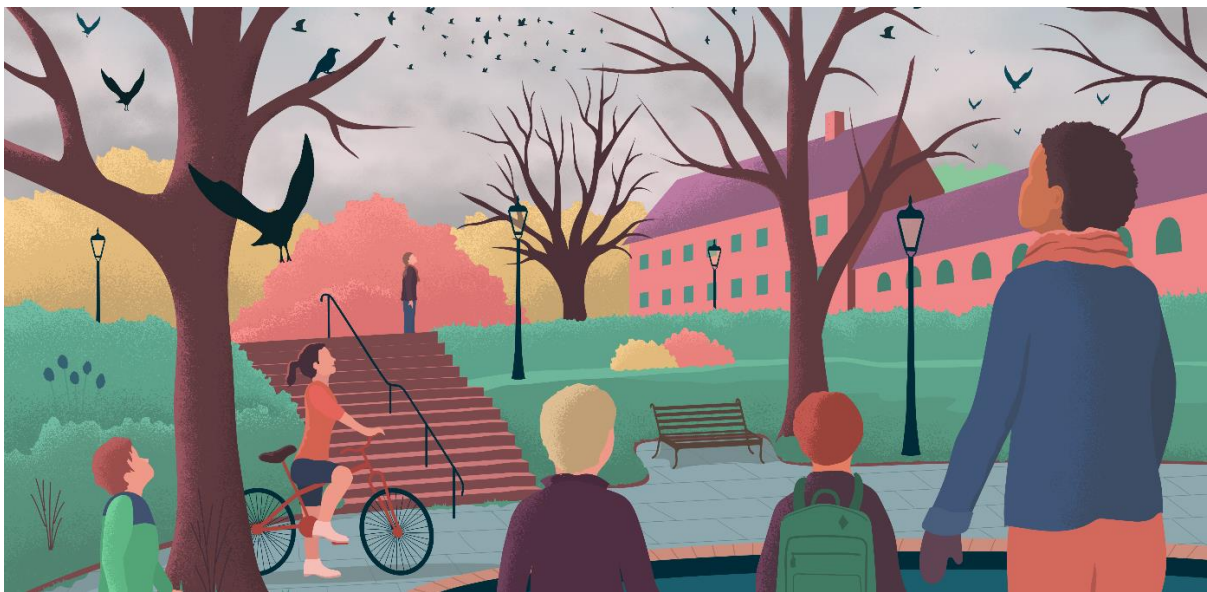


Evidence and Analysis

We investigated how environmental citizenship is enacted in the volunteer work carried out by amateur birders. We used a combination of ethnographic fieldwork and 91 interviews with amateur birders in six countries (Estonia, Netherlands, Norway, Romania, Spain, Sweden) to explore the links between participation in ornithological citizen science and Education for Environmental Citizenship (EEC). The ultimate goal of EEC is to equip citizens with a coherent corpus of competences that will enable them to act pro-environmentally, as agents of change, as well as to help them understand the urgency of current socio-ecological issues and realize the necessity to actively participate in the civic and social arena. In the interviews and fieldwork, we paid specific attention to the dimensions of knowledge and learning in environmental citizen science (CS) activities: what do participants learn, and how? What knowledge do they bring? Does their involvement change over time? How does that learning facilitate environmental care, in terms of both caring about something and caring for something?



For most birders, their connectedness with nature goes hand in hand with a more ecocentric view on the human-nature relationship. An instrumental view of nature, as a purely functional resource for humans, is clearly rejected and a more reciprocal relationship is preferred. This conviction makes their care and action for nature meaningful for them. We note that there is a bidirectional relationship between citizen science and citizenship: participation in amateur birding may cultivate environmental citizenship, but this care for nature may also be a motivation for people to get involved in birding in the first place.



Main Results

1. Role models are key to learning about and getting involved in environmental CS activities.

In our interviewees' histories, we encountered many parents and grandparents who functioned as a mentor or role model that guided them into the world of nature and birds or taught them how to care. Other people who mentored our interviewees included naturalists who appear in media and excursion leaders. There is an increasing prominence of visibility of female birders in all countries where interviews took place. Community is a critical element to awakening and cultivating interest in nature activities.

2. Scales of involvement change over time.

Interviews with birders showed that nature was very present in their childhood and their interest in birds was already awakened during their younger years. Birdwatching at an early age can lead to adult interest in environmental-related professions. However, when they entered into puberty and after that get a busy job, sometimes a family with kids, nature and birds moved to the background somewhat. Later in adulthood, sometimes after a particular event or because of meeting someone, they rediscovered their love for nature and birds and they



invest a lot of time and energy in birding, including engaging in international birding activities, and being active for nature. Our informants found that the trend to drop activities as a young adult could be countered by group activities and community-building.

3. Learning and nature protection motivate individuals to take up and stay involved in CS activities.

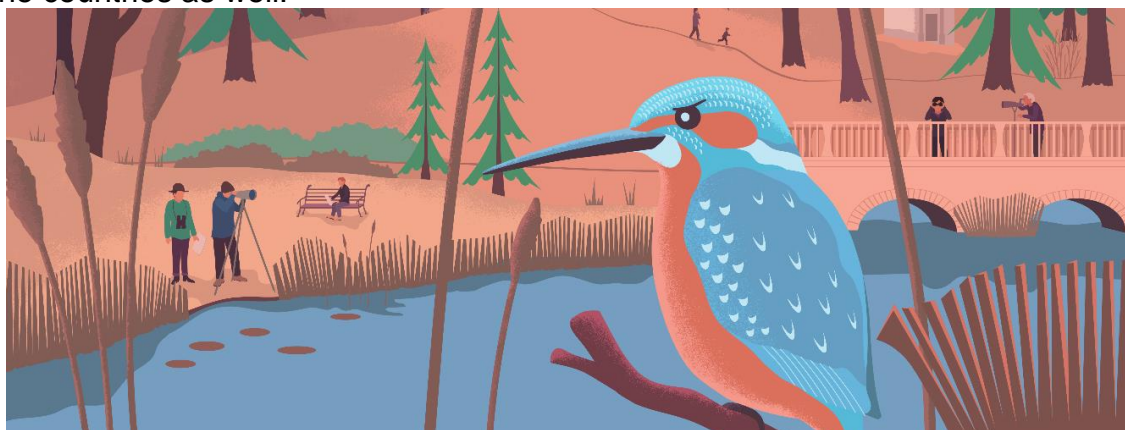
Learning about birds constituted a driving force for all interviewees. Birders crave this learning experience and this leads to wanting to share more and hence learn more with others. Simultaneously, they want to contribute to nature protection via activism and/or sharing observations. This indicates an alignment of birder's learning goals with EEC goals.

4. Organized platforms of engagement enhance the learning process.

Birders crave learning experiences, which leads them to share more and hence learn more with others. Such sharing processes are facilitated today by the use of tools such as birding apps (such as the well-known eBird), online groups, email and online forums. Digital platforms can strengthen the connection of people with their surroundings and assist in learning through identification of uncertain birds.

5. Learning is a process leads to care which grows over time.

For a lot of birders, awareness about environmental problems, environmental behaviour and care for nature are interrelated and grow over the life course. Birders talk about how they became attentive to birds. Learning becomes a motivation and a way of enhancing their connection with birds through a deeper understanding of what they find before their eyes. Being active in group learning situations, for example joining an association or participating in organized excursions, increases learning and opens up new worlds of connection with nature and space for action. The caring actions we encountered in the interviews were education, often especially focused on children; activism for the protection of birds; advocating pro-environmental behaviour, especially things people can do (or refrain from doing) individually, for instance in their own households. Feeding birds is a small-scale caring action that popped up frequently in some of the countries as well.





Policy Implications and Recommendations

On the basis of these findings, we have five recommendations for future environmental CS projects and programmes.

1. Promote involvement by children and young adults in environmental CS.

Our research shows that a broader love for and connectedness with nature, often rooted in childhood, is a powerful influence to becoming active in CS activities like birding. In turn, these activities strengthen this love for and connectedness with birds and nature, which for most leads to gradually developing a broader environmental citizenship over time. Despite some efforts to motivate and engage children and youngsters, in several of the participating countries we encountered concern about a lack of younger birders, and especially younger members of birding groups. Environmental CS programs need to intentionally target these younger stakeholder groups.

2. Design environmental CS activities to focus on learning as a way of cultivating care.

Learning within the birding context involves cultivating a sense of closeness to birds. Many birders take a 'positive route' towards environmental citizenship and action for nature via love for birds and their drive to learn about birds and nature, instead of the more 'negative and heavy route' by getting absorbed by worries, concerns and emotions concerning loss. Tools like online platforms such as eBird, Artportalen and Waarneming.nl can reinforce their learning process. Birders not only enter data themselves but also use the platforms to check observations reported by others, using that information to have further bird encounters. Because learning takes place over a longtime frame, CS activities should be designed to involve citizens multiple times during the implementation of the project.

3. Promote group formation among participating citizens through CS.

In some countries, younger birders might be very active but are seen as uninterested in membership or becoming active in birding groups, which raises concerns about the continuity of these groups. Considering the positive role that birding groups can play in stimulating and reinforcing learning, caring about, and love for birds, the future of the social world of birding is an important point of attention. Birding stimulates environmental citizenship in part by the social dimensions of being a birder. It is important to reflect on how inclusive the world of birding is to optimize the potential of birding as a pathway to environmental citizenship.

4. Place more attention on promoting pro-environmental values and behaviours in CS activities.

Environmental CS activities need to be linked to contributing to the protection of nature, not just studying nature. Projects should aim to enhance other types of knowledge such as transformative action knowledge, skills such as decision-



making skills, argumentation skills, and collaboration skills, and attitudes such as citizens' willingness for collective environmental actions and democratic decision-making.

5. Promote EEC outcomes as an integrated component of CS programs.

Because those involved in environmental CS programs often have learning and nature protection as their own goals, these predispositions can be mobilized to cultivate environmental citizenship. CS programs should therefore be designed to incorporate EEC principles, such as civic participation and critical active engagement, planning actions, networking and sharing in scales, sustaining environmental and social change, and participant evaluation and reflection in programs. CS programs need to actively encourage their participants to act in society as agents of change.





Further reading by the EnviroCitizen team

- Adamous, A., Georgiou, Y., Paraskeva-Hadjichambi, D., & Hadjichambis, A.C. 2021. [Environmental Citizen Science Initiatives as a Springboard towards the Education for Environmental Citizenship: A Systematic Literature Review of Empirical Research](#). *Sustainability* 13, 13692.
- Ganzevoort, W., & van den Born, R. 2019. [The thrill of discovery: significant nature experiences among biodiversity citizen scientists](#). *Ecopsychology*, 11(1), 22-32.
- Hadjichambis, A. C., Reis, P., Paraskeva-Hadjichambi, D., Činčera, J., Boeve-de Pauw, J., Gericke, N., & Knippels, M. C. 2020. [Conceptualizing Environmental Citizenship for 21st Century Education](#). Springer Nature.
- Jørgensen FA and D Jørgensen. 2021. [Citizen science for environmental citizenship](#). *Conservation Biology* 35(4): 1344-1347.
- Van den Born, R. et al. 2022. *Love, Learning and Care for Birds: Ornithological citizen science as a pathway to environmental citizenship*, WP2 report for EnviroCitizen

Project Identity

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