

MESSAGING GUIDE 

## Benefits of Environmental Education for Conservation



### Environmental Education can be a useful strategy to engage a variety of audiences in conservation.

As we look to demonstrate the importance of environmental education in conservation work to different audiences, we must speak to what they care about and how environmental education can support their goals. This guide suggests key talking points targeted to groups including preK-12 teachers and schools; conservation funders; federal, state, and local policymakers; community members; and natural resource managers.

To craft these strategic messages, we drew on an analysis by Stanford University researchers, who considered more than 100 peer-reviewed studies related to environmental education's impact on conservation outcomes. This guide includes a brief summary of the evidence documented in their article as well as some related communication points.

Visit our website<sup>1</sup> to learn more about this analysis and other research reviews and access additional communications tools and related research.

## Background & Summary of Message Points for Key Audiences

The messaging in each of the following sections reflects the analysis results likely to be most compelling to each of the identified audiences.



### ● PreK–12 Teachers and Schools

Environmental education sets the foundation for young people to gain the necessary knowledge, skills, and motivation to take an active role in protecting the environment and creating more resilient communities. Environmental education helps students understand and evaluate local and global issues and enables them to master critical thinking skills needed to make informed decisions for the planet. Environmental education is built on the principles of science and gives students opportunities to engage directly with scientists, conservation professionals, and decision-makers. Environmental education also helps young people learn how to take developmentally appropriate action to address environmental issues, connect with other community members, and learn how important it is to consider multiple perspectives and disciplines when addressing society's complex conservation challenges.



### ● Conservation Funders

Environmental education can help support and enhance the mission of conservation funders, but it's important to understand each funder's goals and how education can help advance its work. For example, foundations that care about protecting biodiversity might be interested in how education can help build knowledge, skills, and engagement to help protect the species or ecosystems that are their focus. Environmental education can be a cost-effective investment, as the funding can have a broad and lasting impact. It can also be a critical component in building the human capital required to sustain conservation efforts. In addition, environmental education can increase civic engagement, reach underserved audiences, contribute to individual and community health, help address social issues, encourage positive behavior changes, and more. The bottom line, when communicating with funders, is to show how your work can help them meet their goals. One of environmental education's greatest strengths is its adaptability across various contexts, audiences, and desired outcomes. It can align with a broad array of funders' missions. Overall, environmental education can lead to pro-environmental behavior and support the conservation goals of many funders. For more suggestions, please read *Environmental Education: A Brief Guide for U.S. Grantmakers.*<sup>2</sup>

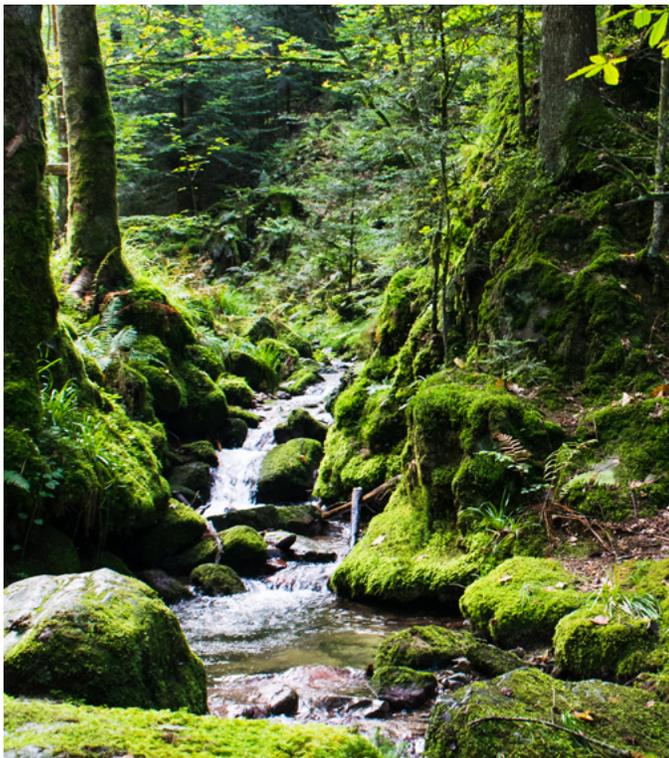


● **Federal, State, and Local Policymakers**

Many policymakers care about conservation policies that are designed to address key environmental threats—from climate change to biodiversity loss. The analysis results can help ensure that these decision-makers understand the role of environmental education in achieving pro-environmental behaviors and conservation outcomes, as well as support for conservation policies. Environmental education is a natural complement to policy and science and is an effective strategy in many conservation programs. It can also be an efficient way to help address local environmental issues, build community capacity to respond to those issues in the future, and sustain the effectiveness of conservation initiatives. Environmental education increases civic engagement and helps people understand what it means to be responsible community members. Again, research shows us that environmental education can help people understand the science upon which policies are based and help engage people in looking for and supporting solutions to specific conservation and environmental issues. As such, it is a vital component of effective policymaking.

● **Community Members**

Community members play a role in conservation through their actions as citizens, their personal decisions, management of private and public lands, and more. While opinions and concerns are likely to vary widely across this group, everyone relies on living in a healthy and sustainable community. This concept can be fundamental to demonstrating the importance of environmental education. Key principles in environmental education include working closely with various community members, such as private landowners, small businesses, and families, to identify local environmental issues and work toward solutions. Environmental education relies on science and technical expertise, but engaging and empowering people is the cornerstone of successful programs. Environmental education does not promote specific opinions; rather, it helps people learn how to think—not what to think—about issues of importance in the community. Environmental education for conservation builds on relationships and trust and is most successful when aligned with the needs and interests of the community members it serves.



### ● Natural Resource Managers

Natural resource managers recognize that people and their livelihoods rely on earth’s natural systems, and that people’s actions play a critical role in maintaining ecosystem health and productivity. Natural resource managers likely will appreciate the community-based approach at the core of many environmental education programs—the built-in participatory strategies, the purposeful engagement of local people and perspectives, and the intentional opportunities for participants to take direct action and contribute to mutually beneficial solutions. Environmental education can improve conservation by using locally appropriate and creative strategies that empower citizens, providing them with opportunities to take direct action and remain engaged in ongoing dialogue and community efforts to address local concerns. They will also appreciate that environmental education focuses on helping people think critically about the best path forward and is non-partisan.

**“To help bring about the societal changes needed to reverse [environmental challenges], conservation biologists need to be more proactive, provocative, and purposeful in increasing environmental literacy.”<sup>3</sup>**

– David Bickford, National University of Singapore

## Detailed Messages for Key Audiences

**Environmental education can positively impact conservation results.** Conservation impacts range from building program participants’ skills and motivation to adopt pro-environmental behaviors to making immediate improvements to environmental indicators, such as schools reducing greenhouse gas emissions or communities reducing waste. Environmental education programs designed to achieve conservation results similarly varied in approach, ranging from classroom lectures to hands-on community action projects, and addressed diverse topics, including habitat protection and restoration, water quality, saving energy, climate change, and more. Regardless of the program approach or topic, positive conservation impacts were measured broadly across all forms of environmental education programs.

**Environmental education can make direct improvements to the environment:** Environmental education can make direct, physical improvements to environmental indicators, such as improving water and air quality, increasing biodiversity, or restoring habitat. One group of researchers seeking to understand if and how education can contribute to measurable improvements in air quality found that most of the programs they studied involved taking direct action to improve air quality. Those programs employing more environmental education practices (such as place-based learning and building community partnerships) were more likely to report improvements in air quality.<sup>4</sup> Two education programs in Japan, one on restoring a natural wetland adjacent to rice fields and the other on restoring dragonfly ponds to promote habitat conservation, documented improved biodiversity due to the program. Researchers also noted increased populations of indicator species, such as waterfowl and butterflies.<sup>5</sup>



**Environmental education builds environmental awareness, knowledge, and skills. Research tells us these are critically important elements to pro-environmental behavior change.**

Evidence of this can be seen, for example, in one US program, where environmental education is credited with motivating farmers to change their pesticide use to reduce environmental impacts.<sup>6</sup> In another case, six months after completing a yearlong environmental education program, students in six Russian villages reported intentions to take steps to protect endangered tigers,<sup>7</sup> and students who participated in a US national park program were still engaging in efforts to reduce their energy and water consumption three months later.<sup>8</sup>

**Environmental education increases pro-environmental behaviors:** Environmental education successfully gets program participants to adopt pro-environmental behaviors in their daily lives. Whether individuals make efforts to save water and energy in their homes, buy different groceries or products to reduce waste, choose to walk or bike to work rather than drive, environmental education is a powerful strategy for identifying opportunities to adopt new environmental behaviors. A Stanford University review of studies exploring environmental education programs in K-12 settings honed in on programs specifically designed to bring about behavior change in participants. Of that subset, 83% reported they were able to do so successfully, with a number of positive impacts on the environment. Several related studies, also described in that review, documented some participants maintaining behaviors over the long term, nearly doubling the environmental behaviors they performed regularly, such as buying local produce, unplugging unused electronics, or composting food waste.<sup>10</sup>

## References

- <sup>1</sup> <https://naaee.org/our-work/programs/eeworks>
- <sup>2</sup> <https://naaee.org/eeepro/resources/environmental-education-brief-guide-us>
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- <sup>4</sup> Johnson, B., M. Duffin, and M. Murphy. 2012. "Quantifying a relationship between place-based learning and environmental quality." *Environmental Education Research* 18, 609-624.
- <sup>5</sup> Kobori H. 2009. "Current trends in conservation education in Japan." *Biological Conservation* 142, 1950-1957.
- <sup>6</sup> Wyatt, G. J., D. Herzfeld, and T. Haugen-Brown. 2015. "Teaching farmers and commercial pesticide applicators about invasive species in pesticide training workshops." *Journal of Extension* 53
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- <sup>8</sup> Stern, M. J., R. B. Powell, and N. M. Ardoin. 2008. "What difference does it make? Assessing outcomes from participation in a residential environmental education program." *Journal of Environmental Education* 39, 31-43. <https://doi.org/10.3200/JOEE.39.4.31-43>
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- <sup>10</sup> Stern, M. J., R. B. Powell, and N. M. Ardoin. 2008. "What difference does it make? Assessing outcomes from participation in a residential environmental education program." *Journal of Environmental Education* 39, 31-43. <https://doi.org/10.3200/JOEE.39.4.31-43>