

Environmental education has failed and must be revamped, new book argues

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Schools must revamp how they teach about the environment to prevent ecological collapse, conservationist Charles Saylan and UCLA life scientist Daniel T. Blumstein argue in "The Failure of Environmental Education (And How We Can Fix It)," published this week by the University of California Press.

"Americans like to think we are doing a great job educating our kids about the environment, but there has been a major disconnect between raising awareness about the environment and taking action to reduce environmental degradation," said Blumstein, a UCLA professor and chair of the department of ecology and [evolutionary biology](#). "We believe environmental destruction — pollution, global warming, biodiversity loss, ocean acidification, over-harvesting resources, to name a few — is ruining the Earth and that students should be taught to preserve the Earth."

"Environmental education has failed to keep pace with [environmental degradation](#)," said Saylan, co-founder and executive director of the Ocean Conservation Society. "We are advocating a sea change in education."

"The world will be a very different place by the end of this century," Blumstein said. "Is that a world we want for our kids and our grandkids?"

"Sooner than that," remarked Saylan. He and Blumstein strongly

emphasize "tipping points" that can rapidly degrade the environment.

"Many systems may be stable for a long time and suddenly change," Blumstein said. "Tipping points are unpredictable. You don't know when you're near one."

He cited the rapid collapse of Hosni Mubarak's government in Egypt as one example and the depletion of many fish species as another.

"You don't know where [tipping points](#) are until they tip," Saylan agreed. "They can happen faster than most people think. Many people all over the globe, for example, are running out of fresh water. Where will all these people go?"

Blumstein and Saylan recommend integrating environmental education into the overall curriculum in schools, rather than teaching it separately.

"When you're learning math, why not learn about a carbon audit or an environmental issue?" Blumstein asked. "Students can learn about projected climate-change scenarios, what acidification is and the effects of pollution. Teachers and schools can develop all kinds of creative, integrative educational experiences."

Specifics should be left to local communities, Saylan said. He and Blumstein do not seek to micromanage what schools should teach at various grade levels.

Blumstein and Saylan have both participated in Earth Day events since these events began back in 1970, and they have been disappointed to see that over the ensuing decades, the Earth's environmental problems have actually become worse.

"This generation of young people and the next generation to follow will

have to solve a lot of environmental problems," Blumstein said. "That is why K-12 education is so important. We are facing one of the largest collective action problems humanity has ever faced, and we need to give students the skills to solve them. Education has to be an important part of the solution to [environmental destruction](#); we have given the generation in school and those that follow big marching orders."

"Neighborhood recycling programs and plastic bag bans are great but unlikely to save us from serious impacts of global climate change," Saylan said. "Actions must be commensurate in magnitude to the problems they are intended to mitigate. Environmental education must nurture the social awareness and engagement necessary to convert words and ideas into measurable action."

Blumstein and Saylan recommend teaching critical thinking. Environmental education must be accountable — "we will need to know which teachers and programs work and which do not," Saylan said — it must be integrative and it must quickly permeate our schools, they argue.

Students also need to learn how science works.

"Science is self-correcting," Blumstein said. "Nothing is known with certainty except easy things."

[Environmental education](#) should not be a political issue, they say.

"Environmentalism is no longer a choice," Saylan said. "All of us who breathe need to be environmentalists now; our future and our children's future depend on it."

"We need to maintain a habitable Earth," Blumstein said. "There is only one."

Provided by University of California - Los Angeles

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