

How we can increase the effectiveness of global environment protection

May 29 2020



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Researchers from the Institute of Environmental Sciences (CML) identified six top priorities where environmental interventions can make the most difference. By doing so, they hope to help researchers and



policymakers make the most out of the limited, available resources to protect people and the planet.

Helping people and the planet

The research team, led by environmental scientist Laura Scherer, identified the <u>top priorities</u> in two areas of concern: people and the planet. People are represented by <u>food security</u>—our most basic need—and have the following top priorities: pollinator loss, <u>soil compaction</u>, and nutrient depletion. The planet is represented by biodiversity conservation, which is a measure of ecosystem quality. Its top priorities are <u>ocean acidification</u>, and land and sea use.

Grabbing low-hanging fruit

"These top priorities are promising areas to work on for different reasons," says Scherer. She names soil compaction as an example, which is the densification of soil due to pressure, for instance by animal feet or machines. Soil compaction makes it more difficult for plants to grow and animals to live in. "It was judged as less important than most other environmental issues, but not many people are working on it and it is easy to improve. Hence, it is low-hanging fruit and still keeps resources available for other environmental interventions. In contrast, while ocean acidification is difficult to solve, it is moderately important and hardly anyone is working on it. So, with a higher priority, much progress can be made in this area."

In the past couple of years, <u>climate change</u> has received more and more attention. "People increasingly understand its devastating consequences on people and the planet," says Oscar Rueda, co-author of the study. "What many of us are less aware of is that, besides climate change, we are facing many other serious environmental challenges whose effect on



people and the planet can be similarly bad. This motivated us to perform our study and provide insights into how we can protect our planet and its people in the most effective way."

Living in a post-corona world

Their results might even be more important in a post-COVID-19 world, Scherer argues. "On the one hand, governments are currently spending a lot to cope with the pandemic, while the economy is facing a recession. Thus, our resources for environmental protection might even be more limited, which increases the importance of setting priorities.

"On the other hand, government programmes to reactivate the economy can, directly and indirectly, tackle the top environmental priorities. Directly, they can promote those activities that help to mitigate the top priorities. Indirectly, the stimulus packages give governments the upper hand to negotiate conditional support to companies and other organisations, whose activities have a large impact on the top priorities."

Rueda hopes their study results will be applied by researchers and policymakers. "The mindset that we are proposing is new to environmental protection and not easy at all to implement, so there is a long way to go. But we see our study as the first step in that direction," he concludes.

More information: Laura Scherer et al. Global priorities of environmental issues to combat food insecurity and biodiversity loss, *Science of The Total Environment* (2020). DOI: 10.1016/j.scitotenv.2020.139096

Provided by Leiden University



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