

# Sustainable development goals only achievable through cross-disciplinary research

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It is not possible to achieve the sustainable development goals (SDG) if science does not contribute with cross-disciplinary knowledge and understanding of how systems are interconnected. This is emphasized by a U.N. appointed panel of international researchers with the University of Copenhagen represented in *Nature Sustainability* in connection with the SDG Global Summit in New York.

Right now, the U.N. member states are gathered in New York to discuss how to achieve the Sustainable Development Goals. In this connection, a U.N. appointed panel of international researchers has published a commentary paper in the scientific journal *Nature Sustainability*. Here, they emphasize how science and research need to play a role in achieving the global goals.

"We argue that the sciences have to contribute collectively to a greater understanding of various systems and how they interact and are interconnected. When talking about solutions within, for example, climate and sustainability, almost everyone thinks of technological solutions. But we need to understand how those technologies interact with other systems," says Professor Katherine Richardson, one of the 15 U.N. appointed scientists behind the publication and professor at the University of Copenhagen.

The researchers emphasize that solutions to individual global goals may counteract the advancement of other goals. If, for example, food production is expanded in order to achieve the global [goal](#) of zero hunger, this may simultaneously work against the global goals of preventing [climate change](#) and protecting and preserving life on land. It is such interactions between systems that researchers and universities need to research in a cross-disciplinary manner, Katherine Richardson points out.

## Increasing Disproportions

In 2015, the U.N. member states decided that the Sustainable Development Goals, which consist of 17 SDGs and 169 targets, must be met by 2030. The following year, the U.N. appointed an international research panel to evaluate the progress in reaching these goals and to identify ways to work with the goals towards 2030.

Last week, the researchers' report was published as a prelude to the U.N. SDG Global Summit in New York on 24-25 September. And one of the conclusions is that at the global level, it seems difficult to achieve many of the goals.

"Our report shows that timewise, only a handful of the 169 targets are on track. And the goals that we will probably achieve are about improving conditions for people. When we talk about climate and biodiversity, there is a growing disparity between what we need to do and what is actually being done," says Professor Katherine Richardson.

## **Need for all branches of science**

However, the same research team emphasizes in *Nature Sustainability* that there are many things that can be done to achieve the Sustainable Development Goals. If one can break down the silos and the sector thinking in the world of science, scientists will to a far greater extent be able to conduct research that can make a global difference. Centrally at the University of Copenhagen they agree.

"Many people believe that it is first and foremost research within technical and health sciences that together with research within natural and life sciences will help us to achieve the global goals. But we really need social sciences, law, theology and the humanities to help us understand how systems interact globally," says Prorector Bente Stallknecht.

"The University of Copenhagen offers a wide span of programs and research. Thus, we have a great potential in relation to conducting cross-disciplinary research, which can be especially helpful in achieving the global goals."

**More information:** Peter Messerli et al, Expansion of sustainability science needed for the SDGs, *Nature Sustainability* (2019). [DOI: 10.1038/s41893-019-0394-z](https://doi.org/10.1038/s41893-019-0394-z)

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