

Untangling the complicated relationships between people and nature for a brighter future

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An international group of scientists is making major advances in sustaining the world's environments, untangling the intricate ways in which people and nature depend on each other.



The results are published in today's *Nature Sustainability* and includes contributions from a team of scientists based at the ARC Centre of Excellence for Coral Reef Studies (Coral CoE).

With major crises such as extinctions and <u>environmental degradation</u> now upon us, the timing of the study is crucial.

"Environmental problems are messy," Dr. Michele Barnes from Coral CoE said. "They often involve multiple, interconnected resources and a lot of different people—each with their own unique relationship to nature."

The paper, led by Dr. Örjan Bodin from Stockholm University, proposes several advances to a 'network approach' that can better analyse and help solve these problems by identifying the key relationships between people and nature that underpin them.

"Research has traditionally only measured and described problems," Dr. Bodin said.

"We are advancing a method that can go beyond this, to find new solutions to environmental challenges," he said.

Prof Graeme Cumming from Coral CoE said social, economic, and ecological aspects all need consideration to govern and manage sustainable ecosystems.

"These elements often interact in complex ways and are mutually dependent," Prof Cumming said. "A rapidly changing world means these interdependencies will only increase at all scales—from local to global."

For example, introducing forest conservation policies in a wealthy country leads to an increase in supply for <u>wood products</u> from a less



<u>developed country</u>—leading to de-forestation there.

"Identifying the shortcomings of these human-nature relationships are a relatively easy task. Possible solutions aren't," Dr. Barnes said.

"This paper paves a path forward for <u>future studies</u> to better address these issues, with research design guidelines to help scholars move beyond single case studies."

More information: Improving network approaches to the study of complex social–ecological interdependencies, *Nature Sustainability* (2019). DOI: 10.1038/s41893-019-0308-0, www.nature.com/articles/s41893-019-0308-0

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