

Better conservation planning can improve human life too

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Conservation planning can be greatly improved to benefit human communities, while still protecting biodiversity, according to University of Queensland research.

Ph.D. candidate Jaramar Villarreal-Rosas, from UQ's School of Earth and Environmental Sciences, said the benefits people receive from ecosystems—known as ecosystem services—are under increasing threat globally due to the negative impacts of human activities.

"There's been a substantial decrease in the quality and quantity of freshwater from wetland ecosystems in the Americas since European settlement, according to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services," Ms Villarreal-Rosas said.

"The same data shows that, at the same time, pollination services—from insects and birds—are declining in Europe and Central Asia.

"These are critical services we sometimes don't even think about—the food we eat, the air we breathe, or the sense of relaxation after a walk in a park.

"And to date, landscape planning decisions have largely been made without fully considering the multiple benefits people obtain from nature."

The researchers analyzed 326 [scientific papers](#) that applied systematic [conservation](#) planning for ecosystem services worldwide, classifying them based on the extent to which they correctly integrated the benefits people receive from [ecosystems](#), and whether multiple values and connections to land were considered.

They revealed that only two per cent of conservation plans globally considered all ecosystem services components that determine benefit people, acknowledging different values of the land.

"This means we're largely making planning decisions that may put ecosystem services at risk, and in turn, people's livelihoods and lifestyles

may be greatly affected," Ms Villarreal-Rosas said.

"Conservation plans are falling short of maximizing benefits for both people and nature.

"There is an urgent need to develop efficient and effective planning strategies to protect and restore ecosystem services for multiple stakeholders."

Senior author Professor Jonathan Rhodes said the research team did just that—outlining a formal process that governments and [policy makers](#) can use when putting together their conservation plans.

"Solutions must explicitly include benefits to different people in space, time and socioeconomic status," Professor Rhodes said.

"People have different values and connections to land and these should be acknowledged to ensure planning decisions have positive outcomes for multiple people.

"Through the principles we've outlined in this study, we're hoping to not only improve [ecosystem services](#) globally, but to increase efficiency, transparency and equity in decision making processes.

"We see [conservation planning](#) shifting towards holistic approaches, where both the diversity of people and nature is valued, respected, and protected.

"Making these changes is essential to achieve international policy agendas such as the United Nations Sustainable Development Goals."

More information: *Trends in Ecology & Evolution* [DOI: 10.1016/j.tree.2020.08.016](https://doi.org/10.1016/j.tree.2020.08.016)

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