

# The cultural significance of carbon-storing peatlands to rural communities

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Travelling to a peatland area with the Urarina. Credit: Christopher Schulz

A group of UK and Peruvian researchers have carried out the first detailed study of how rural communities interact with peatlands in the Peruvian Amazon, a landscape that is one of the world's largest stores of carbon.

Tropical peatlands, found in Southeast Asia, Africa, Central and South America, play an important, and, until recently, underappreciated role

for the global climate system, due to their capacity to process and store large amounts of carbon. Across the world, peat covers just three per cent of the land's surface, but stores one third of the Earth's soil carbon.

The peatlands are sparsely populated but have been inhabited for centuries by indigenous and Spanish-descended populations. Even now, most communities are only accessible by boat.

Now, a group of researchers led by a University of Cambridge geographer have carried out the first detailed survey of how local communities view and interact with these important landscapes. Their results are reported in the journal *Biological Conservation*.

Working with colleagues from Peru, the UK researchers spent time with two rural Amazonian communities: a small indigenous community from the Urarina nation and a larger mestizo community of mixed cultural heritage. While other researchers have been engaging with these communities for decades, the study was the first to engage with their views on the uses, cultural significance, management and conservation of peatlands in the Peruvian Amazon.

"These communities are very remote, and very little is known about their relationship with the peatlands," said Christopher Schulz from Cambridge's Department of Geography, the paper's first author. "People living in remote and [rural communities](#) are shaping ecosystem management in their surroundings, but their perspectives are rarely heard in wider debates."

Members of both communities are primarily subsistence farmers, although the mestizo community does have some small shops and conducts some trade outside their community. Both communities, along with others based in the remote, largely-unknown peatlands, are mostly ignored by central government.

The peatlands are home to various guardian spirits, such as the Baainu known among the Urarina people, who is said to trick people into losing their way. The area is also home to various 'dead lakes' which are culturally taboo among the mestizo community, who believe that guardian spirits can cause thunderstorms if the lakes are approached. The mestizo community also fear that approaching the dead lakes could lead to getting attacked by anacondas or caimans, or getting sucked into the soft ground.

Away from the lakes, the landscape is dominated by [palm trees](#), which grow well despite the wet, poor peatland soils, and are an important food source for animals and for the Urarina and mestizo communities. The [palm](#) fruit and hearts are harvested by both communities for personal consumption and to sell to travelling traders. Both communities also make use of the wood and timber, although it is of lower quality than from trees from non-peatland areas. In the Urarina community, the palm fronds are also used as roofing, although these are increasingly being replaced by corrugated metal roofs.

In addition to their practical applications, palms also have a cultural and spiritual function. In the Urarina community, fibres from the aguaje palm are used for textile production. The Urarina creation myth contains an element in which a wise woman is identified by her ability to weave aguaje fibres into cloth.

Given the importance of the palm trees to both communities, it has led to issues of conservation. To harvest the aguaje fruits, the trees are currently felled. "Both communities recognise that they have an effect on palm tree populations, but they don't have any specific conservation strategies as such," said Schulz. "In the past, different groups have introduced equipment for climbing the palms instead of felling them, so that's a simple conservation initiative that could be supported."

"The knowledge accumulated by the Urarina about these permanently wet ecosystems is the best guarantee for their conservation," said co-author Manuel Martín Brañas from the Peruvian Amazon Research Institute (IIAP).

"Before the scientific community had discovered the importance of these ecosystems for the climatic balance of the planet, the Urarina were already using them in an efficient and sustainable way, they classified them, gave them names, and they had established social controls for not damaging them," said co-author Cecilia Núñez Pérez, also from IIAP.

Further research will investigate the potential role that conservation NGOs and other relevant stakeholders or institutions could play in the safeguarding of peatland areas, and ecological surveys will be conducted to better understand the ecological composition of the [peatland](#) vegetation.

**More information:** Christopher Schulz et al. Uses, cultural significance, and management of peatlands in the Peruvian Amazon: Implications for conservation, *Biological Conservation* (2019). [DOI: 10.1016/j.biocon.2019.04.005](https://doi.org/10.1016/j.biocon.2019.04.005)

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