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We've been asking the wrong questions about conservation

Stop worrying about how species will respond to climate change – focus on how our adaptations are going to affect them

James Watson

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Heavy flood waters sweep through Beichuan in southwest China's Sichuan province. Extreme weather events are now occurring more frequently because of climate change. Photograph: AFP/Getty Images

In looking at how best to protect wildlife from the growing climate change crisis, conservation scientists usually ignore the single most significant impact on fauna and flora: the changes warming drives in the behaviour of its dominant species – humans – and resultant effects on the living world and natural processes. Those effects are already driving many of the climate-related ecological shifts we are witnessing across the globe.

For example, the opening up of the Arctic for oil and gas, mining and transport routes as sea-ice retreats directly impacts polar biodiversity. Expansion of agricultural activities due to changing rainfall in the mountains of Africa's Albertine Rift and the valleys of the Congo Basin now threatens gorilla habitat there.

Elsewhere, the construction of ineffective seawalls in Papua New Guinea to slow down the impact of sea-level rise has led to the wholesale destruction of some of the most biodiverse and protein-productive coral reefs in the world. Increasing temperatures across the high-altitude Tibetan plateau likewise contribute to a shift in the formerly stable balance between indigenous herders and wildlife, both of which graze the delicate grasslands.

The list is endless but is it not all negative. For example, in the [Maya Biosphere Reserve in Guatemala](#), efforts by local communities to control a growing number of wildfire incidents, associated with a drying climate, are having a positive impact on vulnerable populations of threatened species like jaguar.

Nevertheless, it would appear that in their work on climate change, conservation scientists have forgotten a basic tenet of our field: that conservation is fundamentally about people.

A survey of the literature shows that in 2013, more than 6,500 climate-change-related papers have been published in peer-reviewed conservation journals. The vast majority of these examine how and where future temperature and rainfall changes will make species more vulnerable.

While direct threats to species are often less challenging to identify, quantify and predict, indirect threats can often be far more significant and lasting. Nowhere is this more true than with climate change. For example, while hard to perceive on the ground, the risk that a national park will likely become the best place to grow food can be the most relevant threat to species found there.

The misdirection of conservation science when it comes to climate change is not due to a lack of data or a lack of time to undertake relevant research. It is more basic than that. We've been asking the wrong questions.

Understanding the ecology of species and their likely responses to climate change is helpful, but understanding how humans are going to be affected by climate and what this impact will be on those species is far more important.

As a conservationist who has spent his career looking at climate change impacts, I have largely stopped worrying about working out how species are going to respond and begun focusing on how human adaptations will affect those species. It is clear to me that this is what our immediate priority should be.

Failure to predict likely human adaptations to climate change commits us to a future of reactive, emergency responses likely to be wholly inadequate to the demands of the coming century. With greater attention to this subject, we can target conservation resources preemptively to meet more effectively and efficiently what many of us believe to be the greatest global challenge of our time.

Dr James Watson directs the Global Climate Change program for the Wildlife Conservation Society and is the chair of the International Union for Nature Conservation (IUCN) climate change specialist group. He is an adjunct professor at the University of Queensland and has recently become president-elect of the Society for Conservation Biology.

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