

Text of 'The Destruction of Biodiversity'

Neville Ash: "The situation for biodiversity loss is getting worse and worse, we're seeing the accelerating loss of biodiversity, and that may well lead to some devastating collapses in certain ecosystem functions."

Robert Scholes: "There's so many different things happening simultaneously: there's climate change, there's fragmentation, there's the massive continuing increase of the human population and its demand on agricultural land both for food and for fuel purposes, and all of this, in a sense, is the perfect storm, it's all coming together. Around the world, approximately a quarter of the world's surface has been completely transformed, in other words has either gone into mono-cultural agriculture and forestry, or else into urban areas, so a full quarter of the earth's surface has been transformed in a way which is very hostile to biodiversity."

Stephen Schneider: "Reefs are already in trouble from the release of toxic chemicals and fertilizer runoff, from people who fish inappropriately with things like dynamite and poisons."

Miguel Araujo: "Corals are bleaching and with an extra warming of two degrees, they might go extinct. Polar regions, especially in the Arctic, is melting at a rate that is faster than any time in recorded history. Species in the mountains are moving up, species in very arid environments are suffering."

Stephen Schneider: "We have to stop dumping all our wastes in the atmosphere because if we keep changing the climate, then any reserve you set up is only temporary before it no longer houses the species you're trying to protect."

Paul Leadley: "The tropical forests are a good example. There are some models that predict that much of the Amazonian forest could disappear due to severe drought in the future due to climate change. And that could also have big impacts on rainfall, so actually by cutting down forests or losing forests due to climate change that actually alters rainfall patterns not only in Brazil, but can also modify rainfall patterns in parts of the United States."

Terry Root: "It's gonna be a very, very dramatic change, and we could even go up to as many as four degrees Celsius or even six degrees Celsius increase, and, at that rate, species, all species including us, will have never have experienced a temperature that warm to have to live in."

Robert Scholes: "Humans are consuming about half of all the net primary production on the world, either directly or indirectly through the other species. And that's a stunning thought that one single species is appropriating to itself one half of the production of the world. When you get up to that level of consumption, you're getting quite close to a tipping point. I think we've seen quite a lot of evidence of that around the world, of progressive large-scale failures of ecosystems. Approximately three quarters of the world's fisheries are either at their limit or have already collapsed."

Paul Leadley: "There are some good examples, like cod fishing off the East coast of North America, where those fisheries declined, they stopped fishing them and they still haven't come back. So we know we can push some systems beyond a threshold from which they can recover."

Neville Ash: “Perhaps one of the biggest changes we’ve seen is the transition in certain areas from really large fish-dominated systems to jellyfish-dominated systems.”

Paul Leadley: “So if you get down to ecosystems that have a very small number of species, there’s very good evidence that those ecosystems function poorly compared to those systems that are relatively rich in species.”

Robert Scholes: “Biodiversity when it starts to unravel unravels at an accelerating rate because of all the species and interactions: you’re basically pulling elements out of this house of cards, which ecosystems consist of, and finally they start collapsing under their own.”

Stephen Schneider: “So the problem that we have is that you can cross some thresholds, and then start moving toward a completely new, unfamiliar state, and you might not even know it for 50 years, but once you’ve crossed it, you can’t say: ‘Never mind!’ What we do in the next decade or two commits the long-term future to a radically different status of sustainability that we are leaving to our children and grandchildren and the legacy for the rest of humanity and nature.”