

Humanity and earth's ecosystems face an environmental emergency. But that phrase doesn't capture the scope of what we face.

Let's imagine we are circling our planet by satellite—and then can zoom down to the earth's surface to see the situation on the ground.

EMERGENCY!

The Ecosystems of Our Planet— And The Life They Support (Including Us!)— Are In Grave Danger



Orangutan in Kalimantan, Indonesia

The island nations of Indonesia and Malaysia contain amazing tropical rainforests. But there are huge swaths of land where the forests have been wiped out—with only some stumps remaining. In other forests, there are vast miles of palm tree plantations where forests once were.

In the forested region of Borneo, the world is alive with amazing plants and animals—beautiful orchids and other flowering plants, birds of many kinds. There are apes, tigers, amphibians, reptiles and even elephants. But all this rich life is rapidly being exterminated as the forests are being destroyed. Three-quarters of Indonesia's once immense forests are already gone. If things are not stopped quickly, this vast rich ecosystem will be no more—all these animals and plants gone—with consequences for all of us.



Former rainforest area in Borneo, Indonesia

Background: Burnt rainforest, Indonesia

Many of Earth's ecosystems—its complex webs of life—are being undermined, compromised and even destroyed. By ecosystem we mean the way in which all the living organisms in any area—the plants, animals, and micro-organisms like bacteria—interact with one another, and with the topographical area (the features of the land—rivers, mountains, desert, etc.)—in a complex web of life. There is a delicate relation between these organisms—they are all interdependent.

Species in ecosystems have been compared to rivets in an airplane wing. Take out one and it's not necessarily much of a problem (unless it's some type of central or controlling bolt), but

remove a few more and the wing weakens and goes out of whack. A few more, and the entire structure collapses.

Some very important ecosystems—including rainforests and coral reefs that contain the richest life on earth, but also others—are being outright devastated and in some cases, already collapsing or being eliminated altogether. Others, such as the Arctic, are being severely affected. Ecosystems blend into, interact with and can tremendously impact each other, affecting the entire global ecosystem. Humans depend on functioning living ecosystems for our own survival.

We have to confront this reality. Taking out individual species and groups of species can unravel ecosystems, and ecosystem collapses can cascade like dominoes. Now many factors, with climate change being the leading edge, are coming together to confront us with the threat of not only massive extinction of species, but collapse of some ecosystems and the threat of a cascading impact on the earth's global ecosystem and the transformation to a different kind of planet that potentially could even threaten human existence. We can't predict all of the pathways and outcomes, but this is the trajectory we are already on and it must be stopped.



Survivors of Hurricane Katrina, New Orleans, August 2005

New Orleans, the 9th Ward neighborhood. Most of the people who live here are either poor, Black, or both. Five years after being destroyed by the massive Hurricane Katrina, the houses here are mostly in ruins. The neighborhood has been abandoned by a government and an economic system that does not provide for people's needs. Hurricane Katrina meant people dying, abandoned and trapped in their homes. Police and soldiers came at people with guns, when they needed help. Katrina was a monster—fueled by warmer waters in the Gulf of Mexico. And Katrina is a sign of things to come—the type of more powerful hurricanes and storms that are likely already occurring and will become more common as warming of the planet proceeds.

This is the North Pole. From the air, you can see amazing ice sheets, which seem to stretch endlessly. But compared to 30 years ago, during the late summer they are smaller by about the size of California and Texas combined. They are melting away as the planet warms. The sea ice also melts earlier now, making it harder for polar bears that hunt from the ice to find food at critical times. Bears are powerful swimmers, but now some are drowning, because they have to swim greater distances between floating ice to hunt. And it's not just the bears—the entire Arctic ecosystem is threatened by global warming. What's more, the melt of the Arctic will cause dangerous feedbacks, warming the planet even more.



The Arctic

Photo: U.S. Coast Guard/Patrick Kelley

Photo: Courtesy Greenpeace

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