

Study finds most wars occur in Earth's richest biological regions

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A woman carries palm kernels in Liberia's Jalays town. In many biodiversity hotspots, local people rely on available natural resources for income, food and other survival needs. Copyright: CI/photo by Michael Matarasso

In a startling result, a new study published by the scientific journal *Conservation Biology* found that more than 80 percent of the world's major armed conflicts from 1950-2000 occurred in regions identified as the most biologically diverse and threatened places on Earth.

Titled "Warfare in Biodiversity Hotspots," the study by leading international conservation scientists compared major conflict zones with the Earth's 34 biodiversity hotspots identified by Conservation International (CI). The hotspots (www.biodiversityhotspots.org) are considered top conservation priorities because they contain the entire populations of more than half of all plant species and at least 42 percent



of all vertebrates, and are highly threatened.

"This astounding conclusion - that the richest storehouses of life on Earth are also the regions of the most human conflict - tells us that these areas are essential for both biodiversity conservation and human wellbeing," said Russell A. Mittermeier, president of Conservation International (CI) and an author of the study. "Millions of the world's poorest people live in hotspots and depend on healthy ecosystems for their survival, so there is a moral obligation - as well as political and social responsibility - to protect these places and all the resources and services they provide."

The study found that more than 90 percent of major armed conflicts defined as those resulting in more than 1,000 deaths - occurred in countries that contain one of the 34 biodiversity hotspots, while 81 percent took place within specific hotspots. A total of 23 hotspots experienced warfare over the half-century studied.

Examples of the nature-conflict connection include the Vietnam War, when poisonous Agent Orange destroyed forest cover and coastal mangroves, and timber harvesting that funded war chests in Liberia, Cambodia and Democratic Republic of Congo (DRC). In those and countless other cases, the collateral damage of war harmed both the biological wealth of the region and the ability of people to live off of it.

In addition, war refugees must hunt, gather firewood or build encampments to survive, increasing the pressure on local resources. More weapons means increased hunting for bush meat and widespread poaching that can decimate wildlife populations - such as 95 percent of the hippopotamus slaughtered in DRC's Virunga National Park.

"The consequences extend far beyond the actual fighting," said lead author Thor Hanson of the University of Idaho. "War preparations and



lingering post-conflict activities also have important implications for biodiversity hotspots and the people who live there."

In total, the hotspots are home to a majority of the world's 1.2 billion poorest people who rely on the resources and services provided by natural ecosystems for their daily survival. Environmental concerns tend to recede or collapse in times of social disruption, and conservation activities often get suspended during active conflicts. At the same time, war provides occasional conservation opportunities, such as the creation of "Peace Parks" along contested borders.

"The fact that so many conflicts have occurred in areas of high biodiversity loss and natural resource degradation warrants much further investigation as to the underlying causes, and strongly highlights the importance of these areas for global security," Mittermeier said.

The study concluded that international conservation groups - and indeed the broader international community - must develop and maintain programs in war-torn regions if they are to be effective in conserving global biodiversity and keeping ecosystems healthy. It also called for integrating conservation strategies and principles into military, reconstruction and humanitarian programs in the world's conflict zones.

"We encourage support for local conservationists and protected area staff during conflict periods, but we in no way suggest intentionally putting people in harm's way," the study said. "Local staff often remains in conflict areas precisely because those areas are their homes, making continued support both an ethical imperative and a good conservation strategy."

Source: Conservation International



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