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The five water towers and the Mau Forest Complex, Kenya 1973-2008

Since the 1980s, many areas of the Mau Forest Complex in Kenya have been deforested or degraded, in spite of its national importance.

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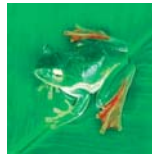
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Over 350 new species are discovered in the Eastern Himalayas

Each year, new species are discovered in the Eastern Himalayas, but development and global warming already threaten their survival.

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The livestock sector causes more greenhouse gases worldwide than the entire transportation sector (UN report, 2006).



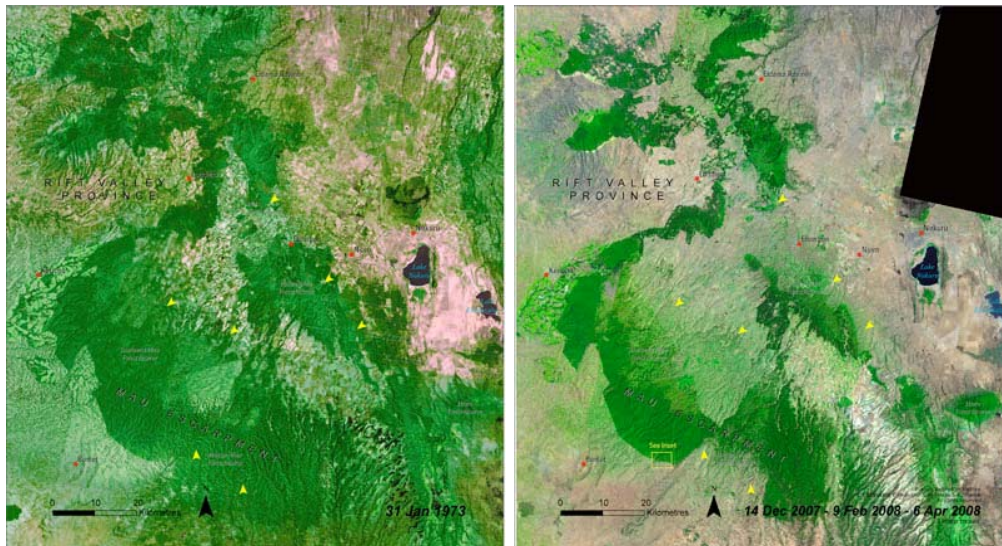
Forest fires in Borneo, Indonesia

Fires burn throughout Borneo sending thick plumes of smoke north-northeast offshore and threatening to intensify a "brown haze" across southern Asia.

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Environmental **Hotspot** Alert

The five water towers and the Mau Forest Complex, Kenya 1973-2008



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In spite of its national importance to Kenya, many areas of the Mau Forest Complex have been deforested or degraded, with much of the damage occurring since the 1980s. Degazettement of forest reserves and continuous widespread encroachment have led to the destruction of over 100 000 ha of forest since 2000, representing roughly one-quarter of the Mau Complex's area. This series of satellite images documents 35 years of incremental destruction of forest area, punctuated by dramatic excisions.

The Mau Forest Complex contains the catchment areas for many of Kenya's most important rivers. The loss of forest can affect the quality and volume of water in these important rivers. Extreme land-cover changes such as these can have serious consequences both within the forest and downstream in the form of water shortages, health risks, desertification, habitat destruction, sedimentation, erosion, and even alteration of the micro-climate. This rate of forest loss is unsustainable and threatens the security and future development of Kenya.

Source: <http://na.unep.net/atlas/webatlas.php?id=393>

[back to top](#)

Environmental Science Alert

Over 350 new species are discovered in the Eastern Himalayas



One of the world's richest areas of biodiversity lies in the Eastern Himalayas, a region that spans Bhutan, Northeastern India, Myanmar's far north, Nepal, and the southern parts of Tibet. This is where the lowland Indo-Malayan biogeographical Realm meets the elevated Palearctic Realm. It includes four Global 200 ecoregions of international biological significance. The landscapes are rugged and generally inaccessible and every year, new species are discovered. Between 1998 and 2008, at least 353 species new to science were found in the Eastern Himalayas, including 242 plants, 16 amphibians, 16 reptiles, 14 fish, 2 birds, 2 mammals, and at least 61 invertebrates. Of these are the world's smallest deer, a flying frog, and a new monkey species. Population growth and development pressures, however, are threatening the region's biodiversity. Unsustainable and illegal logging, farming, overgrazing, poaching, mining, pollution,

fuel-wood collection, hydropower development, and poorly planned settlements are destroying the forests. Only a quarter of the region's original habitats are still intact and 163 species are globally threatened. In addition, the region is particularly vulnerable to the impacts of global climate change. Strategic action is needed to conserve shared ecosystems and secure the livelihoods of the region's inhabitants. A unified sustainability plan should include local stewardship of forests, grasslands, and wetlands; water management at the river-basin scale; and tourism and energy initiatives that account for environmental impacts.

Source: WWF. The Eastern Himalayas: Where Worlds Collide. New Species Discoveries, Living Himalayas Initiative, World Wildlife Fund, Available at http://assets.wwf.org.uk/downloads/new_species_report.pdf.

[back to top](#)

Near Real-Time Environmental Event Alert

Forest fires in Borneo, Indonesia

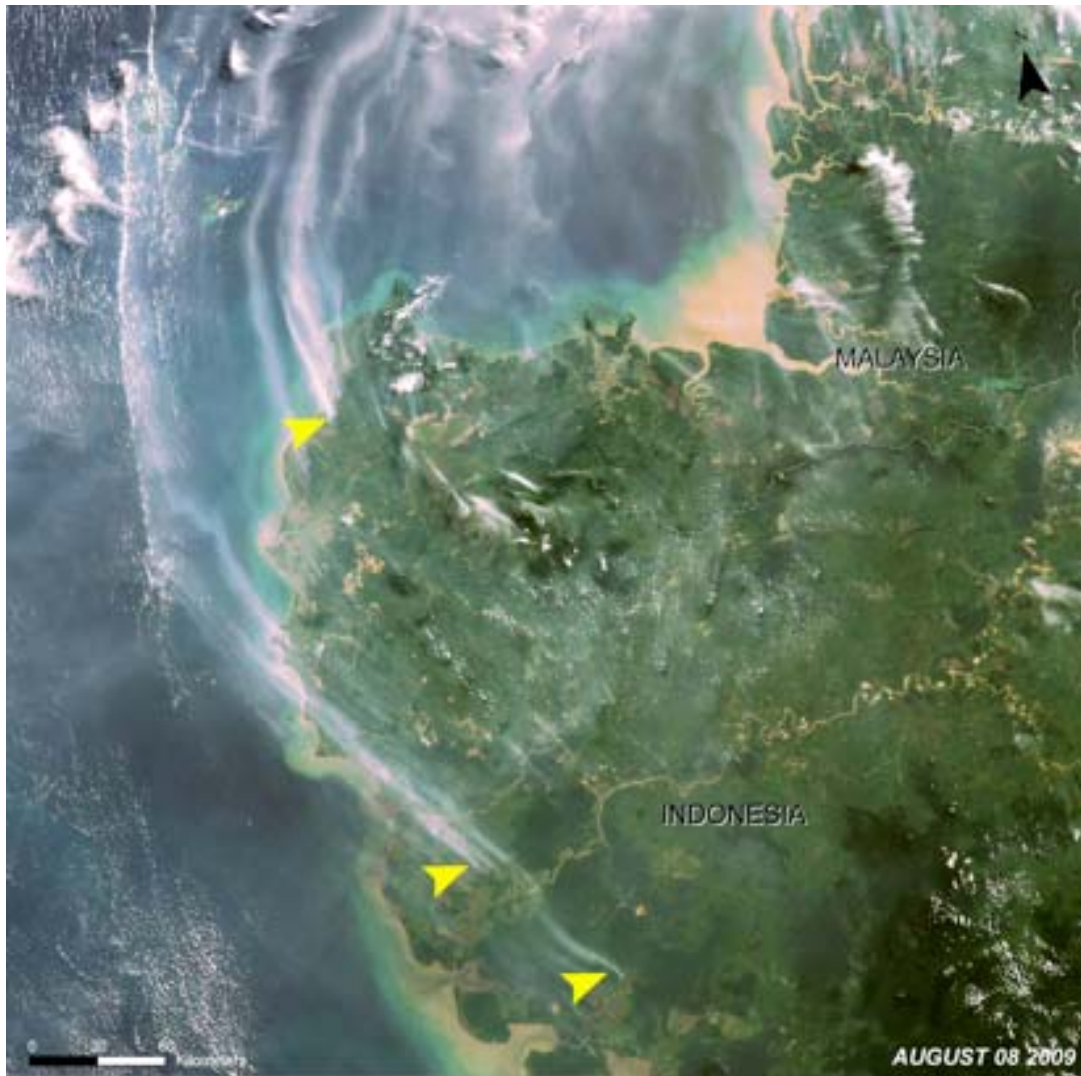


Figure 1: Forest fires (yellow arrows) raging in Borneo, Indonesia in this image, taken on the 8th of August 2009, send thick plumes of smoke arching north-northeast offshore. These fires threaten to intensify a "brown haze" across southern Asia.

Lowland tropical forests in Indonesia are underlain by a swampy layer of peat that can be up to 20 meters (66 feet) thick. Persistent environmental change—in particular, drainage and forest clearing—threatens their stability, and makes them susceptible to fire. When peat swamp forests catch fire, the peat burns as well as the trees. These fires can spread underground, and persist for long periods, destroying natural habitats and releasing substantial volumes of greenhouse gases.

The use of fire to manage and create agricultural land is an annual event that results in widespread burning in lowland forests on Borneo. In August 2009, raging fires broke out in the peat-swamp forests of Central Kalimantan, Borneo, Indonesia, threatening the largest population of orangutans in the world. The fires were started by people but spread uncontrollably due to the extreme drought that Borneo is currently experiencing as a result of an El Niño weather pattern. The reduced rainfall and stronger southeasterly winds that El Niño also creates provide favorable conditions for larger scale smoke haze pollution.

Smoke from the fires blew over major towns on Borneo Island, causing air quality to plunge to its worst level this year in parts of Malaysia's eastern Sarawak state on Borneo. The UN has identified this "brown haze", a near-permanent

cloud across southern Asia, as one of the world's worst environmental hazards. The haze is caused by the smoke from forest fires and agricultural burning, as well as industrial emissions and inefficient wood and dung burning stoves. It can reduce the solar energy reaching the Earth's surface by up to 15 per cent, reports the New Scientist, altering the Asian monsoon, reducing harvests and killing as many as a million people a year from respiratory diseases.

Sources: UN-REDD. 2009. The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. Blazing Indonesian forest fires fuel global climate change <http://www.un-redd.org/Events/UNREDDVideoInterviews/tabid/613/language/en-US/Default.aspx> (Accessed on 3rd November 2009).

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