

# Biodiversity Monthly Newsletter

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Biodiversity Conservation, Sustainable Utilization, Access and Benefit Sharing



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## Kenya, Ethiopia Vow to Save Endangered Grevy Zebra

**1 MAY 2012**— Conservation experts from Kenya and Ethiopia have drawn a road map for ensuring the survival of an endangered type of zebra.

The experts from areas inhabited by endangered Grevy's zebra have developed a national action plan to guide efforts to ensure the survival of the Grevy's zebra whose five-year strategy expired last year.

The meeting convened by Kenya Wildlife Service (KWS) with support from stakeholders was held at the Sportsman's Arms Hotel in Nanyuki.

Participants were drawn from government, NGOs, local community, private land owners, people with interest in Grevy's zebra conservation and officials from the Ethiopia Wildlife Conservation Authority.

The Grevy's zebra population has been declining from an estimated 15,000 in the late 1970s to current 2,400.

This has been attributed to poaching, diseases, limited access to grazing and water resources as a result of competition with livestock, and due to scarcity of these resources.

The expired Grevy's zebra strategy was credited for important milestones, including the 2008 first structured census for Grevy's zebra, recruitment of a full-time national Grevy's zebra liaison officer, establishment of various community conservancies in Northern Kenya, training of community scouts, enhanced research and conservation activities.

Plans are underway for a second national Grevy's zebra census by the end of this year. The first was held in 2008. Grevy's zebra only survive in Kenya and Ethiopia's semi-arid lands yet they historically existed in Somalia, Djibouti, Eritrea and Sudan where they have gone extinct.

Kenya's Grevy's zebra estimated national population of 2,400 is largely found on the shores of Lake Turkana, Samburu, Marsabit, Laikipia, Meru, Tsavo, Garissa and Naivasha.

The Grevy's zebra is most adapted for semi-arid areas, especially those North of the equator and can go for five days without water with the exception of lactating females.

Dr. Kifle Argaw, the Director of Ethiopia Wildlife Conservation Authority, underscored the importance of cross border development of the strategy for managing and conserving the wild animal.

"We need to develop these species strategies together since if any country lags behind, it becomes a headache for the rest. We need to jointly push the conservation agenda for the Grevy's zebra and other species," he said.

The Grevy's zebra is protected from any commercial use through its listing on Appendix I of the United Nations Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The species is also classified as endangered by the International Conservation Union (IUCN).

*Source: All Africa*

## World governments establish biodiversity panel

**Scientists from more than 90 countries will unite to assess ecosystems and natural resources.**

**23 April 2012** Governments from more than 90 countries have agreed to establish an independent panel of scientists to assess the very latest research on the state of the planet's fragile ecosystems. The decision, which will create a body akin to the Intergovernmental Panel on Climate Change (IPCC), was made in Panama City this weekend, after years of negotiations.

The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) will be responsible for producing international scientific assessments on issues such as ocean acidification and pollination, to help policy-makers to tackle the global loss of biodiversity and degradation of ecosystems.

"I hope that this body will allow biodiversity to be better taken into account in sustainable-development strategies, as the IPCC has for climate change over the past 20 years," says Irina Bokova, director-general of the United Nations Educational, Scientific and Cultural Organization (UNESCO), based in Paris.

The themes of the panel's assessments, along with its overall budget, are to be decided at the newly established body's first plenary meeting, which is scheduled for 2013. But the IPBES will begin work immediately on reviewing existing assessments — such as 2005's global Millennium Ecosystem Assessment — to analyse their scope and impact on policy.

Biodiversity researchers welcomed the move. "Our community sees this as an extremely important step in order not to waste any time until the first plenary meets," says Anne Larigauderie, executive director of DIVERSITAS, an international biodiversity research programme headquartered in Paris.

The annual IPBES budget has not yet been confirmed, but proposals range from US\$5 million to \$13 million. A trust fund will be set up to receive voluntary contributions committed by governments, United Nations organizations, the private sector and foundations.

Germany won the vote to host the IPBES secretariat, which will be headquartered in Bonn. The German government beat four other contenders, including India and South Korea, with its promise to provide annual contributions of \$1.3 million for IPBES activities, and further funding for conferences, travel costs and capacity building in developing nations.

*Source: Nature*

## Climate change doubles cost of conserving nature

**April 17, 2012** Climate change will make conservation of biodiversity, and all the associated human benefits such as clean water and clean air, more challenging and expensive, with costs increasing by more than 100 percent in some cases, according to three new studies by a group of international researchers convened by Conservation International. Researchers called the studies a "wake-up call" for cost-efficient biodiversity conservation and climate stabilization.

The researchers focused on species and ecosystems in South Africa, Madagascar and California. The results were presented in three papers published together in the journal *Conservation Biology* today under the title *Conservation Focus: Costs of Adapting Conservation to Climate Change*. The studies are among the first to estimate the costs of conserving biodiversity under the effects of climate change.

“The specific effects of climate change on species in South Africa, Madagascar and California are very different, but the costs of conserving them will certainly increase considerably in all three regions under climate change,” said lead author Lee Hannah, senior scientist for climate change biology at Conservation International. “We can have a healthy planet and keep extra costs to a minimum by acting quickly to cut emissions and incorporate climate change into conservation plans.”

“This set of studies from around the world is a wake-up call,” said Rebecca Shaw, a climate scientist and associate vice president for Environmental Defense Fund. “The truth is that we have been struggling to conserve the nature we depend on for clean air and clean water without climate change. These studies show it is going to get harder and more costly to conserve nature in the future. It is time to get much more creative about inspiring innovative and cost-effective private incentives for conservation to more efficiently sustain our planet’s life-support system for our benefit and the benefit of our children.”

“Conservation is expensive,” said Belinda Reyers, Chief Scientist of Biodiversity and Ecosystem Services at the Council for Scientific and Industrial Research in South Africa, “and will probably become more so as climates change — but considering the existing investments already made in conservation, and the costs of inaction — the sooner we get going the better. Our messages are however, not all doom and gloom, in fact the South African case study highlighted the important role that new approaches to conservation and new partnerships can play in helping reduce these costs.”

“By protecting the plants and animals of its forests, Madagascar is protecting the sources of life-saving medicines, clean water for agriculture, and jobs for people in tourism,” said Jonah Busch, climate and forest economist at Conservation International and lead author of *Climate Change and the Cost of Conserving Species in Madagascar*. “The top conservation priority is to stop ongoing deforestation of the island’s last remaining forests to protect its many unique species from climate change.”

“If world leaders want to be effective in both slowing the rate of environmental degradation and helping the poor to prosper now and in the future, they should place biodiversity conservation at the top of their agendas,” Hannah said.

*Source: phys.org*

## **Tackle Fungal Forces to Save Crops, Forests and Endangered Animals, Say Scientists**

**Apr. 11, 2012** More than 600 million people could be fed each year by halting the spread of fungal diseases in the world’s five most important crops, according to research published April 11 in the journal *Nature*.

Furthermore, data reviewed by scientists suggests that in 70% of cases where infectious disease causes the extinction of a type of animal or plant, an emerging species of fungus is behind the problem. Evidence suggests this figure is increasing.

The scientists behind the study, from the University of Oxford, Imperial College London, and institutions in the US, are calling for new solutions to prevent the proliferation of existing and emerging fungal infections in plants and animals in order to prevent further loss of biodiversity and food shortages in the future. Fungal infections presently destroy at least 125 million tons of the top five food crops — rice, wheat, maize, potatoes and soybeans — each year, which could otherwise be used to feed those who do not get enough to eat. These crops provide the majority of calories consumed by people.

The damage caused by fungi to rice, wheat and maize alone costs global agriculture \$60 billion per year. The effects are disproportionately catastrophic for those in the developing world, where 1.4 billion people live on less than \$1.25 per day, and rely most heavily on these low-cost foods.

Diseases like rice blast, soybean rust, stem rust in wheat, corn smut in maize and late blight in potatoes affect more than just productivity; many have wide ranging socio-economic costs. Trees lost or damaged by fungi fail to absorb 230-580 megatonnes of atmospheric CO<sub>2</sub>, equivalent to 0.07% of global atmospheric CO<sub>2</sub>, an effect the scientists say is likely to be leading to an increase of the greenhouse effect.

In animals, new fungal diseases increasingly threaten the existence of over 500 species of amphibian, as well as many endangered species of bees, sea turtles and corals. In the US alone, studies suggest the decline in bat populations caused by white nose syndrome fungus will lead to a dramatic rise in the insect crop-pests that the bats would otherwise eat, and a cost to agriculture of more than \$3.7 billion per year.

Dr Matthew Fisher, from the School of Public Health at Imperial College London, and a corresponding author of the study, said: “The alarming increase in plant and animal deaths caused by new types of fungal disease shows that we are rapidly heading towards a world where the ‘rotters’ are the winners. We need strive to prevent the emergence of new diseases as we currently lack the means to successfully treat outbreaks of infection in the wild.”

The article shows how instances of fungal diseases have been increasing in severity and scale since the middle of the 20th century, largely thanks to trade and travel, and now pose a serious danger to global food security, biodiversity and ecosystem health. The threat to plants from fungal infections has now reached a level that outstrips that posed by bacterial and viral diseases combined and is projected to continue rising.

They are calling for tighter control of trade in plant and animal products that facilitate the spread of disease, and more research into tools that can predict emerging fungal infections so scientists can learn to halt the spread of existing diseases that are currently geographically isolated.

**Source: ScienceDaily**

## Rwanda third country to ratify the Nagoya Protocol on genetic resources

**5 April 2012** Rwanda became the third country to ratify the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity.

The Nagoya Protocol will enter into force 90 days after the deposit of the fiftieth instrument of ratification. In addition to Rwanda, Gabon and Jordan have also ratified the Protocol. The Nagoya Protocol was open for signature between 2 February 2011 and 1 February 2012. There are 92 signatories to the Protocol.

Rose Mukankomeje, Director General, Rwanda Environment Management Authority (REMA), said: “The ratification of the Nagoya Protocol by our country is an important step towards a better sustainable management of our rich biodiversity. This new international instrument under the Convention on Biological Diversity will certainly contribute in boosting our economy and at the end the livelihoods of communities will be improved. Like other developing countries around the world, once the Protocol enters into force, Rwanda would be in a position to benefit meaningfully from its biological resources and associated traditional knowledge, which have been exploited over the years without real return.”

Braulio Ferreira de Souza Dias, Executive Secretary of the Convention on Biological Diversity, said: “The Nagoya Protocol has the potential to unlock the full value of the genetic resources of our world. The benefits to be realised and then shared with equity are considerable. I urge other Parties to the Convention to take the steps to ratify as soon as possible.”

In order to become Parties to the Nagoya Protocol, Parties to the Convention that have signed the Nagoya Protocol may then proceed to take steps at the domestic level that would lead to depositing their instruments of ratification, acceptance or approval with the Depositary. Parties to the Convention not able to sign the Protocol by 1 February 2012, but still wish to become Parties, may accede to the Protocol by depositing an instrument of accession with the Depositary. Ratification, acceptance, approval and accession have the same legal effect. Further information on how to become a Party to the Protocol can be found at: [www.cbd.int/abs/becoming-party/](http://www.cbd.int/abs/becoming-party/).

The entry into force of the Nagoya Protocol will provide greater legal certainty and transparency for both providers and users of genetic resources, creating a framework that promotes the use of genetic resources and associated traditional knowledge while strengthening the opportunities for fair and equitable sharing of benefits from their use. Hence, the Protocol will create new incentives to conserve biodiversity, sustainably use its components, and further enhance the contribution of biodiversity to sustainable development and human well-being.

The Global Environment Facility (GEF) has provided financial support for the early entry into force and effective implementation of the Nagoya Protocol. A medium-sized project of US\$ 1 million is providing support to the ratification and early entry into force of the Protocol through a series of awareness-raising and capacity-building activities. The project is being executed by the Secretariat of the Convention on Biological Diversity, with generous support from the Government of Japan through the Japan Biodiversity Fund.”

## Scientists Forecast Forest Carbon Loss

**Apr. 6, 2012;** When most people look at a forest, they see walking trails, deer yards, or firewood for next winter. But scientists at the Harvard Forest and Smithsonian Institution take note of changes imperceptible to the naked eye – the uptake and storage of carbon. What they've learned in a recent study is that an immense amount of carbon is stored in growing trees, but if current trends in Massachusetts continue, development would reduce that storage by 18 percent over the next half century. Forest harvesting would have a much smaller impact.

Jonathan Thompson is Research Ecologist at the Smithsonian Conservation Biology Institute, Research Associate at the Harvard Forest, and lead author on the paper which appeared in the journal *Ecological Applications* in late 2011. "The rebounding forests of New England provide a tremendous public benefit by storing carbon that would otherwise contribute to climate change," said Thompson. To put these findings into context he adds, "In Massachusetts, forests capture approximately 2.3 million metric tons of carbon each year. That's equal to the amount of carbon dioxide emitted from the energy used by one million American homes annually." He and his coauthors were able to estimate the extent to which development may chip away at that carbon sink, using an uncommon collection of long-term data and a distinct form of research known as scenario science.

For more than 30 years, scientists at the Harvard Forest have scaled towers into the forest canopy and measured the trunks of trees to track how much carbon is stored or lost from the woods each year. This treasure trove of data is part of the national Long-Term Ecological Research (LTER) Network, which is celebrating more than three decades of research this month. This important milestone is marked by six new papers just released in a special issue of the journal *BioScience*. The forest carbon research is one example of participatory scenario science — a growing trend in ecology featured in a paper by Thompson, David Foster, Director of the Harvard Forest, and their colleagues in the *BioScience* issue.

Harvard Forest is one of four LTER sites in the northeastern U.S. and was awarded a grant by the National Science Foundation to join the Network in 1988. David Foster coauthored the *Ecological Applications* paper of 2011 and co-edited the new *BioScience* special issue. He notes, "With three decades of data meticulously collected as part of the LTER Network, we have reached a crucial transition where we are now able to tackle major environmental challenges, such as the fate of forest carbon, across large landscapes."

**Source: *Science News***