

ENVIRONMENTAL SERVICES

Environment

22 APRIL
Earth Day

5 JUNE
World Environment Day

A larch forest on the Putorana Plateau in Siberia, near the geographic centre of the Russian Federation. The Putorana Nature Reserve, established in 1988 to protect the world's largest herd of reindeer as well as bighorn sheep, was placed on UNESCO's World Heritage List in 2010 as representing a complete set of subarctic and arctic ecosystems including pristine taiga and forest tundra, as well as arctic desert and water systems.

UNESCO/30211122/A.ROMANOV



Environmental functions of forests and trees, such as soil and water conservation, are of special importance to small islands because of the relatively high ratio of coastline to land area, short distances between uplands and coastal areas, and limited size of watersheds. The forests are also important for biodiversity conservation, since small islands generally have a high percentage of endemic species (of which many are found in forests) and small populations make them relatively susceptible to extinction from deforestation, unmanaged tourism and the introduction of exotic species (Marquesas Islands, French Polynesia). CLAIRE M.



27 SEPTEMBER
World Tourism Day

Forest hikers take shelter from the rain, Hungary.

FAO/FO-6034/ÉVA SZABADOS



Forest-based nature tourism and ecotourism help drive both social and environmental development. Around the world, excursions in the canopy have become popular activities for tourists. Admission fees contribute to local development and forest conservation and management. This suspension bridge over the Breakfast River Gorge in Dominica is reached by an aerial tram which carries visitors through the tropical forest in suspended gondolas.

FAO/METTE WILKIE



ENVIRONMENTAL SERVICES

Environment

In the coastal province of Quang Binh, Viet Nam, *Casuarina* trees are planted to prevent the gradual intrusion of sand dunes into areas of cultivated land. The International Fund for Agricultural Development (IFAD) promoted a participatory protection scheme for the young trees. This woman and her son replant trees uprooted by the wind. They are responsible for the upkeep of 2 ha of land (about 10 000 trees). ©IFAD/6850/LOUIS DEMATTEIS



17 JUNE
World Day to Combat
Desertification and Drought

A nursery worker in Luxor, Egypt tends tree seedlings for use in sand dune fixation and afforestation, under an FAO project to improve plantation management in desert lands using available sources of water, including wastewater.

©FAO/22118/ROSETTA MESSORI



A nursery raises local *Acacia* species for dune fixation to fight against sand encroachment in Mauritania, a country that has been chronically affected by desertification and drought.

MOUSTAPHA OULD MOHAMED



In the Near East, overgrazing is one of the main drivers of desertification: goats in southwestern Morocco climb the argan tree (*Argania spinosa*) to graze. CONALLO'BRIEN

ENVIRONMENTAL SERVICES

Environment

11 DECEMBER
International Mountain Day



Deforestation amplifies risk for mountain communities. Landslide could spell disaster for the inhabitants of these precariously constructed buildings in Banaue, the Philippines. [FAO/FO-5744/PATRICK DURST](#)

Many mountain people live in poverty, isolated through difficult topographic and climatic conditions and distance from economic and political centres. Like these Nepali women collecting fodder, mountain people often rely on the forest for much of their livelihoods. [FAO/22739](#)





Healthy mountain forests provide tourism value and aesthetic pleasure, as when viewed across a valley on the South Island of New Zealand. TREY RATCLIFF



Afforestation of mountain areas can have important benefits such as stabilizing slopes and providing energy supply for local populations. However, it is important to plant the appropriate species at the right altitude. These pine trees are unable to thrive in Ecuador's páramo ecosystem, at 3 600 m above sea level. FAO/THOMAS HOFER



A protection forest in Switzerland shows two tree lines: the natural one above, and the one created by land use below. FAO/THOMAS HOFER

ENVIRONMENTAL SERVICES

Water

22 MARCH
World Water Day



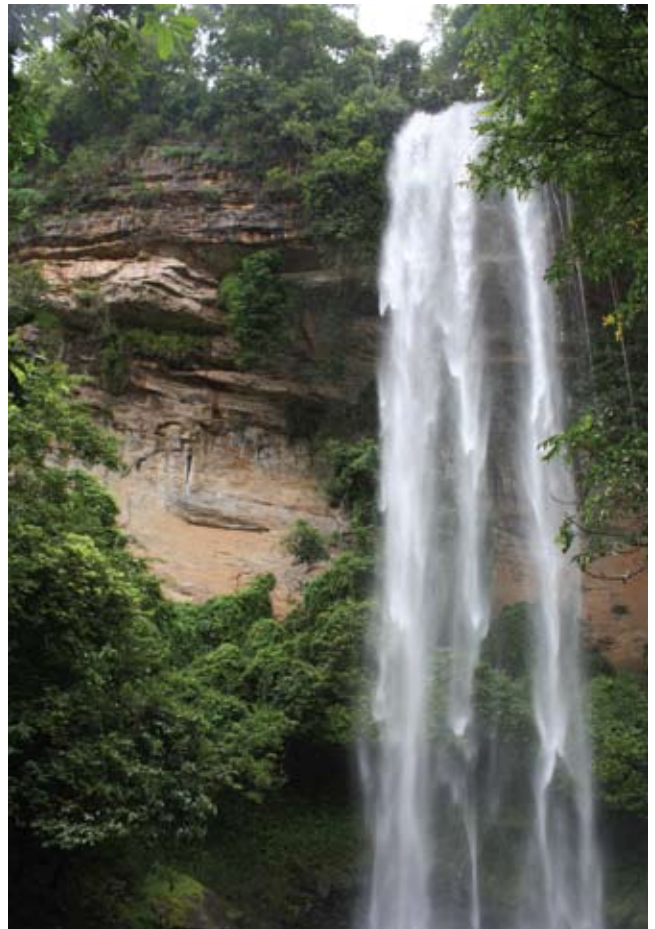
Throughout the world, watershed and riparian forests have an essential role in stabilizing water supply and ensuring its purity – from Canada...



In Yemen, as elsewhere in the Near East, forests have a crucial role in safeguarding scarce water supplies. FAO/QIANG MA



...to Kyrgyzstan.



A waterfall in the Fouta Djallon Highlands of Guinea – the water tower for the major West African river systems.

FAO/THOMAS HOFER

In dryland communities in northern Senegal, the top priority is water.

UNCDF/4851 / ADAM ROGERS



ENVIRONMENTAL SERVICES

Water

14 MARCH
International Day of Action for
Rivers

Riparian forests filter sediments and pollutants, influencing water flows and quality (Madagascar).

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Riparian forests have a dramatic effect in the arid Shigar Valley of Pakistan. FAO/FO-5689/PATRICK DURST



Forest inhabitants in the Congo depend on the river – and on the wood from their forests – for transport of people and products. ©TFT/EDWARD PARKER/CIB



Coastal forests are rich habitats for birds as well as sea creatures. Their leaf litter and detritus enters the marine food web. Mangroves (below) serve as feeding, breeding and nursery grounds for numerous commercial fish and shellfish.

UNCDF/4315

2 FEBRUARY
World Wetlands Day

8 JUNE
World Ocean Day

Coastal forests such as these mangroves in Belize offer protection against storm surges and erosion, helping to conserve wetlands and the livelihoods of people who depend on them. BERNT ROSTAD



Grazing camels have depleted these mangroves of their foliage below 3 m, preventing them from fulfilling their protective role. This stand (in the Sudan) also shows signs of extensive timber-cutting. UNEP

ENVIRONMENTAL SERVICES

Biodiversity

22 MAY
International Day for Biological
Diversity

4 OCTOBER
World Animal Day



A tree frog (*Boophis madagascariensis*) in the Eastern rainforests of Northern Madagascar – ecosystems of unique biodiversity, of which the majority of species are endemic to specific localities or protected areas.

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Bella Vista Cloud Forest in Ecuador is home to many different kinds of hummingbird.

©UNESCO/10036378/ALISON CLAYSON



The stinkhorn fungus *Phallus indusiatus*, also known as the bridal veil, is common in humid tropical forests of Asia, the Americas, and Africa, where soils are rich with organic matter. The fungus is covered with a foul-smelling substance that attracts flies and other insects, which spread the spores, ensuring its reproduction. It is edible (after removal of the spore mass) and is considered a delicacy in some cultures.

©TFT/EDWARD PARKER/CIB

ENVIRONMENTAL SERVICES

Biodiversity



FIRST MONDAY IN OCTOBER
World Habitat Day

A spotted quoll or tiger quoll (*Dasyurus maculatus*) in Australia's Central Eastern Rainforest Reserve. Native to Australia, this carnivorous marsupial is about the size of a domestic cat and lives mainly on the forest floor. IUCN classifies its conservation status as vulnerable, and its habitat is mostly limited to national parks.

©UNESCO/10026807/G.THRELFORD

SECOND WEEKEND IN MAY
World Migratory Bird Day



Yellow-billed storks (*Mycteria ibis*) perch in a tree along the Chobe River, Namibia.

©UNESCO/30208212/PIERRE GAILLARD



The forest and its products also provide habitat for humans: a home made of wood, Madagascar...
UNCDF/MADAGASCAR063/ADAM ROGERS



...and a village set in the forest, Hungary. FAO/FO-6084/MIKLOS KERESZTES

ENVIRONMENTAL SERVICES

Climate

23 MARCH
World Meteorological Day

16 SEPTEMBER
International Day for the
Preservation of the Ozone Layer

Climate change doesn't only mean melting glaciers and rising sea level. It also means shifting habitats and increased occurrence of extreme weather events such as droughts and severe storms, with impacts for forests and people. Mountain forests are among the most vulnerable ecosystems (Glaciers National Park, Argentina).



Forest ecosystems (including biomass, dead wood and soil) contain roughly the same amount of carbon as the Earth's atmosphere. The forest sector thus has a crucial role in mitigating climate change by reducing emissions from deforestation and forest degradation, and by conserving and enhancing forest carbon stocks – for example, through afforestation and forest restoration. The planting of trees to restore this degraded landscape in Khao Kho, Thailand, is one illustration. FAO/FO-5817/PATRICK DURST





Liquid biofuels made from wood and other cellulosic feedstocks – such as bioethanol and biodiesel – are under development as substitutes for fossil fuels. These researchers in Indiana, United States of America, for example, are using genetic tools to find ways to convert short-rotation poplar trees into bioethanol. Could such research make it unnecessary to celebrate a car-free day in the future?

PURDUE AGRICULTURAL COMMUNICATION

22 SEPTEMBER
World Car Free Day

The non-edible seeds of *Jatropha curcas* contain a high proportion of oil which can be used to produce biodiesel. The plant may yield more than four times as much fuel per hectare as soybean, and is therefore considered to have good potential to become a sustainable source of fuel that would not compete with food production. FAO/ROBERTO CENCIARELLI



FAO's Regional Support Programme for the Coordination and Technical Supervision of Disaster and Drought Risk Reduction in the Horn of Africa focuses on reducing vulnerability and strengthening capacity to respond to recurrent droughts and other climatic hazards. Facilitators for the establishment of Pastoral Field Schools receive training under the shade of a tree, Ethiopia. ©FAO/24702_2010R58F22/GIULIO NAPOLITANO

ENVIRONMENTAL SERVICES

Disaster prevention

SECOND WEDNESDAY IN OCTOBER
**International Day for Natural
Disaster Reduction**

Prescribed fire is used to maintain the health of fire-dependent ecosystems (reducing invasive species and stimulating native plants) and to clear the forest of excess fuels such as dead wood and brush to prevent catastrophic wildfire, as shown here in the western United States.

CUSTER NATIONAL FOREST/DON SASSE



In steep areas, mountain forests prevent erosion and landslide. In this landscape in Nepal, deforestation of slopes has resulted in severe gully formation, but the first signs of improvement resulting from afforestation measures are visible. FAO/FO-0305/THOMAS HOFER

Seedlings from this mangrove nursery on Hainan Island, China, will be planted to protect the coastline against damage from tropical storms. [FAO/FO-6959/JIM CARLE](#)



Recovery from disaster: after Hurricane Ivan struck Grenada in 2004, beneficiaries of an FAO carpentry project used fallen trees to rebuild homes. [©FAO/24637_5015/GIUSEPPE BIZZARRI](#)

