

WORLD ENVIRONMENT DAY  
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## Weird and wonderful facts about terrestrial ecosystems



Todd Brown/UNEP



This year's [World Environment Day](#) campaign focuses on land restoration, desertification and drought resilience under the slogan “Our land. Our future. We are #GenerationRestoration.” Drought and desertification are threatening essential ecosystems across the planet, including freshwater ecosystems and soil, the connective tissue that makes all life on Earth possible.

Here is a closer look at what makes terrestrial and land-based ecosystems so unique and, in some cases, awe-inspiring.

### Soil and water

- ◆ Almost [60 per cent](#) of all species live in soil, making land the planet's most biodiverse habitat.
- ◆ Healthy soils [store massive amounts of carbon](#), which, if released, would cause a huge spike to planetary warming.
- ◆ Only [0.5 per cent of water on Earth](#) is useable and available freshwater. Climate change is dangerously affecting that supply.
- ◆ Over the past two decades, land-based water storage—including soil moisture, snow and ice—[has dropped at a rate of 1 centimetre per year](#) with severe ramifications for water security and food production.

### Drylands

- ◆ Drylands—areas which face great water scarcity—cover [41 per cent](#) of the Earth's land surface and 78 per cent of the world's [rangelands](#).
- ◆ [Drylands](#) generate 44 per cent of global crops, are the source of feed for half of the world's livestock and support the lives and livelihoods of more than 2 billion people.
- ◆ Despite what the name suggests, drylands are home to [more than a quarter of the world's forests](#), a third of global biodiversity hotspots and provide critical migration points for birds.

### Deserts

- ◆ Deserts cover more than one-fifth of the Earth's land area and are found on every continent.
- ◆ The Sahara is [the largest hot desert in the world](#), spanning 9.4 million square kilometers, about the size of Canada.
- ◆ Despite its reputation for being lifeless, [the Sahara Desert is home](#) to 500 plant species, 70 mammalian species, 100 reptilian species, 90 avian species, and several arthropods, such as spiders and scorpions.
- ◆ Many deserts are expanding because of climate change but some countries are fighting back including the 22 countries in Africa that border the Sahara Desert where [the Great Green Wall](#) initiative aims to restore 100 million hectares of land through a mosaic of green and productive landscapes.



## Forests

- ◆ Forests cover [31 per cent](#) of the Earth but they are not equally distributed as more than half of the world's forests are found in only five countries: Brazil, Canada, China, the Russian Federation and the United States of America.
- ◆ More than [28,000 plant species](#) are currently recorded as being of medicinal use and many of them are found in forest ecosystems.
- ◆ Soil microorganisms are important in producing antibiotics. Penicillin, for example, comes from [a small fungus](#) living in the soil.
- ◆ The largest organism on Earth is [a fungus](#) in the Blue Mountains of the United States. Covering about 965 hectares of land, the fungus could be as ancient as 8,650 years, which would earn it a place among the oldest living organisms in the world.

## Freshwater

- ◆ Lakes, rivers and wetlands hold [20–30 per cent of global](#) carbon despite occupying only 5–8 per cent of its land surface.
- ◆ The Nile River is widely regarded as [the world's longest waterway](#). Starting in East Africa, it flows through 11 different countries and stretches 6,695 kilometres.
- ◆ Approximately [1.4 billion livelihoods](#) worldwide are directly reliant on access to fresh water, including jobs related to the food and beverage, energy and water industries.

## Farmlands

- ◆ Every five seconds, the equivalent of [one football pitch of soil](#) is eroded. Yet, it takes 1,000 years to generate 3 centimetres of topsoil.
- ◆ Every year more than [24 billion tonnes of priceless topsoil](#) are washed or blown away worldwide, as the land is overcultivated and overgrazed and trees and forests are cut down.
- ◆ The world will need to raise its food production by [60–70 per cent](#) to feed a projected human population of 9 billion by 2050 even as the current agricultural expansion continues to threaten forests and biodiversity.
- ◆ Close to [75 per cent](#) of the world's fruit and seed crops depend, at least in part, on pollinators like bees. Pollinators contribute to [35 per cent](#) of the world's total crop production, pollinating 87 of 115 leading food crops worldwide.
- ◆ Despite their importance, pollinators are in [serious decline](#), primarily due to intensive agricultural practices, pesticide use, invasive species, diseases and climate change.
- ◆ Globally, at least [2 billion people](#) depend on the agriculture sector for their livelihoods, particularly poor and rural populations.

## Cities

- ◆ Urban areas occupy just [three per cent](#) of the Earth's land surface but are home to more than half its people.
- ◆ Cities account for [75 per cent of global resource and energy use](#) and produce more than half of global waste and at least 60 per cent of greenhouse gas emissions.
- ◆ More than [one-third](#) of the biggest cities, including Barcelona, Bogota, New York and Tokyo, source a significant proportion of their high-quality drinking water from protected forests nearby.
- ◆ Trees in urban areas can cool the air by [up to 5°C](#), reducing air conditioning needs by 25 per cent. Urban trees provide multiple health benefits such as cleaner water. They also clean the air and reduce flooding among many other benefits.

### For more information

✉ [worldenvironmentday@un.org](mailto:worldenvironmentday@un.org)

🌐 [unep.org](http://unep.org)

🌐 [worldenvironmentday.global](http://worldenvironmentday.global)

**Our Land. Our Future**  
We are  
**#GenerationRestoration**



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