



Life on land

15 Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.

Over the last 25 years Brazil lost around half a million square kilometers of forest—around the same area that China gained. Losses and gains are spread across the globe, but the farther south a country, the more likely it is to have depleted forest land, while more northern countries tend to have gained more forests (figure 15a). Human activity can have a detrimental effect on forests and other parts of the environment, and Goal 15 pledges to reduce or reverse these consequences to provide a more viable ecological platform for sustainable development.

Halting forest loss

Forests cover about one-third of all land worldwide and nearly half of this is within Europe and Central Asia and Latin America and the Caribbean. Crucial to the health of the planet and its diverse species and to the livelihoods of one-fifth of the human population, forests

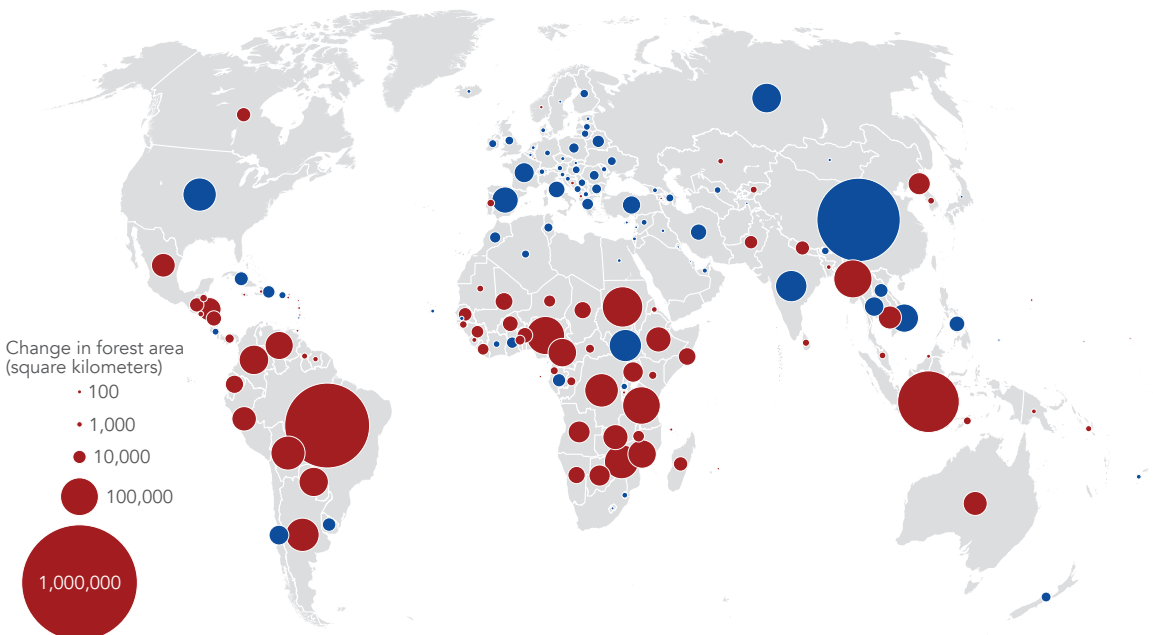
contribute to long-term economic growth, social inclusion, and environmental stability. Goal 15 encourages an increase in both afforestation and reforestation worldwide (target 15.2).

The growing demand for forest products and for agricultural land has contributed to an

15a China gained as much forest area as Brazil lost over the last 25 years

Change in forest area, 1990–2015 (square kilometers)

■ Gains ■ Losses



Source: Food and Agriculture Organization; WDI (AG.LND.FRST.K2).

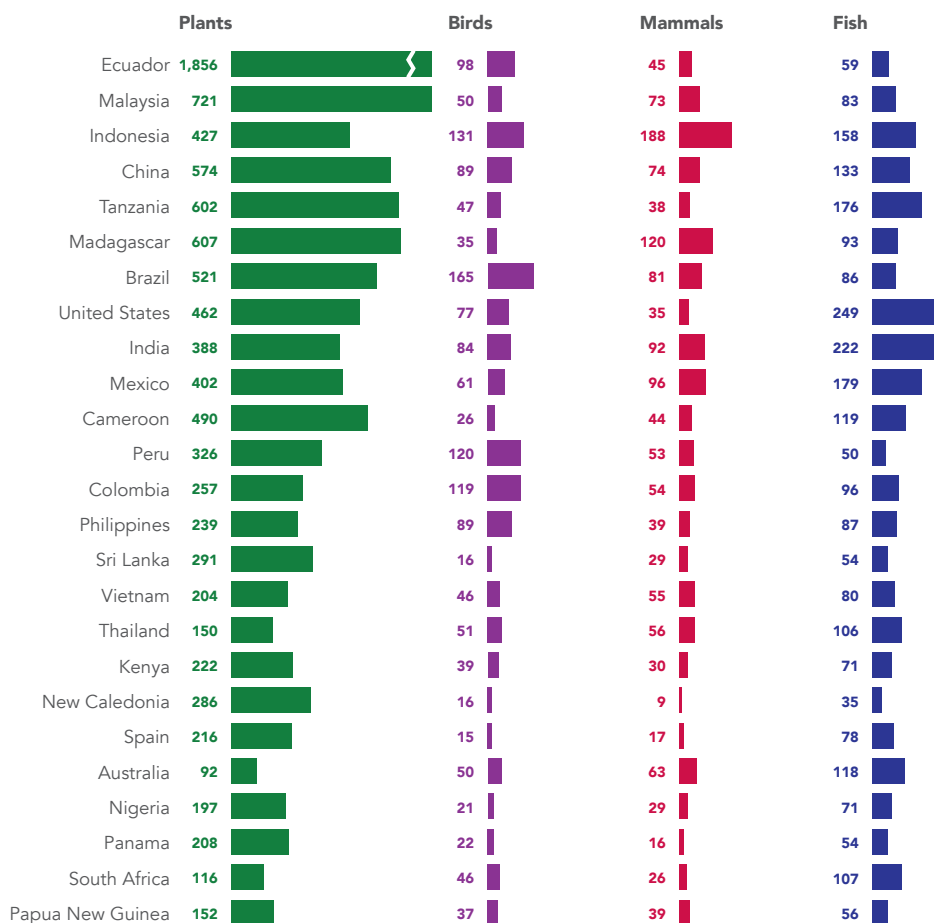
average annual loss of global forest area of more than 50,000 square kilometers over the last 25 years. This depletion is concentrated in low- and lower-middle-income countries where more than 1.2 million square kilometers of forest disappeared between 1990 and 2015. The biggest losses were in Latin America and the Caribbean, where more than 9 percent of their forest disappeared, and in Sub-Saharan Africa, which had a loss of 12 percent (see figure 15a). High-income economies gained about 191,000 square kilometers of forest land during the last quarter of the century.

Protecting habitats and preserving diversity

Climate change, poaching, overfishing, and pollution come together with the degradation of forests, landscapes, and ecosystems to make the habitat that harbors biodiversity much more vulnerable. Goal 15 seeks to reverse these trends and dampen the threat of extinction to many plant and animal species (target 15.5), especially in Latin America and the Caribbean, Sub-Saharan Africa, and East Asia and Pacific. The number of threatened plants is highest in Ecuador, the number of threatened fish in the United States, the number of threatened mammals in Indonesia, and the number of threatened birds in Brazil (figures 15b–f).

15b Thirteen countries each have more than 500 threatened species of plants, birds, mammals, and fish

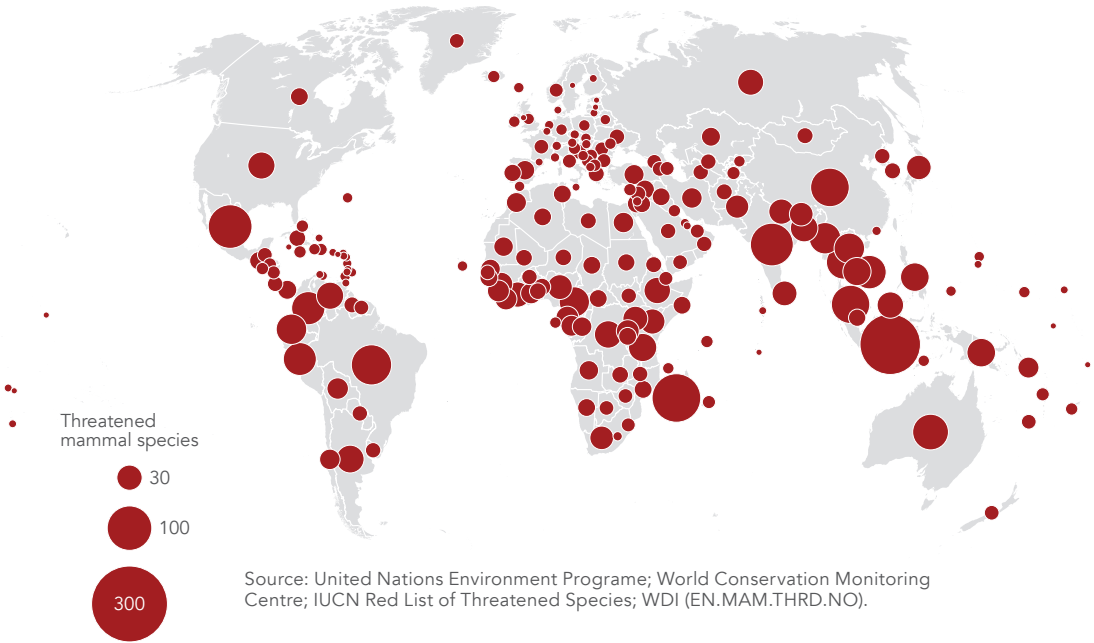
Number of species classified by the International Union for Conservation of Nature as endangered, vulnerable, rare, indeterminate, out of danger, or insufficiently known, 2016



Source: United Nations Environment Programme; World Conservation Monitoring Centre; International Union for Conservation of Nature: IUCN Red List of Threatened Species; Froese, R., and D. Pauly (eds.), 2008, FishBase database (<http://www.fishbase.org>); WDI (EN.HPT.THRD.NO, EN.BRD.THRD.NO, EN.MAM.THRD.NO, EN.FSH.THRD.NO).

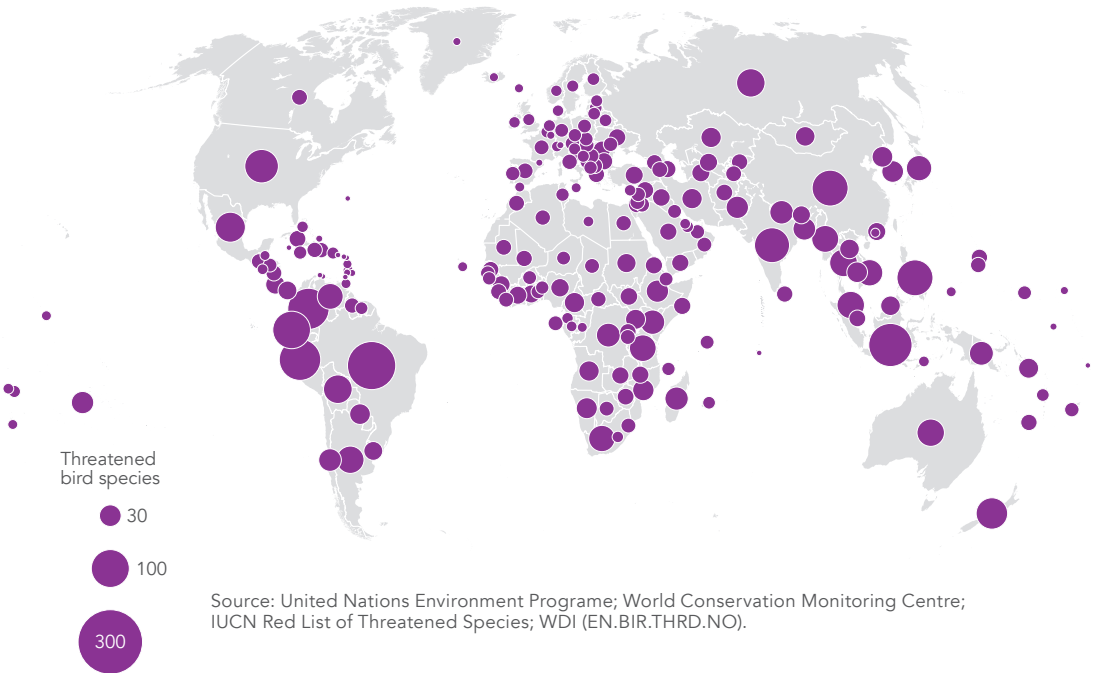
15c Indonesia and Madagascar have the greatest number of threatened mammal species

Threatened mammal species, 2016



15d Many species of birds are threatened across Latin America and the Caribbean and East Asia and Pacific

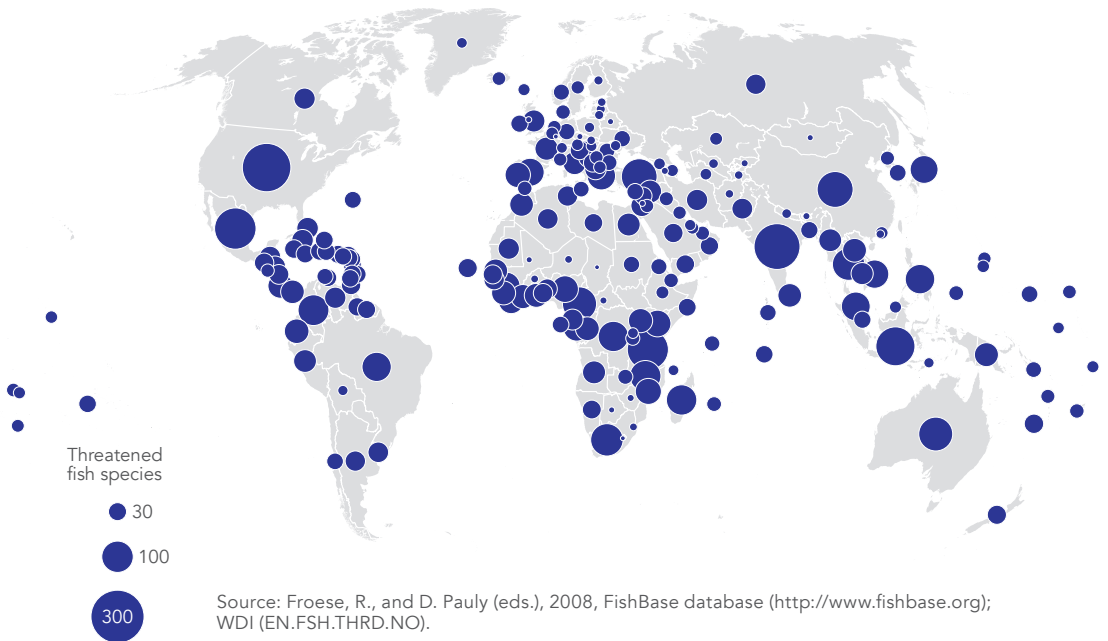
Threatened bird species, 2016



Note: Scales are assigned separately to each map.

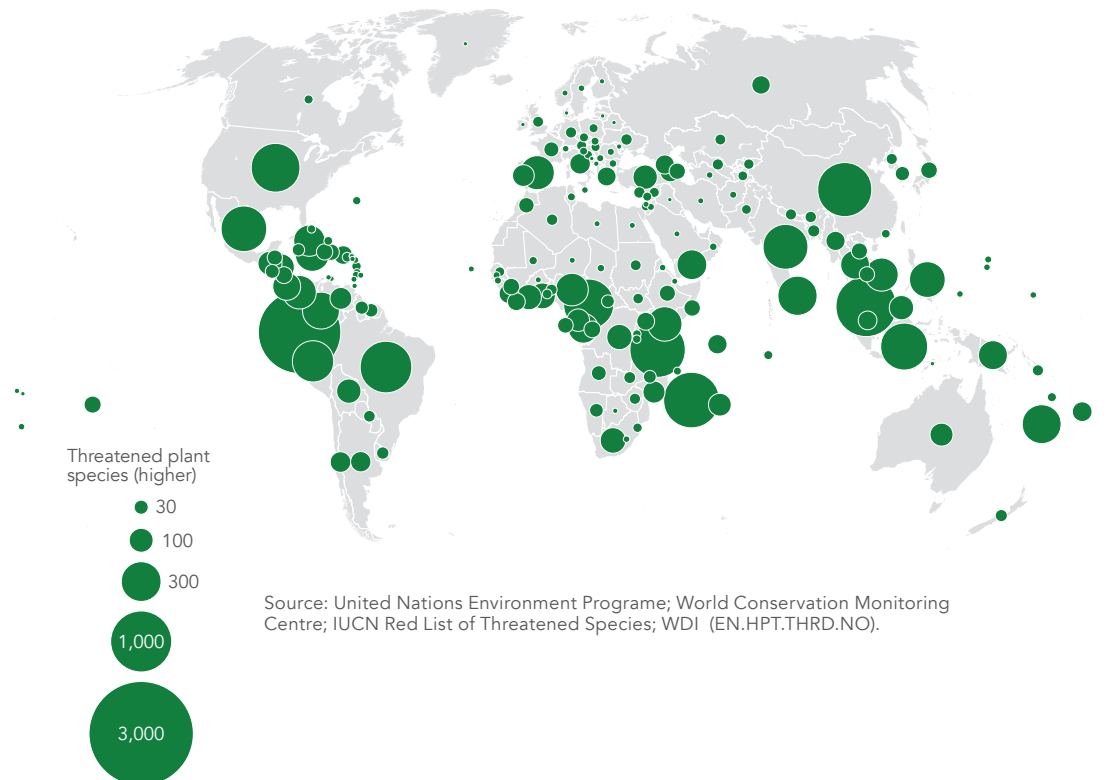
15e India, Mexico, and the United States have the largest number of threatened fish species

Threatened fish species, 2016



15f Ecuador has substantially more threatened plant species than any other country

Threatened plant species (higher), 2016



Protecting land

Worldwide, nearly 15 percent of all terrestrial land is now protected, over 80 percent more than in 1990. Many countries in Latin America protect at least 20 percent of their land, while South Asia lags behind other regions with an average of just under 7 percent (figure 15g).

Restoring forests and degraded landscapes

Restored landscapes support sustainable development in many ways: they benefit livelihoods and biodiversity by reducing erosion, supplying clean water, and providing wildlife habitat, biofuel, and other forest products (targets 15.1 and 15.3). Forests and trees also help mitigate climate change, enhance soil fertility, conserve soil moisture, and boost food production (target 15.3). A restored landscape may accommodate a range of land uses such as agriculture, protected reserves, ecological corridors, regenerated forests, well-managed

plantations, agroforestry systems, and riparian plantings to protect waterways.

Worldwide, nearly 25 million square kilometers offer opportunities for restoration, many in tropical and temperate areas. Nearly 18 million square kilometers would ideally combine forests and trees with other land uses through “mosaic restoration,” including smallholder agriculture, agroforestry, and settlements. A further 5 million square kilometers would be suitable for wide-scale restoration of closed forests. Africa provides the largest restoration opportunity, followed by Latin America (figure 15h).

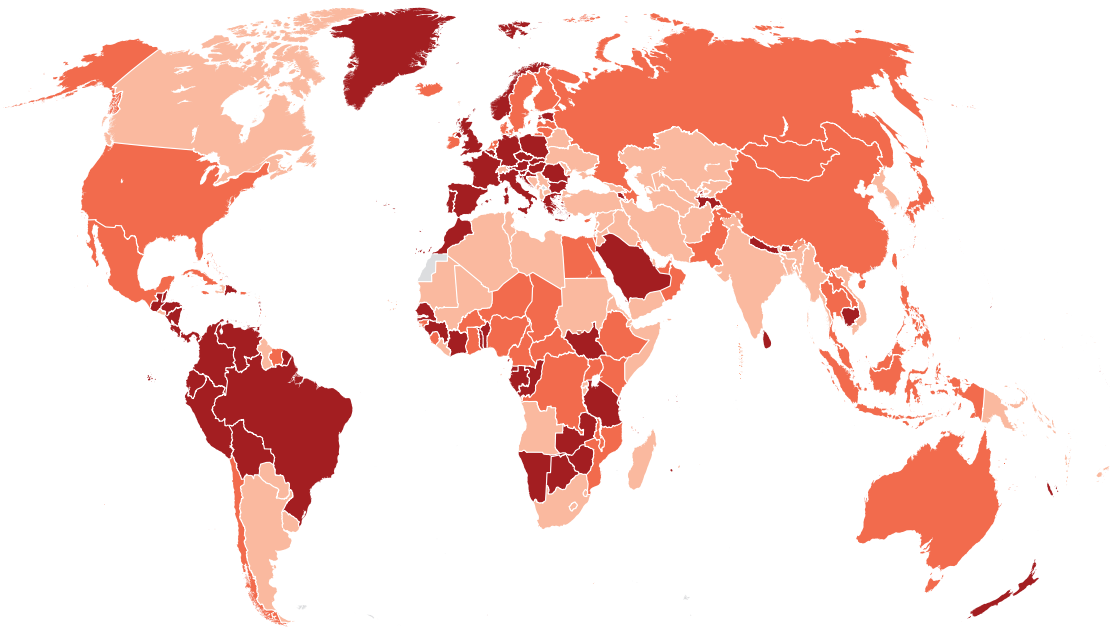
Providing pathways out of poverty

Some 300 to 350 million people, about half of them indigenous, live within or close to dense forests and depend almost entirely on forests for subsistence.¹ And many more in urban areas depend on forest resources for food, energy sources, and construction materials.

15g One in three countries protects at least a fifth of its terrestrial land

Terrestrial protected areas, 2014 (% of total land area)

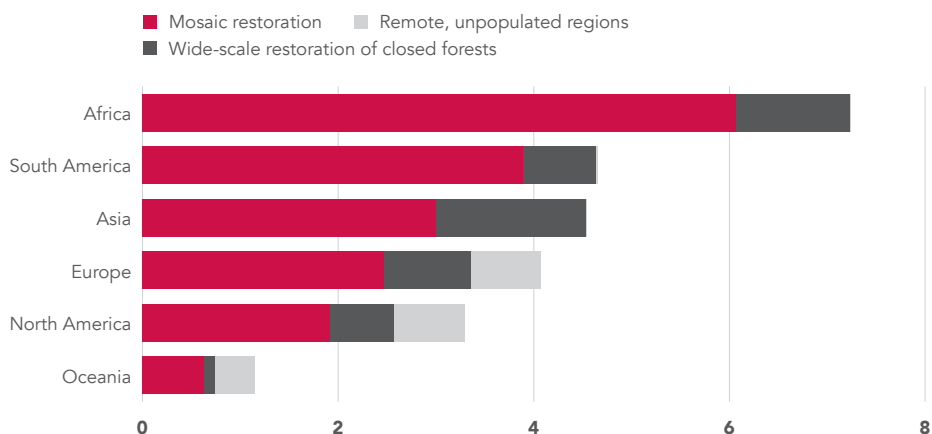
0–10 10–20 20–100 No data



Source: United Nations Environment Programme and the World Conservation Monitoring Centre, as compiled by the World Resources Institute; WDI (ER.LND.PTID.ZS).

15h Africa provides the most opportunities for landscape restoration

Millions of square kilometers



Source: WRI/IUCN, 2011, A World of Opportunity (http://www.forestlandscaperestoration.org/sites/default/files/resource/4_bonn_challenge_world_of_opportunity_brochure_2011-09.pdf).

15i Forest income accounts for around a quarter of all income for rural communities near forests

Sources of income for rural communities with access to forests (%)



Source: Angelsen, A., P. Jagger, R. Babigumira, B. Belcher, and N. J. Hogarth, 2014, "Environmental Income and Rural Livelihoods: A Global-Comparative Analysis," *World Development* 64(S1).

Beyond subsistence, forests and landscapes are an important aspect of rural livelihoods. Rural households living near forested areas in Africa and Asia derive over 20 percent of their income from forest sources, and those in Latin America derive over 28 percent from forests (figure 15i).² About half the income from forests is noncash and includes food, fodder, energy, medicine, and house-building materials. This noncash contribution, or "hidden harvest," is especially important for people living in extreme poverty.

Notes

1. S. Chao. 2012. *Forest Peoples: Numbers Across the World*. Moreton-in-Marsh, UK: Forest Peoples Programme.
2. A. Angelsen, P. Jagger, R. Babigumira, B. Belcher, and N. J. Hogarth. 2014. "Environmental Income and Rural Livelihoods: A Global-Comparative Analysis." *World Development* 64(S1). <http://dx.doi.org/10.1016/j.worlddev.2014.03.006>. The PEN survey covers about 8,000 households in 24 countries across Sub-Saharan Africa, South and East Asia, and Latin America, and is representative of smallholder-dominated communities living close to forests (with access to forest resources).