

CLIMATE NOTES ON THE DEVELOPMENT AND FUTURE OF THE WORLD'S FORESTS

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The preservation and expansion of the global forest areas as well as their sustainable management have found their way into a large number of agreements over recent years. Among them are the new 17 UN Sustainability Goals adopted by the UN General Assembly in 2015. By 2020, it is above all to restore damaged forests and to strengthen afforestation and reforestation all over the world in order to counteract problems such as climate change, species fading and poverty. These targets are to be achieved by means of resources from all available sources and can provide incentives for sustainable use in developing countries (Sustainable Development Knowledge Platform 2016).

For more than 1.6 billion people around the world, forests provide a livelihood by providing food, water as well as fuels and medicine (UNDP 2016). The conversion of forest land into agricultural land for the production of products such as soya, palm oil and meat as well as paper and wood products continues to be the main cause of global deforestation. While deforestation in the 19th century took place mainly in the temperate latitudes, it has been shifting over the last decades mainly to the tropics and subtropics. In the period from 2000–2010, the annual loss of forest areas there amounted to 7 million hectares (FAO 2016).

Figure 1 shows the percentage change in forest area in the period 2005–2015 and annual absolute change in 1,000 hectares (lower picture). Both figures show that deforestation mainly affects tropical and subtropical regions. Countries such as Brazil, Indonesia, Nigeria and Zimbabwe as well as Argentina and Honduras have seen enormous deforestation rates, although a slight slowdown in deforestation rates has been observed in Brazil since 2005. In more than 70 percent, agriculture and forestry are the main cause in these

countries, which in turn is attributable to factors such as population growth and the creation of secure land ownership (FAO 2016). But also in industrialized countries such as Canada and Australia 50,000 or 290,000 hectares of forest area disappear annually by mining and the extraction of oil sands (see Figure 1). Overall, the global forest area decreased by over 3 percent and 130 million hectares respectively between 1990 and 2015.

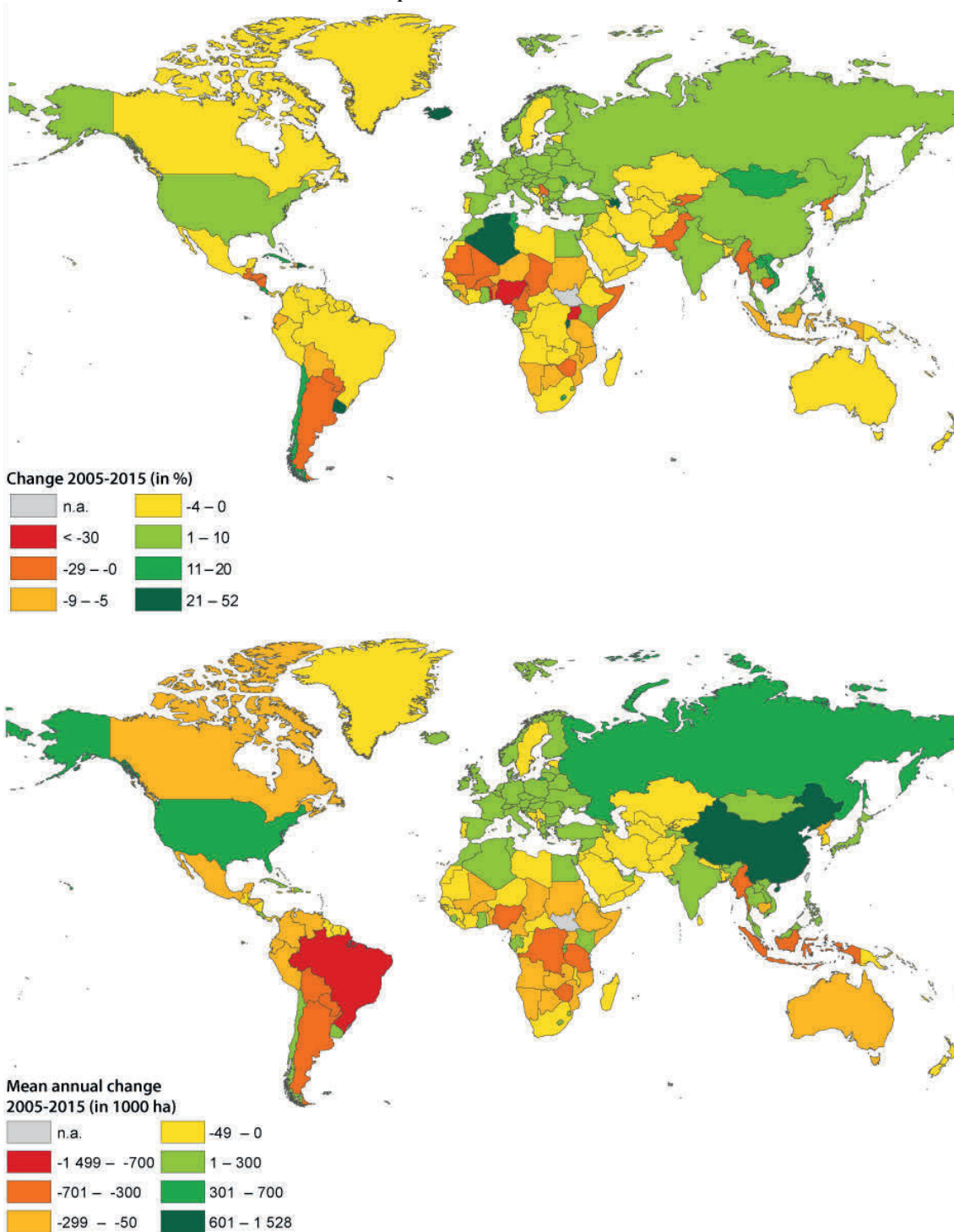
Deforestation, however, also has success in afforestation, as seen, for example, in Russia, the United States and large parts of Central Europe (see also Figure 1). The increase in forest areas is thus particularly evident in areas with a declining rural population and improved agricultural productivity as well as effective legislation for the preservation of forests (FAO 2016). Other countries such as Chile, Paraguay, Iceland, Costa Rica, Rwanda and Burundi are also experiencing significant progress. Above all, China stands out among the afforestation rates. These figures are due to a forestry program ('Grain for Green Program'), which was initiated in 1999 to stem mainly the progress of soil erosion (Hua *et al.* 2016). The program uses cash payments to the rural population as an incentive for the restoration of forests as well as bush or grassland. By 2013, 27.8 million hectares of forest have been afforested in China. The majority of the forests are used mainly for the production of wood, fruits and other products, while the restoration of biodiversity is only second. A major problem here is that the newly created forests are mainly monocultures and simple, poorly mixed forests.

In Rwanda, parts of the country were already being reforested in the seventies, but especially after the civil war in 1994 and the massive deforestation wave in this context. Here atypical, but rapidly growing species such as eucalyptus trees and pine trees are used. At the present time, the forest area accounts for 29.3 percent, which means that the 2011 target of 30 percent (or 2 million hectares) was almost reached by the year 2020 (Ministry of Natural Resources 2015). Rwanda's self-commitment is part of the so-called Bonn Challenge (2011), in which around 150 million hectares of destroyed forests are to be reforested on a voluntary

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Figure 1

Development of world forest areas



Source: FAO Stat 2016.

basis by 2020. In 2014, the target was expanded to 350 million hectares by the year 2030. 36 countries, organizations and firms are now part of this platform. In addition to forest areas, degraded agricultural areas as well as areas which are a natural protection against erosion or flooding are to be afforested and transferred

to sustainable management (Bonn Challenge 2016). To date, around 112 million hectares have been afforested, representing 75 percent of the original 2020 target. The Bonn Challenge Barometer of Progress was launched in October 2016 in order to demonstrate the measures implemented and the quantifiability of progress.

In the same year, the New York Declaration on Forests was adopted at the UN Special Summit on Climate Protection. 189 countries, governments, businesses and civil society and indigenous groups have been supporting this initiative since 2014 (UNDP 2016). The aim of the non-binding agreement is, among others, the halving of global deforestation and its complete cessation by 2030. Within the framework of these objectives, the private sector will be involved in the prevention of deforestation by the production of palm oil, soybeans, beef and paper (see Climate Focus 2015). Of the nearly 60 private companies and financial service providers supporting the Declaration, 41 have committed themselves to comprehensive commitments to curb deforestation. However, most companies had already adopted such measures before the agreement, and little is known about the methods for evaluating and reporting on implemented measures and their successes (Supply Change 2015). Nevertheless, the New York Declaration is given a promising role in announcing additional self-commitments.

The protection and restoration of the world's forest areas had a further success last year. The protection of forests and their importance in the framework of the climate conference in Paris were formally fixed for the first time in a climate agreement. Article 5 explicitly invites States Parties to "take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1(d), of the Convention, including forests" (UNFCCC 2015). It encourages countries to create policies to preserve existing forests, as well as stimulating sustainable management. However, the REDD+ mechanism for the reduction of emissions by deforestation and forest degradation, which is meant to be used, has been avoided in this way, and the contracting states are not subject to any obligations within the framework of forest protection.

It is also criticized in this context that no concrete plans exist for the general funding of the REDD instrument (Heinrich Böll Stiftung 2016). Furthermore, the lack of protection of the indigenous population and the extensive restriction on the forest as a pure CO₂ sink or to achieve negative emissions are still being criticized. In addition, the lack of evidence for an actual forest protection also plays an important role. Furthermore, the focus of the programs is still too small on the actual large deforestation causes such as oil production, mining and infrastructure development, but too often accuses indigenous populations of

their natural way of life, forest destruction (Action Solidarité Tiers Monde 2016). The future success for the sustainable protection of forests and the species living there therefore continue to depend on a clear financing of the projects and implemented initiatives, the involvement of local actors, international obligations as well as strict rules on the verifiability of the measures.

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