

MONITOR

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Sustainable Forest Management

André Algermißen

- › In Germany, forest management is associated closely with the concept of sustainability.
- › Storms, forest fires, infestations of bark beetles and droughts have all taken their toll on the forests in Germany.
- › A sustainable form of forest management aspires to preserve the ecological, economic and social value of our forests.
- › Forests provide multiple benefits from the perspective of our ecosystems which are important to preserve for future generations: they improve the quality of our air and water, for instance, and also act as carbon storage systems.
- › Returning areas of forest to nature is not conducive to protecting either the climate or biodiversity.
- › In the interests of maintaining the many differing benefits to our ecosystem and intensifying the efforts to protect our climate and the environment, payment models for the owners of forests are considered a good option.
- › In April 2021, the German parliament voted in favour of recognising the benefits to the ecosystem brought about by forests, and in June 2021, the Federal Minister for Agriculture, Julia Klöckner, presented a corresponding model.

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Sustainable forest management

Whether it is from the Darßwald Forest to the Black Forest, or the Eifel to Saxon Switzerland: forests are omnipresent in Germany, and cover approximately one third of the total area of the country. They are also very popular with the general public: according to a recent study, some 87 percent of Germans enjoy spending their time in their local forests, where they like to go hiking, enjoy the nature and see the local wildlife.¹ However, our areas of forest are by no means just areas of recreation; they are also an important factor in our economy. Besides tourism, they offer a variety of further opportunities for generating income; the timber industry, for example. In this respect, it is estimated that the forest and timber cluster provides work for approximately 1.1 million people in Germany, and that the employees work in some 130,000 companies.²

The state of our forests, on the other hand, is worrying: storms, forest fires, bark beetle infestations and the droughts of recent years have all taken their toll on the forests in Germany. In 2020, the official description of the state of our forests came to sobering conclusion: the condition of the arboreal crowns, which is used as a key indicator of tree health, has continued to deteriorate, with just 21 percent of trees showing no crown defoliation (i.e., in contrast to a case of full foliage). An increasing die-back rate has also been recorded.³

Before the backdrop of increased expectations regarding the protection of the environment and the climate, an increased focus is being made on the forest. What form can sustainable forest management take, and what instruments can be used to encourage it?

Sustainable forest management – a conceptual definition

The term “sustainability” is experiencing considerable popularity in the current political climate. However, few people are aware that at least in Germany, this concept actually originates from a basic principle of German forest management. As long ago as 1713, in his treatise “Sylvicultura Oeconomica”, Carl von Carlowitz, head of the upper mining authority in Freiberg, Saxony, argued that a stable and consistent use of the forest was of fundamental importance.⁴ With this statement, von Carlowitz not only laid down the foundations for the subsequent concept of sustainability, but also formulated the guiding principle of sustainable forest management.

From today's perspective, sustainable forest management aims to preserve the economic, social and ecological values of our forests.⁵ In Europe, *FOREST EUROPE*, a pan-European policy process addressing forests at the ministerial level, is dedicated to forest policy. At the most recent conference in Bratislava in April 2021, the importance of a sustainable forest policy was highlighted and a vision for the European forests of 2030 was formulated.⁶ Germany has now assumed the chairmanship of the conference, and is in a position to set key points of emphasis over the coming months. In recent years, *FOREST EUROPE* has also defined a set of criteria for sustainable forest management⁷:

- › The conservation and appropriate improvement of forest resources, and ensuring their contribution to global carbon loop systems
- › Maintaining and promoting the production function of forests for both wood and non-wood products
- › The conservation, protection and adequate improvement of biodiversity in forest ecosystems
- › The preservation, protection and appropriate improvement of the protective function in forest management, particularly in the areas of soil and water
- › The maintaining of other socio-economic functions and conditions

Established certification systems, such as the FSC (Forest Stewardship Council) or PEFC (Programme for the Endorsement of Forest Certification Schemes) are considered to be indicators of forest sustainability. These confirm that the forest enterprise not only complies with the minimum requirements of the legislation concerning forests and conservation, but also fulfils additional services in the ecological, economic and social field.

Highlighting and recognising the wide-ranging ecosystem benefits provided by forests

Sustainable forest management is based on an understanding of the wide-ranging ecosystem benefits provided by forests: our forests provide habitat for plants and animals, protect us against noise and erosion, improve the quality of our air and water, and provide an important recreational resource for the general public. Forests also provide us with the important raw material of wood, which we can use in a variety of ways and which is becoming increasingly important before the backdrop of fluctuating global timber prices. The services provided by our forests should not be underestimated, especially when it comes to the protection of the climate: they therefore influence our climate on a small and large scale. At the same time, the forest acts as a carbon storage system, and captures approximately 58 million tonnes of CO₂ equivalents per year. This is equivalent to the emissions from all commercial vehicles in Germany.⁸ Our forests are also an important reservoir of biological diversity: the beech forests in Central Europe are home to approximately 5,700 to 6,700 species of animal and 4,300 species of plant and fungus.⁹

Sustainable forest management makes use of the multifunctional nature of the forest, and relies on measures that adapt forests optimally to climate change. In this way, for example, the stability of the forest will be increased by the restructuring of our forests in the future so that they develop from large-scale stocks of pure conifer to multi-level, structurally rich, mixed stocks of deciduous and coniferous species.¹⁰

Conservation and forest management are not mutually exclusive

The approach of a sustainable form of forest management is not without controversy, and has had potential for conflict for many years. Voices in conservation and environmental organisations are increasingly calling for large areas of forest to be returned to nature, as this is the only way to preserve the biodiversity of forests and achieve the global goals surrounding the protection of biodiversity. There is no doubt that the increasing loss of biodiversity must be counteracted, and that appropriate measures must be promoted to ensure effective protection, such as reducing the use of pesticides. However, returning large areas of forest to nature and/or preventing the use of areas of forest is not a good idea, for various reasons:

- › Firstly, ending the sustainable use of timber in domestic forests would not lead to a decrease in the demand for timber. It would necessitate importing the wood from other countries which have standards of forest management that are considerably lower than the German standards.¹¹ Moreover, long transport routes would not be appropriate from the perspective of the protection of the climate. This would make a mockery of the objective of a sustainable policy which is based on global responsibility and which seeks to prevent a negative impact on the environment in third countries.
- › Secondly, the assumption that managed forests are poorer in terms of their biodiversity than “natural” forests, which is regularly made, has not been scientifically proven. On the contrary, the undisturbed, natural development of vegetation leads to the emergence of dark forest structures which have a lesser diversity of plant species than sustainably-managed forests.¹² To date, no species of plant have been found in unmanaged forests which cannot also be found in managed forests. Conversely, endangered species can be found that are only found in commercially-managed forests.¹³ It can therefore be concluded that proactive and sustainable forest management can make a major contribution to the protection of biodiversity. Nevertheless, the needs of species which depend on dead wood must also be taken into account.
- › Thirdly, the importance of forest management for climate protection must also be emphasised: “The CO₂ which forests absorb from the air during photosynthesis and then store permanently in wood-based biomass is released back into the atmosphere to the same level in forest ecosystems which have been left to nature as the wood decays.”¹⁴ Managed forests therefore ensure that the CO₂ remains stored in the wood over the long term, when it is used in timber construction, for example.

How can sustainable forest management be encouraged?

Sustainable forest management is the key to a greater degree of climate and environmental protection, and can only be achieved together with the owners of the forests. Some 48 percent of all forests in Germany are privately owned, about half of which are managed by farms that own less than 20 hectares.¹⁵ In the interests of maintaining the many benefits to our ecosystem and furthering the efforts to protect our climate and the environment, payment models for the owners of forests are considered a good option. In particular, small forest enterprises, which are only able to generate low revenues from timber sales, should also be considered in potential remuneration models before the backdrop of a broad concept of sustainability, which includes the social dimension, in addition to the ecological and economic sides of sustainability. The focus of this funding instrument is not only to reward the maintaining of benefits to the ecosystem, but also to create incentives to further promote the conversion of forests towards climate-resilient, mixed forests, which can constitute an important tool in the fight against climate change. The question regarding the models of payment must also take into account the fact that a forest is only able to promise long-term returns if additional climate and environmental protection measures are also to be fulfilled. In order for the models of payment to fulfil their purpose, with the use

of established systems of certification, it is important to ensure that the owners also manage their forests sustainably. Politicians have recognised the need for action: in April 2021, the German parliament voted in favour of the governing coalition's proposal to reward forest ecosystem benefits. In early June 2021, at the German Forest Summit, the Federal Minister for Agriculture, Julia Klöckner, presented a model for rewarding the climate protection benefits of forests. This envisages two stages: in the first stage, the owners of forests receive a basic sum with which they are rewarded for the preservation, development and management of particularly climate-sensitive forests, provided that they can demonstrate the sustainability certification. In the second stage, there is an extra payment for those who provide additional services to further increase the CO₂ storage capacity of the forests.¹⁶ It will probably not be possible to implement this until the next legislative period, however. The Federal Ministry of Food and Agriculture (BMEL) is currently in consultation with the European Commission with the goal of clarifying questions regarding state aid law.¹⁷

Concluding remarks

Climate change is putting pressure on our forests. To rise successfully to the challenges, it is essential to focus on a sustainable form of forest management that protects the important ecosystem benefits provided by forests and enables an adaptation to climate change. Returning areas of forest to nature, as called for by some environmentalists, is not very effective, as it does not do justice to either the protection of biodiversity or the potential of the forest as a carbon storage system. It would also see the demand for wood being compensated for with imports. To preserve ecosystem benefits and to further intensify the protection of the climate and biodiversity models of payment are an appropriate model for owners of forests. Some initial plans have already been announced by the Federal Ministry of Agriculture. In addition, in July 2021, the EU forest Strategy is to be published, which is also expected to provide impetus for sustainable forest management.

¹ Sinus Institute (2021): Study: Germans tend to worry about the state of their forests – but have, to date, taken little action to protect them. <https://www.sinus-institut.de/media-center/presse/studie-zum-internationalen-tag-des-waldes> (last visited on 11.06.2021).

² AGDW - Die Waldeigentümer: Unternehmen Wald (*Forest owners: the forest as a business*). <https://www.waldeigentuermer.de/themen/unternehmen-wald/> (last visited on 11.06.2021).

³ Bundesministerium für Ernährung und Landwirtschaft (2021): Ergebnisse der Waldzustandserhebung 2020. (*German Federal Ministry of Food and Agriculture (2021): Results of the 2020 Forest Survey*). https://www.bmel.de/SharedDocs/Downloads/DE/Broschueren/ergebnisse-waldzustandserhebung-2020.pdf?__blob=publicationFile&v=8 (last visited on 11.06.2021): 6.

⁴ See Iris Pufé (2017): Nachhaltigkeit (*Sustainability*): 37.

⁵ See Bundesministerium für Ernährung und Landwirtschaft (2021): Nachhaltige Waldbewirtschaftung: Definitionen und Konzepte auf internationaler Ebene (*German Federal Ministry of Food and Agriculture (2021): Sustainable forest management: definitions and concepts at the international level*). <https://www.bmel.de/DE/themen/wald/waelder-weltweit/nachhaltige-waldbewirtschaftung.html> (last visited on 15.06.2021).

- ⁶ FOREST EUROPE (2021): Bratislava Ministerial Declaration “The Future We Want: The Forest We Need.” <https://foresteurope.org/wp-content/uploads/2017/08/Bratislava-Ministerial-Declaration.pdf> (last visited on 6/18/2021).
- ⁷ See Umweltbundesamt (2021): Nachhaltige Waldwirtschaft (*German Federal Environment Agency (2021) Sustainable forest management*). <https://www.umweltbundesamt.de/daten/land-forst-wirtschaft/nachhaltige-waldwirtschaft#nachhaltige-waldbewirtschaftung-> (last visited on 14.06.2021).
- ⁸ Bundesregierung (2021): Rede der Bundesministerin für Ernährung und Landwirtschaft, Julia Klöckner, beim Nationalen Waldgipfel 2021 am 2. Juni 2021 in Oranienbaum-Wörlitz. In: Bulletin der Bundesregierung Nr. 80-7 vom 8. Juni 2021: 1. (*German Federal Government (2021): Speech by the Federal Minister for Food and Agriculture, Julia Klöckner, at the 2021 German Forest Summit in Oranienbaum-Wörlitz on 2nd June 2021. In: Bulletin of the German Federal Government no. 80-7 of 8 June 2021: 1.*)
- ⁹ Naturschutzbund Deutschlands: Zahlen und Fakten zum Wald in Deutschland und weltweit (*German Conservation Association: facts and figures on forests in Germany and worldwide*) <https://www.nabu.de/natur-und-landschaft/waelder/lebensraum-wald/13284.html> (last visited on 28.06.2021).
- ¹⁰ Bundesministerium für Ernährung und Landwirtschaft (2020): Wald und Forstwirtschaft tragen zu Nachhaltigkeitszielen der Bundesregierung bei (*Federal Ministry of Food and Agriculture (2020): woodland and forest management contribute to the sustainability goals of the Federal Government*). <https://www.bmel.de/DE/themen/wald/wald-in-deutschland/forstwirtschaft-nachhaltigkeitsziele.html> (last visited on 28.06.2021).
- ¹¹ See Schutzgemeinschaft Deutscher Wald: Natürliche Waldentwicklung. Wildnis ist kein Allheilmittel für mehr Biodiversität im Wald (*German Forest Protection Association: Returning forests to nature is no panacea for greater biodiversity in forests*). <https://www.sdw.de/positionen/natuerliche-waldentwicklung/index.html> (last visited on 16.06.2021).
- ¹² See Gerhard Hofmann: Pflanzenarten- und Strukturvielfalt in Wirtschaftswäldern (*Plant species and structural diversity in commercial forests*). In: *AFZ – Der Wald* (AFZ: the forest) magazine, 1/2018: 24-31.
- ¹³ Ernst-Detlef Schulze / Christian Ammer: Konflikte um eine nachhaltige Entwicklung der Biodiversität: Spannungsfeld Forstwirtschaft und Naturschutz (*Conflicts for a sustainable development of biodiversity: the tension between forestry and conservation*). In: *Biologie Unserer Zeit* (Biology of our time) magazine 5/2015: 306.
- ¹⁴ Ute Seeling: Land- und Forstwirtschaft – was tun zum Klimaschutz? (Agriculture and forestry – what can be done about climate protection?) In: *LAND. MitgliederMagazin der Familienbetriebe Land und Forst* (LAND. Members’ magazine of country and forest family businesses) 1/2021: 38.
- ¹⁵ Bundesministerium für Ernährung und Landwirtschaft (2018): Der Wald in Deutschland. Ausgewählte Ergebnisse der dritten Bundeswaldinventur (*Federal Ministry of Food and Agriculture (2018): the forest in German. Selected results of the third federal forest inventory*). https://www.bmel.de/SharedDocs/Downloads/DE/Broschuere/bundeswaldinventur3.pdf;jsessionid=A64D9C4AF77B067D25240C6C65C2708C.live922?_blob=publicationFile&v=3 (last visited on 28.06.2021): 9.

¹⁶ Federal Ministry of Food and Agriculture (2021): press release from Klöckner: we want to recognise the climate protection benefits of the forest. <https://www.bmel.de/SharedDocs/Pressemitteilungen/DE/2021/095-Waldgipfel.html> (last visited on 14.06.2021).

¹⁷ Stefanie Awater-Esper (2021): Klöckner stellt Modell einer Klimaprämie für den Wald vor (*Klöckner presents the model of a climate payment for forests*): In: *top agrar online* dating from 03.06.2021. <https://www.topagrar.com/jagd-und-wald/news/kloeckner-stellt-modell-fuer-klimapraemie-fuer-den-wald-vor-12583900.html> (last visited on 18.06.2021).

Legal notice

The author

André Algermißen is responsible for the subject areas of climate, agriculture and environment in the Agenda 2030 department of the Konrad Adenauer Foundation. He previously worked as a research assistant for a member of the German federal parliament (Bundestag). Mr. Algermißen studied at the Rhenish Friedrich Wilhelm University of Bonn, the Ruprecht Karl University of Heidelberg, the University of St. Andrews and the University of New Mexico Albuquerque.

Konrad-Adenauer-Stiftung e.V.

André Algermißen

Policy Advisor for Climate, Agriculture and Environment,
Division Analysis and Consulting

Tel. +49 30 / 26 996-3945

andre.algermissen@kas.de

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