

# Sustainable Forest Management - Can Consumers Make an Impact?

## Introduction

Forests are important for mitigating climate change, economic development and quality of life as forests provide recreation (Tosun, 2012). The forests of the world are currently decreasing and sustainable forest management (SFM) is becoming more and more important. SFM is the management of forests in a way that maintains biodiversity and ecosystem services for current and future generations at global and local scales whilst not causing damage to other ecosystems (Program for the Endorsement of Forest Certification, 2023). From 1990 to 2020 the area of forests globally has gone from 4128 million hectares to 4059 million hectares (Yamamoto & Matsumoto, 2022). Many measures have been implemented in order to try to reduce deforestation and improve SFM; the sustainable development goals (SDG) and different forest certifications are some examples of such implementations (Yamamoto & Matsumoto, 2022).

Forest certification is a voluntary process (Program for the Endorsement of Forest Certification, 2023) where the quality of the forest management in an area is assessed by an independent third-party (Rametsteiner & Simula, 2003). The assessment is made based on predetermined requirements and results in a written assurance/certification if the forest management process fulfils the standard (Tosun, 2012). Certification aims to use consumer power as a market force. The certification system allows forest management to be directly influenced by consumer preference (Clark & Kozar, 2011) and as a result regulates the behaviour of both the consumers and producers of forestry products (Tosun, 2012). The aim of this paper is to give an overview of SFM and its certification. Two examples of forest certification will be discussed and compared: the Forest Stewardship Council (FSC) and the Program for the Endorsement of Forest Certification (PEFC).

## Consumer impact on the certification cycle

The need for SFM began in the early 1990s as irresponsible forestry and biodiversity loss, especially in the tropics, became apparent (Rametsteiner & Simula, 2003). This then created demand for sustainable forestry products by consumers which eventuated in the certification process (see Figure 1 (a)). This demand from consumers resulted from a change in consumer preference which altered the marketplace, decreasing returns, and eventuated in companies requiring certification to increase premiums and market access (Schepers, 2010). In 1993 the FSC was founded to combat this issue (Clark & Kozar, 2011) followed by the PEFC in 1998 (Tosun, 2012).

Certification consists of five steps (see Figure 1 (b)) (Forest Stewardship Council, 2023). First, forest managers and owners must become familiar with the certification options and requirements of the country. Then they must ensure that their management practices meet the standards required. From here they can contact the appropriate accredited certification bodies. The PEFC offers a cheaper option for small, family and community owned forests at this step (Program for the Endorsement of Forest Certification, 2023). The forest will then undergo an onsite audit by the certification body and based on compliance with certification requirements, will gain certification.

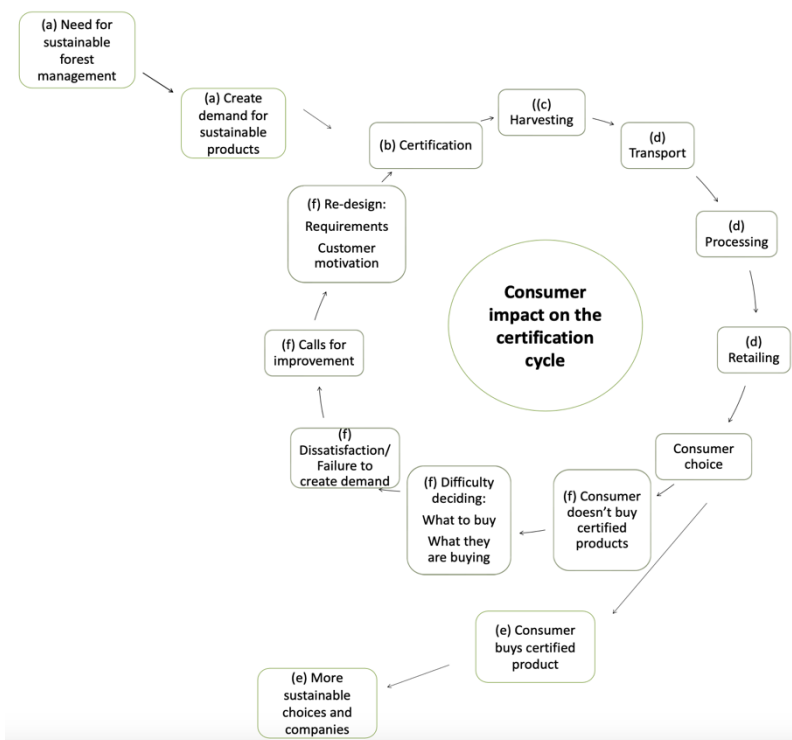
Harvesting of forestry products is then completed in compliance with certification requirements which ensures that the practice is sustainable through continuous auditing (see Figure 1 (c)) (Clark & Kozar, 2011). Continuous auditing in line with the most up to date guidelines ensures that forests are continuously managed sustainably and certification can be withdrawn if the forest management is not to standard (Tosun, 2012).

The final product is formed during the transport, processing and retailing phases of the cycle (see Figure 1 (d)). Forestry products do not just include wood, paper and packaging but also construction materials, fashion, fibre, and furniture (Forest Stewardship Council, 2023). Certification includes a chain of custody that tracks forestry products from forests through to the final product and is monitored through independent auditing to ensure sustainability of the final product (Program for the Endorsement of Forest Certification, 2023).

Consumers then have a choice; to buy or not to buy these certified products. In buying certified products forest management is being directly influenced by consumer preference (Clark & Kozar, 2011) and as a result regulates the behaviour of both the consumers and producers of forestry products (see Figure 1 (e)) (Tosun,

2012). This then leads to an increase in demand for certified products and thus the pressure on forest management and companies to become certified also increases in order to maintain their market share (Clark & Kozar, 2011). The result of this is that there has been a 41% increase in certified production across sustainable commodity sectors (Brach et al., 2018). In the end the hope is that demand for unsustainable products will cease and only products from certified forests will be sold (Tonsun, 2012). Current research shows that certified labelling on certified products promotes the purchase of these products over conventional products (Brach et al., 2018).

Not buying certified products usually arises from consumer confusion as consumers cannot determine which labels signify the most sustainably managed forests (Clark & Kozar, 2011) and if they can trust certification (see Figure 1 (f)) (Brach et al., 2018). In this way the sustainable product market can be seen as featuring more asymmetric and imperfect information (Brach et al., 2018). One of the main barriers to buying certified products for many consumers is price (Brach et al., 2018), however if a certified product and a conventional product both have the same price then consumers are more likely to choose the certified product (Zanchini et al., 2022). There are also other barriers to buying certified products such as the threat of poorer performance of the product and losing time choosing the product (Brach et al., 2018). These barriers can all lead to consumer dissatisfaction with the certified product and thus for consumption and demand for these products to decrease. This can then lead to a call for improvement as companies realise their need to create demand for their certified products. For many consumers there is no difference in choice of certification labels which is most likely due to lack of knowledge or interest in the certification process (Zanchini et al., 2022). Improvement here would improve consumer knowledge and motivation to purchase sustainable products and could also lead to a change in the certification guidelines to further educate consumers.



**Figure 1:** Consumer Impact on the Certification Cycle . This Figure illustrates the different steps involved in the certification cycle and how consumers have an impact on it. The cycle starts with customers' need or demand for sustainable products (a), whereafter it goes on to certification (b), and then harvesting of the certified forest (c), followed by transport, processing and retailing of the product (d). When the product is ready for sale, customers have a choice to buy it or not. Customers buying the product supports more sustainable companies (e). Consumers not buying the product can be based on dissatisfaction with the product or difficulties to understand what one is buying, which can then result in a need for improvement or a re-design of the certification and requirements (f). After the calls for improvement and an eventual re-design of the certification, the cycle continues again from (b) with a renewed product or possibly a new type of certification.

## Certification schemes

Together the FSC and PEFC have certified 431.4 million hectares of forest (Yamamoto & Matsumoto, 2022) and are two of the largest certification systems worldwide. The FSC aims to promote sustainable forestry by gathering citizens, businesses, governments and NGOs to unite for a common goal: to protect healthy, resilient forests for all, forever (Forest Stewardship Council, 2023). The PEFC aims to protect forests both globally and locally by promoting SFM through certification to ensure that future generations can benefit from forestry products (Program for the Endorsement of Forest Certification, 2023).

Both the FSC and PEFC focus on improving SFM (Yamamoto & Matsumoto, 2022), but there are some differences between them. The main differences are that the FSC has international performance levels which are the same in all countries for all companies and organisations that opt to adopt this type of certification whereas the PEFC has mandatory international indicators but also recognises and approves local and additional indicators (Zanchini et al., 2022). In this way the PEFC is more tailored to the specific context of each country and forest type (Program for the Endorsement of Forest Certification, 2023). Both also have group certifications which promote the certification of small, community and family owned forests (Program for the Endorsement of Forest Certification, 2023) (Forest Stewardship Council, 2023). These certifications also put more emphasis on ecological sustainability than on social and economic aspects (SAVCOR, 2005).

The FSC is seen to be the most well known forest certification label (Forest Stewardship Council, 2023) and offers the only existing global set of standards that has been explicitly elaborated and function as a reference for the certification of forest management (Rametsteiner & Simula, 2003). Furthermore there is a strong consensus that FSC forests achieve higher levels of SFM than other certified forests (Clark & Kozar, 2011) and that they also have a greater effect on mitigating forest loss (Yamamoto & Matsumoto, 2022).

## **Sustainable forest management and the sustainable development goals**

As mentioned in the introduction, the sustainable development goals are one of the measures that have been introduced to reduce forest deforestation and improve SFM. Forest certification and SFM is especially essential for SDG15: Life on Land. SDG15 exclusively targets production forests and assists in halting biodiversity loss. However, SFM is also important to other SDGs. The use of certified products in building materials is important for SDG 11: Sustainable Cities and Communities. Certified products also ensure a more circular production and consumption cycle which is important for SDG 12: Responsible Consumption and Production. Sustainably managed forests can also be used to combat climate change as they remove carbon dioxide from the atmosphere which is important for SDG 13: Climate Change. Finally, SFM is a collaborative scheme that includes many different stakeholders across the globe making it extremely important for SDG 17: Partnership for the Goals (United Nations, 2023).

## **Conclusion**

Forests are important both for economic, social, and environmental reasons (Tonsun, 2012). Due to decreasing forest areas around the globe the importance of SFM has increased during the last decades (Rametsteiner & Simula, 2003). Forest certification is one measure that can be used to improve SFM. The FSC and PEFC are two of the largest certification systems in the world and both focus on improving SFM (Yamamoto & Matsumoto, 2022). Forest certifications are market-based and therefore dependent on consumers buying products that are labelled with certifications (Clark & Kozar, 2011). Since consumers have the power to choose whether to buy a product or not, they also have the power to make an impact on the certification cycle. It is not easy for consumers to understand the meaning of certifications and why one should buy certified products. Consumer education is therefore essential. Consumers can only make an impact on SFM if they understand its meaning and the importance of buying certified products. A demand from consumers for certified products puts pressure on the forest industry to improve their management of forests. It can, in the best scenario, result in more SFM and consequently help maintain biodiversity and ecosystem services for future generations at a global and local scale (Program for the Endorsement of Forest Certification, 2023). SFM and forest certification are an important part of SDG15 and also relevant for SDGs 11, 12, 13 and 17. In conclusion, we have found that you as a consumer can make an impact by choosing certified products. Your choice to buy certified products supports sustainable producers and sends a signal to other important actors that there is a demand for SFM.

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