

LATEST TRENDS IN THE EVOLUTION OF PEFC CERTIFICATION

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Abstract

Worldwide, PEFCTM represents the most spread certification scheme in forestry. The goal of this paper was to highlight the evolution of the number of Chain of Custody (CoC) certificates and the PEFCTM certified area worldwide between 2013 and 2017, by analyzing the public data provided by the official website. Currently, the total PEFCTM certified forest area accounts for approximately 313 million hectares, out of which 55% are located in North America. As for the largest forest areas certified by PEFCTM the top three places are held by Canada, The United States of America and Australia. At the end of 2017, in Europe the PEFCTM scheme had certified forests from a total number of twenty four countries, with the highest areas being shared by Finland, Russian Federation and Sweden. According to the most recent statistics, around 82% of the total CoC certificates issued worldwide were recorded in Europe, France, Germany and United Kingdom being the countries with the highest shares. Currently, in Romania only twenty three CoC certificates were issued and no forest area was yet certified.

Key words: Chain of Custody, CoC, Europe, forest certification, PEFCTM

INTRODUCTION

In general, forest certification represents a mechanism aimed to promote a sustainable forest management through preserving the functions of the forests and to provide economic benefits at the same time [21].

The certification schemes are voluntary, being regarded as an useful instrument of Corporate Social Responsibility (CSR) in the case of the wood industry [17].

Worldwide, several forest certification systems exist [20], such as Forest Stewardship Council (FSC[®]) and Pan-European Forest Certification (PEFCTM) that represent the most common ones [7], [18].

PEFCTM was set up twenty years ago by a group of European stakeholders [8], mainly forest owners, being a non-profit organization which assesses, endorses and recognizes the national certification schemes [28].

PEFCTM was criticized right from the beginning for the fact that it is mainly focused

on the economic income and very little attention is given to the ecological functions and services provided by the forest ecosystems [16].

Starting from its birth, PEFCTM was seen as an alternative to FSC[®] aimed at preventing the spread of the latter one across European countries [25]. From the point of view of forest companies, this certification scheme is perceived as one that has fewer requirements regarding sustainable forest management standards [30].

Like in the case of FSC[®] certification scheme, PEFCTM promotes also the concept of Chain of Custody (CoC), which guarantees that the wood or wood-based products came from properly managed forests [10], [12].

Starting from 2013, PEFCTM aligned its Chain of Custody standard in the case of imported wood and wood products with the requirements of the European Timber Regulation (EU-TR), especially as regards the due diligence system (DDS) [15].

The special attention which is paid to the management of the artificial regeneration of the forests by using certified forest seeds [29] and the reduction or even the elimination of the pesticides [23] represent ones of the most important provisions of the PEFC™.

In some countries, PEFC™ standard takes into account the management of the non-timber forest products (NTFPs). An example is the aromatic essence extracted from mug pine (*Pinus mugo* Turra) in Italy [27].

The total number of certified forests had grown exponentially since the release of the PEFC™ scheme. Five years after its appearance, the total area of the certified PEFC™ forests worldwide accounted for more than 46 million hectares [9]. After two years, the total certified area reached more than 187 million hectares [11], expanding to 202 million hectares in 2008 [2], 220 million hectares in January 2010 [1] and 232 million hectares at the end of 2010 [3].

In 2005, the PEFC™ certified forest area from Western Europe accounted for around four-fifths of the European certified forest lands [19]. After another six years, the total area of PEFC™ certified forests in EU countries was around 48 million hectares, being almost double in comparison with the FSC® certified area [5].

According to the latest available statistics, it is estimated that nowadays the total certified forest area (mainly PEFC™ and FSC®) represents around 10% of the globally forest area [14], [22].

As concern the situation in Romania, where the forests account for more than 27% of its area [24], only FSC® and PEFC™ certification standards were present at the time of this study [6]. As regards the FSC®, nowadays there are more than 2,7 million hectares certified, the vast majority of them bellowing to the state and being managed by the National Forest Administration ROMSILVA. Instead, until recently little attention was given to PEFC™. In 2014, a meeting of the representatives of the private forest owners and wood industry took place in Braşov and the opportunity to implement the PEFC™ certification scheme was debated [13]. After several other meetings that took

place in the last years, the national standard was adopted, being currently under revision by the international PEFC™ structure.

The purpose of this paper was to point out the evolution of the number of the Chain of Custody certificates and of the certified forest area in the timeframe 2013 - 2017.

MATERIALS AND METHODS

All the data regarding the number of released Chain of Custody certificates and the certified forest area for the timeframe 2013-2017 was gathered from the official website of PEFC™, from Facts & Figures section [26].

RESULTS AND DISCUSSIONS

In the case of the certified forest lands, their area increased from 253 million hectares, in 2013, to 313 million hectares, in 2017 (Fig. 1).

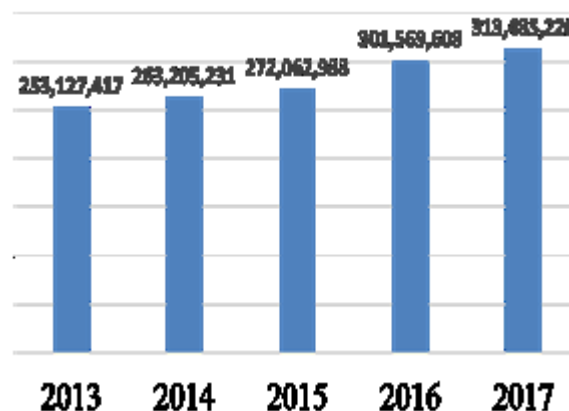


Fig. 1. The evolution of PEFC™ certified forest area worldwide

Source: PEFC™, <https://www.pefc.org/about-pefc/who-we-are/facts-a-figures>

In 2017, the highest share (55%) of the certified forests was recorded in North America, followed by Europe (30%) and Oceania (almost 8%), while the smallest share was hold by Central and South America.

Across Europe, countries such as Finland, Russian Federation and Sweden were the ones with the highest certified PEFC™ areas, while the Netherlands, Luxembourg and Switzerland ranked in the last positions (Fig. 2).

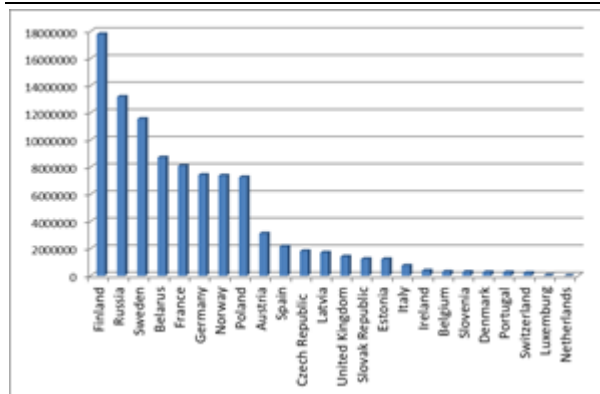


Fig. 2. The top of the European countries as regards the PEFC™ certified forest area

Source: PEFC™, <https://www.pefc.org/about-pefc/who-we-are/facts-a-figures>

In the last five years, the number of CoC certificates increased with approximately 1,500 (Fig. 3).

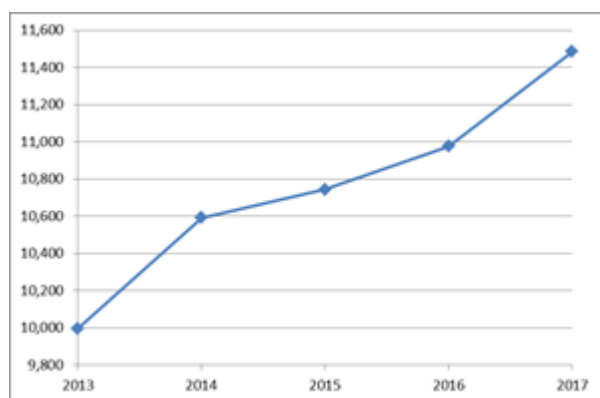


Fig. 3. The evolution of the CoC certificates worldwide
Source: PEFC™, <https://www.pefc.org/about-pefc/who-we-are/facts-a-figures>

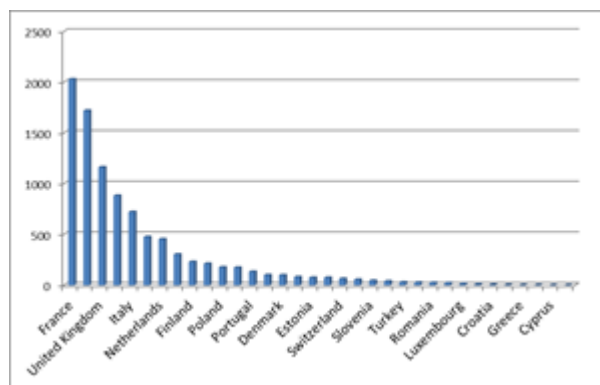


Fig. 4. The top of the European countries regarding the number of CoC certificates

Source: PEFC™, <https://www.pefc.org/about-pefc/who-we-are/facts-a-figures>

In 2017, around four-fifths of the total CoC certificates were recorded in Europe, France, Germany and United Kingdom being the

countries with the highest shares, with 21%, 18% and 12%, respectively, while in Cyprus, Greece and Croatia the fewest numbers were recorded (Fig. 4).

According to the data available in 2017, twenty three Chain of Custody certificates were valid in Romania (Fig. 4), the situation being more or less similar with the one from Turkey.

CONCLUSIONS

North America holds the highest area of PEFC™ certified forests, while in Europe the highest number of CoC certificates was recorded.

Given the current situation regarding the area of certified forests worldwide (more than 313 million hectares PEFC™ certified and around 200 million hectares FSC® certified) and the market demands, it is expected that soon after the approval of the national PEFC™ standard, several small private owners from Romania will certify their forests and more companies from the wood industry will get their CoC certificates.

Last but not least, PEFC™ could play an important role in Romania as regards the certification of the NTFPs, being well known that the country has a great potential in marketing of these forest products [4].

REFERENCES

- [1]Chen, J., Tikina, A., Kozak, R., Innes, J.L., Duinker, P., Larson, B., 2011, The efficacy of forest certification: Perceptions of Canadian forest products retailers, *Forestry chronicle* 87(5): 636-643.
- [2]Cubbage, F., Diaz, D., Yapura, P., Dube, F., 2010, Impacts of forest management certification in Argentina and Chile, *Forest Policy and Economics* 12: 497-504.
- [3]Damette, O., Delacote, P., 2011, Unstable timber harvesting, deforestation and the role of certification, *Ecological Economics* 70: 1211-1219.
- [4]Enescu, C.M., 2017, Which are the most important non-wood forest products in the case of Ialomița County?, *AgroLife Scientific Journal* 6(1): 98-103.
- [5]Gafó Gomez-Zamalloa, M., Caparros, A., San-Miguel Ayanz, A., 2011, 15 years of Forest Certification in the European Union. Are we doing things right?, *Forest Systems* 20(1): 81-94.
- [6]Gavriliuț I., Hălălișan, A.F., Giurcă, A., Sotirov, M., 2016, The Interaction between FSC® Certification and

- the Implementation of the EU Timber Regulation in Romania, *Forests* 7(1), 3, doi: 10.3390/f7010003.
- [7] Gilani, H.R., Kozak, R.A., Innes, J.L., 2018, Chain of custody certification involvement by the British Columbia value-added wood products sector, *Eur. J. Wood Prod.* 76: 1061-1069.
- [8] Gulbrandsen, L.H., 2005, The Effectiveness of Non-State Governance Schemes: A Comparative Study of Forest Certification in Norway and Sweden, *International Environmental Agreements* 5: 125-149.
- [9] Gullison, R.E., 2003, Does forest certification conserve biodiversity?, *Oryx* 37(2): 153-165.
- [10] Haltofová, P., Adámek, P., 2014, Corporate Social Responsibility in Companies of the Primary Sector in the Czech Republic, a Preliminary Study, *Procedia Economics and Finance* 12: 206-212.
- [11] Hălălișan, A.F., Marinchescu, M., Abrudan, I.V., 2012, The evolution of forest certification: a short review, *Bulletin of the Transilvania University of Brașov Series II: Forestry • Wood Industry • Agricultural Food Engineering* 54(2): 35-42.
- [12] Hălălișan, A.F., Marinchescu, M., Popa, B., Abrudan, I.V., 2013, Chain of Custody certification in Romania: profile and perceptions of FSC® certified companies, *International Forestry Review* 15(3): 1-10.
- [13] Hălălișan, A.F., 2015, The evolution of forest certification in Romania, *Revista Pădurilor* 1-2: 64-69.
- [14] Hălălișan, A.F., Enescu, R.E., 2015, Forest management certification process in Romania, *Revista Pădurilor* 3-4: 37-42.
- [15] Holopainen, J., Toppinen, A., Perttula, S., 2015, Impact of European Union Timber Regulation on Forest Certification Strategies in the Finnish Wood Industry Value Chain, *Forests* 6: 2879-2896.
- [16] Johansson, J., Lidestav, G., 2011, Can voluntary standards regulate forestry? – Assessing the environmental impacts of forest certification in Sweden, *Forest Policy and Economics* 13: 191-198.
- [17] Johansson, J., 2014, Why do forest companies change their CSR strategies? Responses to market demands and public regulation through dual-certification, *Journal of Planning and Management* 57(3).
- [18] Klingberg, T., 2003, Certification of Forestry: A Small-scale Forester Perspective, *Small-scale Forest Economics, Management and Policy* 2(3): 409-421.
- [19] Kooten, G.C., Nelson, H.W., Vertinsky, I., 2005, Certification of sustainable forest management practices: a global perspective on why countries certify, *Forest Policy and Economics* 7: 857-867.
- [20] Lewandowski, I., Faaij, A.P.C., 2006, Steps towards the development of a certification system for sustainable bio-energy trade, *Biomass and Bioenergy* 30: 83-104.
- [21] Măciucă, A., 2003, Aspects regarding the wood certification in Romania, *Environmental Engineering & Management Journal* 2(3): 199-204.
- [22] Măciucă, A., Diaconescu, C., 2013, Forest certification on sustainable management of Romanian forest ecosystems, *Present Environment and Sustainable Development* 7(1): 222-234.
- [23] McCarthy, N., Bentsen, N.S., Willoughby, I., Balandier, P., 2011, The state of forest vegetation management in Europe in the 21st century, *Eur J Forest Res* 130: 7-16.
- [24] Palaghianu, C., Dutcă, I., 2017, Afforestation and reforestation in Romania: History, current practice and future perspectives, *Reforesta* 4: 54-68.
- [25] Palmujoki, E., 2006, Public-private governance patterns and environmental sustainability, *Environment, Development and Sustainability* 8: 1-17.
- [26] PEFC Facts & Figures 2018. <https://www.pefc.org/about-pefc/who-we-are/facts-a-figures>, Accessed May, 13, 2018.
- [27] Pettenella, D., Secco, L., 2006, Small-scale forestry in the Italian Alps: From mass market to territorial marketing, *Small-scale forestry and rural development, Proceedings of IUFRO 3.08 Conference, 18-23 June 2006*, 398-408.
- [28] Sikkema, R., Junginger, M., van Dam, J., Stegeman, G., Durrant, D., Faaij, A., 2014, Legal Harvesting, Sustainable Sourcing and Cascaded Use of Wood for Bioenergy: Their Coverage through Existing Certification Frameworks for Sustainable Forest Management, *Forests* 5: 2163-2211.
- [29] Teodosiu, M., Konnert, M., 2014, The control of the forest reproductive material: the genetic traceability, support for forest certification and a sustainable forest management, *Bucovina Forestieră* 14(2): 195-204.
- [30] Tosun, J., 2012, Forest certification in Europe: exploring the determinants of cross-country variation, *Marmara Journal of European Studies* 20(1): 177-197.