

EFI Multi Donor Trust Fund for Policy Support: Annual Report 2019

20 January 2020



EFI MDTF for Policy Support countries marked by green color. These countries (excl. Norway) represent 72% of the EU forest area, and 60 % of the European forest area (excl. Russia)



EFI ThinkForest seminar, Prague, 4 April 2019 (Photo: Ondrej Hajek)



Executive Summary

What is this document?

This document is the Annual Report of the **EFI Multi Donor Trust Fund for Policy Support Facility** (hereafter MDTF) for 2019. It presents the activities, outputs, impacts and budget of the MDTF for 1 January 2019 to 31 December 2019. Year 2019 was the second year of the new 3-year cycle of MDTF (2018-2020). The Annual Report aims to provide transparent information, which can also be used to assess and evaluate the performance and impact of the MDTF work.

Facility management

EFI Assistant Director Lauri Hetemäki coordinated MDTF project activities in 2019, with important support from Communications Officer Ulla Vanttinen, Head of Communications Rach Colling, Administrative Officer Jarkko Haltia and Brussels Liaison Officer Harald Mauser. The ThinkForest Forum has been chaired by its President, Göran Persson, until June 2019 and from there onwards by the new President Janez Potočnik. In addition, other EFI staff resources and outside subcontracting have been used to carry out the activities during 2019.

Facility funding and costs in 2019

In 2019, the MDTF consisted of the following 10 Donor countries: *Austria, Czech Republic, Finland, Germany, Ireland, Italy, Lithuania, Norway, Spain and Sweden*. The total financial contribution from the countries to the MDTF by the end of 2019 was **703 315** euros. The total amount of expenses in 2019 is estimated to have been **595 000 euros**. *It should be noted that when writing this on 20 January, the EFI accounts for 2019 had not yet been finalized.*

Summary of activities

The highlights of activities and outputs from 2019 include:

In 2019, two *From Science to Policy* (FSTP) studies were published: “Living with bark beetles: impacts, outlook and management options” and “Plantation forests in Europe: challenges and opportunities”. In addition, the previously published FSTP 5 “Leading the way to a European circular bioeconomy strategy” was published in Chinese and Russian (print and online). Four online newsletters, *Science Supporting Policy-making* were distributed to the EFI network (approx. 945 recipients by the end of 2019).

ThinkForest events are the flagship science-policy events organized by MDTF, and there were two such events in 2019: 1. “*How to respond to forest disturbances in Europe*”, held in *Prague*, 4 April 2019; and

2. “The Future of Plantation Forests in Europe”, held at the International Press Center, Brussels, 17 December 2019. In addition, MDTF organised a seminar on “China-Europe Forest Bioeconomy” together with the Embassy of Finland in Beijing on 14 November 2019.

Summary of impacts

Publications were widely distributed both in printed and digital forms. 600 copies of each *From Science to Policy study* were printed, and these were distributed at ThinkForest events, to policy makers and stakeholders in Brussels via EFI’s Brussels Liaison Office, and sent to EFI’s network. The electronic copies of both newly published and back catalogue publications again proved popular.

MDTF-funded publications have become increasingly cited in both academic journals and by policy makers (see Appendix). Publications about the bioeconomy (for example FSTP5 Leading the way to a European circular bioeconomy strategy and *What Science Can Tell Us 8* Towards a sustainable European forest-based bioeconomy – assessment and the way forward) were strongly cited in 2019, with 24 and 19 academic citations respectively. Policy citations included UNECE and the International Labour Organization.

To ensure maximum impact and findability, in 2019 all *From Science to Policy* studies were given Digital Object Identifier or DOI references. This is a string of numbers, letters and symbols used to identify an article or document and link it to the web. A DOI will help a reader easily locate a document.

ThinkForest event participation: In total, 201 people took part in ThinkForest events in Prague in April and Brussels in December in 2019 (132 and 69 participants, respectively). In addition, the two ThinkForest seminars were watched by video/web streaming by 1 655 persons by the end of 2019 (1 388 and 267, respectively). The web streaming/video has turned out to be a necessary channel to reach a wider audience, although it may at the same time reduce the number of participants physically present in the seminar. In terms of background, four major participant groups were: the research community, national government (ministries), forest industry and other stakeholder groups.

MDTF also organised a seminar on “China-Europe Forest Bioeconomy” together with the Embassy of Finland in Beijing on 14 November 2019. The event was well received, and was attended by 49. Participants included Peng Youdong, Vice-Minister of the National Forestry and Grasslands Administration and the Ambassadors from Finland and Germany, and Deputy Ambassador from Slovenia.

Media impact: MDTF Policy Support work was again actively promoted in “traditional” and social media in 2019. Media published 21 articles related to ThinkForest seminars, 5 related to publications, and 3 relating to the China-Europe event. The different stakeholder groups published in total 13 follow-up articles in their forums relating to events.

In 2019, MDTF supported EFI’s Lookout Station to organise a Sound Reporting Co-Lab, a 6-month media support programme for journalists. This included a successful media bootcamp in the Bialowieza Forest in Poland in July 2019, which focused on the issue of bark beetles. The journalists’ outputs are expected during 2020.

During 2019, MDTF-funded policy support work was promoted via social media, taking advantage of EFI's existing channels to reach a geographically widespread audience. Effort focused on Twitter, which is used professionally by the policy maker audience. For example, Twitter was used at each of the ThinkForest events, to encourage interaction and dialogue with participants, both those in the room and those watching via the livestream. During 2019, there were 1,629 tweets from the main EFI Twitter account, which gained over 1,420 new followers. The messages were also amplified by EFI's other Twitter accounts (eg @efiresilience, @efimed, @efiplant).

Expert presentations, hearings and statements: Many requests for presentations or expert statements in policy or science-policy forums based on the publications and ThinkForest events indicated the usefulness of the MDTF events and publications. Based on the *From the Science to Policy* –series studies, the authors of the studies and Chief-Editor provided 32 presentations and expert statements in 2019 at various science-policy and at other forums.

Feedback from the network: The publications and ThinkForest events have been tackling topical policy issues and have been considered timely. In particular, participants have appreciated that issues high on the political agenda have been brought to the discussion, and needed science-based information has been provided by the studies and ThinkForest seminars. ThinkForest events have been highly valued by various Commission officials (e.g. Commissioners, senior EC officials, Joint Research Centre officials), national government civil servants, EFI Associate Member representatives, and forest-based sector stakeholders. A half-day 'China-Europe Forest Bioeconomy' event was also well-reserved by national government civil servants, industry and other stakeholder groups.

Contents

1. Introduction	6
1.1 EFI Multi Donor Trust Fund for Policy Support	6
1.2 MDTF funding and management	8
2. Activities and outputs	9
2.1 Publications	9
2.2 ThinkForest and other seminars	12
2.3 Other outputs	16
3. Impacts	20
3.1 Downloads	20
3.2 Impact and feedback from stakeholders and network	21
3.3 Expert presentations, statements and hearings	23
3.4 Media impacts	26
4. Reporting of expenses	28
4.1. Background	28
4.2 Expenditures by cost category	28
5. Current and emerging forest-related policy issues and trends	29
5.1 Changes in the EU Governance framework in 2019	29
5.2 Forest-related EU policy-making: new thinking with narrower scope	31
5.3 Green Deal: a promising start, but not yet there	38
6. Conclusions	42
Annex: Tables	
Table 1: Online statistics	44
Table 2: Number of ThinkForest participants according to background	48
Table 3: Stakeholder follow-up articles related to events and publications	50
Table 4: Media coverage	52
Table 5: Publication citations	55

1. Introduction and background

1.1 EFI Multi Donor Trust Fund for Policy Support

The objective of the Multi-Donor Trust Fund (MDTF) is to support the operationalization of the activities of the EFI Policy Support Facility. The Trust Fund completed its first 3-year period at the end of 2017, and started a new 3-year period on 1 January 2018.

The Steering Committee is the highest decision-making body of MDTF. The Steering Committee approves the MDTF work programme and related budget. The main aims and responsibilities of the Steering Committee are to provide *strategic guidance and advice* on the operations of FPS. It receives information from the EFI secretariat and gives feedback regarding the outputs, outcomes and impacts resulting from the activities of MDTF policy support work. The Steering Committee does not take part in the operation and management of the MDTF policy support work, science-policy studies, or the selection of the scientists conducting the studies. This is in line with the principle of safeguarding the scientific integrity of the actual science-policy work. However, the Steering Committee members can *comment* the science-policy study manuscripts, but they *do not review* them. That is, the decision how to incorporate, or not to incorporate, the possible Steering Committee comments to the studies, rests on the scientists.

The Steering Committee consists of a representative of each donor and the Director of EFI or his authorized representative. The Chair of the EFI Scientific Advisory Board (SAB), or a designated SAB member, took part in the meetings as an observer. The membership of a donor ends 12 months following the last contribution of the donor. The Steering Committee meets at least once a year, and maintains an active interaction through correspondence, and can meet informally in connection with other international meetings.

In 2019, the MDTF Steering Committee members were:

1. Harald Aalde, Ministry of Agriculture and Food, Norway (Silje Trollstøl in spring 2019)
2. Zbignev Glazko, Ministry of Environment, Lithuania
3. Thomas Haußmann, Federal Ministry of Food and Agriculture, Germany
4. José Manuel Jaquotot, Ministry of Agriculture and Fisheries, Food and Environment, Spain
5. Tomas Krejzar, Ministry of Agriculture of the Czech Republic, Czech Republic
6. Fergus Moore, Department of Agriculture, Food and the Marine, Ireland (Noel O'Connor in spring 2019)
7. Marc Palahí, EFI
8. Enrico Pompei, Ministero delle Politiche Agricole Alimentari e Forestali, Italy
9. Georg Rappold, Federal Ministry on Sustainability and Tourism, Austria
10. Jan Svensson, Ministry of Enterprise and Innovation, Sweden (Ingeborg Bromée in spring 2019)
11. Tatu Torniainen, Ministry of Agriculture and Forestry, Finland

The MDTF policy support work is managed and administrated by the EFI Policy Support Facility. The actual implementation of the science-policy studies is based on the work by EFI staff, its Associate Members, and the science community in general. The aim of the work is to:

- respond in a timely manner to policy makers' information needs with scientific-based analysis and information in an easily understandable and policy-relevant format and scale;
- support the formulation, monitoring and evaluation of sustainable policies and strategies relevant for the European forest-based sector;
- communicate effectively and consequently build a better understanding of forest-related issues, proactively involving policy makers, scientists and stakeholders.

The above objectives are carried out in particular through EFI MDTF science-policy publications (*From Science to Policy* reports and *What Science Can Tell Us* reports) and ThinkForest forum high-level science-policy seminars. The ThinkForest forum events are usually chaired by its President. During January 2015 to June 2019, the President was Göran Persson (Prime Minister of Sweden 1996-2006); and from July 2019 onwards Janez Potočnik, the former EU Commissioner for both Science and Research, and Environment. The President's role has also been important in representing ThinkForest and EFI policy support work in different platforms (e.g., international conferences, videos), providing important networks and access to high-level policy makers, inviting speakers to the ThinkForest seminars, and providing strategic advice for EFI management in science-policy support work.



ThinkForest President Janez Potočnik chairing the seminar on the Future of Plantation Forests in Europe, 17 December, Brussels (Photo: Simon Pugh)

1.2 MDTF funding and management

Funding: The members of the MDTF in 2019 were 10 countries: ***Austria, Czech Republic, Finland, Germany, Ireland, Italy, Lithuania, Norway, Spain and Sweden.*** The total contribution of donors in 2019 was **703 315 euros**. The expenses of MDTF activities during 1 January to 31 December 2019 is estimated to have been **595 000 euros** (*the exact amount will be known when the EFI accounts for 2019 are finalized in 2020*).

According to the MDTF Guidelines, funding can be used to finance the following categories of expenditure:

- Policy Support Facility staff costs and travel expenses;
- EFI staff costs, consultant and expert fees and related expenses (travels, etc.) to coordinate and conduct Policy Support Facility studies and activities;
- Costs for contracting EFI member organizations and other relevant organizations for carrying out scientific assessments, policy studies, etc.;
- EFI staff costs and travel expenses related to the negotiations of the trust fund, its establishment and enlargement;
- Communication and media expenses, including publications (e.g. *From Science to Policy* and *What Science Can Tell Us* studies)
- Briefs, EFI News, etc., translations, and video and electronic media;
- Workshop, conference and meeting expenses, including costs associated with presenters, publicity, translation and reporting;
- Equipment related to supporting the activities of FPS;
- Office running costs (not covered by the agreed overheads);
- Costs related to activities, not included above, that have the approval of the Steering Committee;
- Auditing and final external evaluation costs.

Management: The MDTF policy support work is managed and administrated by the *EFI Policy Support Facility*. It initiates, coordinates, carries out and disseminates science-based analysis and synthesis assessments for policy makers, stakeholders, media and the public at large. It supports science-policy dialogue and functions as a go-between scientists and policy makers. One of the main activities is also the managing and operation of ThinkForest Forum, the high-level science-policy information, discussion and information-sharing forum.

Based on feedback from the Steering Committee members, EFI prepares an annual work plan and an associated budget which is approved by the Steering Committee. Studies may be planned to be conducted within a period of up to three years subject to the availability of sufficient funding.

The team responsible for managing and administrating the MDTF policy support work in 2019 was:

Lauri Hetemäki, Assistant Director, EFI
Rach Colling, Head of Communications, EFI
Jarkko Haltia, Administrative Officer, EFI
Harald Mauser, Brussels Liaison Officer, EFI
Ulla Väänttinen, Communications Officer, EFI

2. Activities and outputs

The activities under MDTF for Policy Support were of many different types during 2019. The flagship activities are the ThinkForest events and science-policy publications. In addition, a number of related and supporting activities were carried out, such as the policy support newsletter, webstreaming, videos, policy support webpage, posters, social media activities, expert statements and presentations in policy forums, and efforts to get new countries to join the MDTF. This chapter gives more detailed information about these activities.

2.1 Publications

2.1.1. Science-policy studies

MDTF publications build on existing EFI series, with the aim of creating a cascade of products, targeted at different audiences and purposes. Their main objective is to synthesise existing science analysis and results, and draw policy implications based on these, in order to inform policy making and stakeholders work. The text is accordingly written in a format that is easily accessible to these target groups. In order to help wider distribution and impact, the studies or their Executive Summaries are also translated to other languages, when needed. So far the translations include Chinese, Czech, French, German, Italian, Russian and Spanish editions.

EFI series	No of pages	Purpose
<i>What Science Can Tell Us</i> (WSCTU)	80-100	Synthesis of large scope studies. Main target groups: civil servants, policy makers' assistants, stakeholders, experts, researchers
<i>From Science to Policy</i> (FSTP)	28-32	Synthesis of a specific topic, carried out within a short timeframe (typically in 4-8 months). Main target groups: civil servants, policy makers' assistants, stakeholders, experts, researchers
<i>Executive Summary</i> (formerly <i>ThinkForest Brief</i>)	c.8	Executive Summary from either WSCTU or FSTP, summarizing their policy implications. Main target groups: policy makers, policy makers' assistants, media, stakeholders, experts

Detailed science-policy analysis from a *What Science Can Tell Us* or *From Science to Policy* study is summarised in an *Executive Summary*. Both are made available at ThinkForest events.

In 2019, two new *From Science to Policy* studies were published. In addition, *From Science to Policy 5: Leading the way to a European circular bioeconomy strategy* was translated into [Chinese](#) and [Russian](#), and was made available online and in print.

To ensure maximum impact and findability, in 2019 all From Science to Policy studies were given Digital Object Identifier or **DOI references**. This is a string of numbers, letters and symbols used to identify an article or document and link it to the web. A DOI will help a reader easily locate a document.



From Science to Policy 8: Living with bark beetles: impacts, outlook and management options

<https://doi.org/10.36333/fs08>

The study was coordinated by Dr Tomáš Hlásny, Czech University of Life Sciences in Prague. It had 11 authors from 9 institutions and 7 countries.



From Science to Policy 9: Plantation forests in Europe: challenges and opportunities

<https://doi.org/10.36333/fs09>

The study was coordinated by Peter Freer-Smith, University of California Davis (USA) & Forest Research (UK). It had 10 authors from 9 institutions and 7 countries.

Author affiliations	Countries represented
AgroParisTech* Bavarian Forest National Park CNRS Czech University of Life Sciences Prague*	Austria Belgium Czech Republic France Finland

EFI Forest Research* Ilia State University INRA* James Hutton Institute* Julius-Maximilians-University Würzburg KU Leuven* Natural Resources Institute* Norwegian Institute of Bioeconomy Research* Teagasc Université de Lorraine Université de Strasbourg University of California Davis University of Helsinki* University of Missouri-Columbia University of Natural Resources and Life Sciences, Vienna* University of Turin University of Wisconsin – Madison Wageningen University and Research*	Georgia Germany Ireland Italy Netherlands Norway UK USA
---	--

**EFI Associate or Affiliate Member organization*

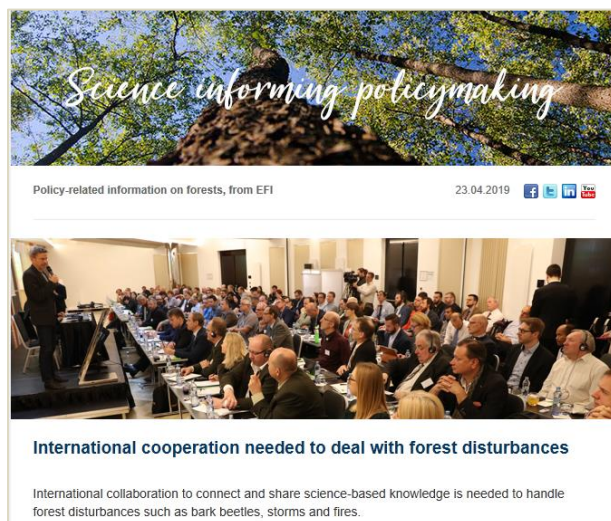
2.1.2 Policy support brochure



A new policy support brochure (*Science informing policymaking*) was produced in 2019 to promote the work of the MDTF. The brochure promotes EFI's core values in science-policy work, and its role in providing unbiased science-based knowledge, and promoting science-policy dialogue and networking via ThinkForest.

http://www.efi.int/sites/default/files/files/publication-bank/2019/EFI_brochure_policymaking.pdf

2.1.3 Policy support newsletter



The *Science Informing Policy-making* online newsletter reports on and promotes ThinkForest events and MDTF-funded studies, in addition to more general news items on current MDTF themes (for example bioeconomy, forest fires). The newsletter is sent by email to EFI's policy support mailing list, using the Apsis newsletter system, and is promoted to EFI's wider network via social media.

During 2019, the design of the newsletter header was refreshed, to reflect the branding of the new policy support brochure.

Subscription was actively promoted during the year (e.g. during registration for events), and by the end

of 2019, the policy support newsletter mailing list totalled some c.750 subscribers, and the events mailing list c.740 subscribers.

<https://www.efi.int/explore/newsletter>

Three editions of the newsletter were published in 2019, and one in very early January 2020, reporting on the December 2019 event.

Newsletter issue	Contents
1-2020 (08.01.2020)	<ul style="list-style-type: none"> • Green Deal needs plantation forests • A new equilibrium for plantation forests
3-2019 (13.09.2019)	<ul style="list-style-type: none"> • Save the date - The future of plantation forests in Europe • Connecting science, sound and storytelling • Resilient landscapes to face catastrophic forest fires • Synergies and trade-offs in sustainable forest bioeconomy • Key bioeconomy requirements
2-2019 (05.06.2019)	<ul style="list-style-type: none"> • Göran Persson steps down as ThinkForest president • New ThinkForest president announced • Białowieża Science Initiative • Telling stories about climate change through natural sound • The role of science in forest policy

1-2019 (23.04.2019)	<ul style="list-style-type: none"> • International cooperation needed to deal with forest disturbances • Living with bark beetles: New perspectives on an alarming problem • Presenting the Białowieża Science Initiative • EFI building bridges to China
-------------------------------------	---

2.2. ThinkForest and Other Seminars

ThinkForest events are mainly organized in Brussels, but occasionally they are also held in MDTF member countries. There were two ThinkForest events in 2019: 1. “How to respond to forest disturbances in Europe, held in Prague, 4 April 2019; and 2. “The Future of Plantation Forests in Europe”, held at the International Press Center, Brussels, 17 December 2019. The Prague event was the first ThinkForest event ever organized jointly with another organization, namely Forest Europe. The venue was fully-booked since the topic was locally high on agenda at the time. In addition, the webstreaming and video recording made available in the web after the event, allowed for easy following outside the Czech Republic.

The ThinkForest events have benefited significantly from the Presidency of Göran Persson. His PR value, networks, advice, and professional and insightful chairing of the events have greatly helped to raise the profile of the events. In addition, Mr. Persson has helped to promote the ThinkForest, EFI policy support work, and European forest sector in general. The Prague event was the last event held under the Presidency of Mr. Persson since the new President, Janez Potočnik started as a President in July 2019.

How to Respond to Forest Disturbances in Europe (4 April)

International collaboration to connect and share science-based knowledge is needed to handle forest disturbances such as bark beetles, storms and fires. This was the main message of the ThinkForest event held in Prague on 4 April. Forest disturbances transcend national boundaries and strategies in response should too transcend them.

Natural disturbances have increased in Europe in the last 40 years, amplified by climate change and the changes humans have made in forest structure and composition over time. Participants heard about the future climate trends at a global level, and how climate change is expected to contribute to a further increase in forest disturbances in future.

Prof. Tomáš Hlásny, Czech University of Life Sciences, shared the conclusions of the new EFI From Science to Policy study, *Living with bark beetles: impacts, outlooks and management options*. He emphasised the need for international cooperation, data sharing and monitoring, as well as taking a holistic approach to disturbance management at a landscape scale.

Lively panel discussions and questions from the audience emphasised that a holistic, joint approach was needed. There's a need to include the social dimension in the process, and maintain continuous dialogue with the public and stakeholders. However, to do so a narrative is needed. Panel chair Fiona Harvey, Environment Correspondent from The Guardian pointed out that media ignore forests most

of the time, so when a disturbance happens, journalists are rather unprepared. As forest disturbances become more frequent, we need to educate the public and educate the media too.



Prof. Tomáš Hlásný presenting the conclusions of the EFI From Science to Policy study, *Living with bark beetles: impacts, outlooks and management options* (at left). Panel discussion on How to respond to forest disturbances chaired by Fiona Harvey (at right). Photos: Ondrej Hajek

The afternoon session shifted perspective, to highlight practical discussions of what has and hasn't worked when dealing with disturbances in different regions of Europe. Speakers again emphasised the benefits they had experienced from transnational exchange of knowledge and sharing of previous experiences.

The seminar was attended by 132 participants. Out of all participants, 27 were country representatives (ministries). Other main participant groups were researchers (55), forest owners and forest industry (14), NGOs (7), other stakeholder groups (7) and international organisations (16, incl. participants from EFI). The event was followed by live web-streaming or via video recording **by 1,388 people** by the end of 2019. To conclude the seminar, a networking event was organised in the conference venue, Hotel Grandium, Prague.

The Future of Plantation Forests in Europe (17 December)

The ThinkForest event held 17 December in Brussels focused on the future of plantation forests in Europe. The European Commission's new Green Deal brings a new context, a new approach and importantly a new political narrative. The momentum has come and now there's a need to make use of it, and show also how plantation forests can play important role in Green Deal's implementation.

Participants heard about the importance of forests for sustainability and EU climate priorities, and how they are essential for the achievement of the main EU objectives in the Green Deal. Peter Freer-Smith, University of California Davis, shared the conclusions of the new EFI From Science to Policy study, *Plantation forests in Europe: challenges and opportunities*. He emphasised that plantation forests can play a key role in meeting the current demands on forests. In Europe, the area of plantation forestry is increasing, together with the proportion of roundwood and other ecosystem services provided. There is new science evidence that the sustainable management of plantations has strong potential to deliver against Europe's emerging policy priorities.

However, when it comes to policies, there is no *one-size-fits all* solution, as the differences in European countries in circumstances are huge. This has implications for the design of new instruments, for

example those implementing the new Green Deal. ThinkForest President Janez Potočnik also highlighted that the success of initiatives like the Green Deal very much depended on how well the social story is integrated and how much ownership it is able to create among the stakeholders.



Andrew Doyle TD, Minister of State for Food, Forestry and Horticulture, Ireland, opening the ThinkForest event in Brussels on 17 December 2019. Photo: Simon Pugh

There were also lively discussions on the priority actions for moving to sustainable plantations in future - including the usefulness of social learning and the challenges of working with small forest owners in areas where forestry is not profitable. Integrating other ecosystem services at a forest stand level on top of wood production is a challenge, but are much easier to incorporate at a landscape level.

The event took place at the International Press Centre, Brussels, and had 69 participants. The participants represented forest industry and forest owners (15), other stakeholders/ NGOs (24), research organizations (13), European Commission (4), countries (5) and international organizations (6, incl. participants from EFI). The morning session was concluded with the networking event. The event was followed via live web-streaming or via video recording by 267 people by the end of 2019.



Margarida Tomé, University of Lisbon, and Jo O'Hara, Scottish Forestry, participating in the panel discussion on the Future of Plantation Forests in Europe, 17 December, Brussels. Photo: Simon Pugh

EFI event on China-Europe Forest Bioeconomy (14 November, Beijing)

MDTF and the Embassy of Finland hosted a seminar in Beijing on 14 November, focusing on forest bioeconomy. The seminar helped the preparation of European Forest Institute China-Europe Forest Bioeconomy ThinkForest event, which is planned to be held in Beijing in December 2020.

The seminar, held at the Embassy of Finland, gathered together 49 policy makers, industry and science representatives to assess current China-Europe forest bioeconomy issues and discuss future prospects for circular bioeconomy cooperation. It was chaired by Esko Aho, former Prime Minister of Finland and EFI special adviser. Speakers included Peng Youdong, Vice-Minister of the National Forestry and Grasslands Administration. Out of all participants, 12 were country representatives (ministries, embassies), including the Ambassadors from Finland and Germany, and Deputy Ambassador from Slovenia. Other main participant groups were forest industry representatives (7), NGOs (5), research (4), European Commission officials (3), other stakeholder groups (7) and international organisations (7, incl. participants from EFI).

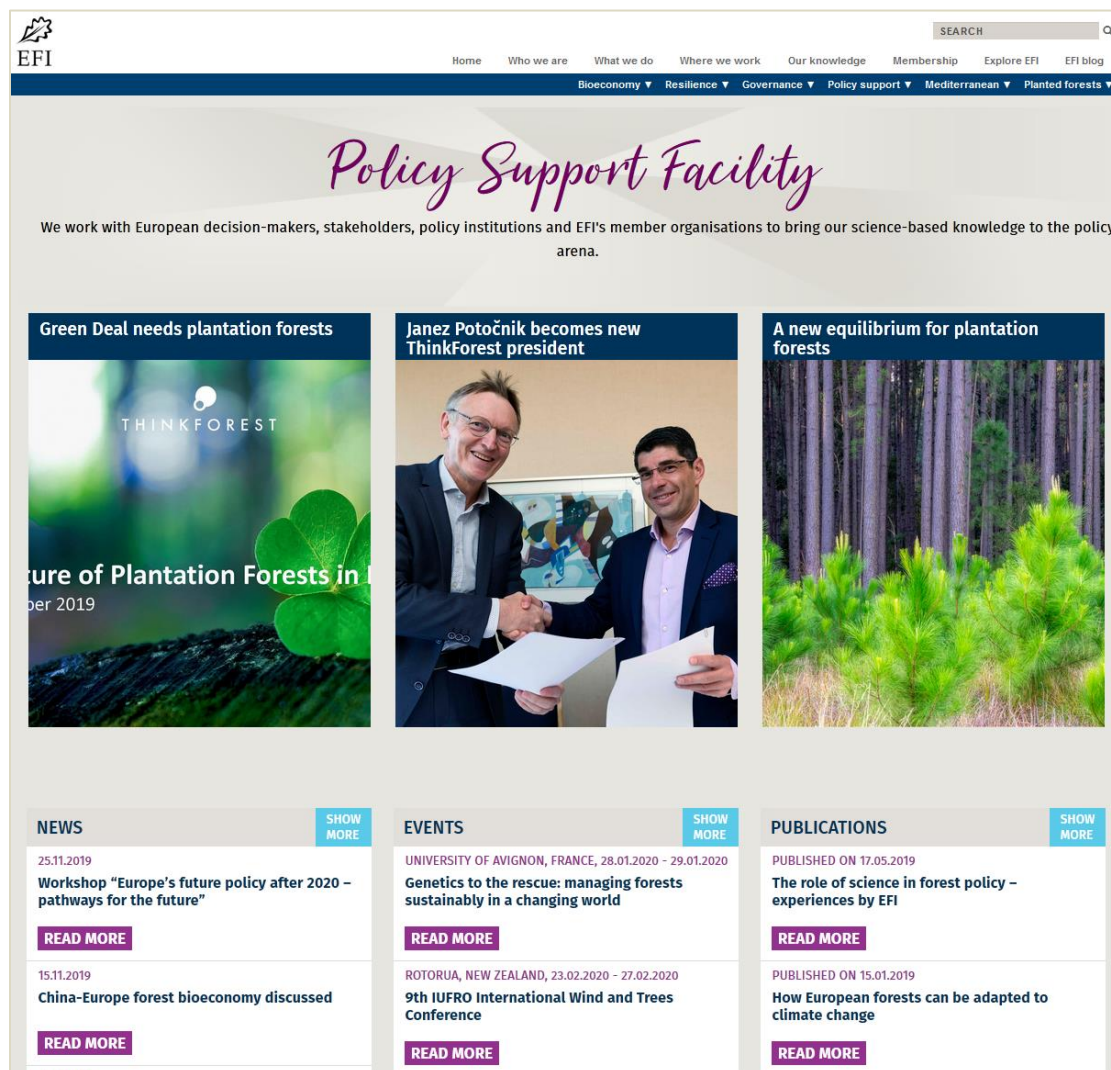
2.3. Other outputs

2.3.1. Online activities

The EFI website is an important tool in MDTF communication activities, as it acts as a central, easily accessible source of information about policy support activities. The website aggregates content from and signposts users to all other channels, but is also the place where a lasting and easily accessible 'footprint' of MDTF-supported outputs is created, making it available to policy makers for future reference.

Policy support/ThinkForest webpages

Policy support material is showcased in the picture boxes on the EFI homepage (www.efi.int) and a dedicated Policy Support Facility section (www.efi.int/policy-support) promotes the latest information and ThinkForest (www.efi.int/policy-support/thinkforest) activities, as well as news, events and publications.



Each new ThinkForest event has its own dedicated webpage, including mini-biographies of key speakers, programme, background information etc. This is updated after each event to include relevant news releases, photos, presentations and videos.

All MDTF publications are promoted on a single page (www.efi.int/policy-support/publications) and reports are deposited in the site-wide Publications Bank (www.efi.int/publications-bank).

Videos

Video continued to be used during 2019, with the aim of making ThinkForest events accessible to as wide an audience as possible. Two ThinkForest events (Prague, April; Brussels, December) were successfully webstreamed live via the [EFI YouTube channel](#). The full event recordings were made available afterwards, giving a lasting record of ThinkForest discussions.

Event	Livestream viewers	Average time watched	Top countries	TOTAL views 2019
ThinkForest: The Future of Plantation Forests in Europe 17.12.2019, Brussels	107	35 minutes	IT	267
ThinkForest: How to Respond to Forest Disturbances in Europe 04.04.2019, Prague	234	47 minutes	FI, CZ, DE, FR, SL, IT	1,388

More details are available in the Annex, in the Online Statistics section.

Social media

During 2019, MDTF-funded policy support work was promoted via EFI's social media channels, to reach a geographically widespread audience.

Social media channel	Number of followers (31 Dec 2019)	Number of followers (31 Dec 2018)
Twitter (main EFI account)	8,853	7,431
Facebook	7,812	6,515
LinkedIn	8,349	5,529
YouTube	911	731 subscribers

Effort again focused on Twitter, which is used professionally by the policy maker audience. Tweets were broadcast from each of the 2019 ThinkForest events, which again saw good social media conversations by participants. During 2019, there were 1,629 tweets from the main EFI Twitter account, which gained over 1,420 new followers. The messages were also amplified by EFI's other Twitter accounts (eg @efiresilience, @efimed, @efiplant).

EFI's audience is also increasing rapidly on other social media channels, for example LinkedIn and YouTube.

Electronic messaging

The capacity to send messages and invitations via the Apsis software system was again used in 2019. A total of 4 messages relating to ThinkForest events were sent by email to the new policy support mailing

list and events list. These included 'save the date' messages, event invitations and reminders, as well as notifications of webstreaming. More details are available in the Annex in the Online Statistics section.

Posters

Two A4 posters were produced to advertise ThinkForest events in 2019. These were made available in PDF (for example for use on the web) and printed formats, for ease of distribution. Printed posters were used at events, and distributed in Brussels (for example at the European Parliament).



There was active contact with the media during 2019, with news items/press releases and invitations to ThinkForest events.

A distribution list of relevant journalists was created for each event, and extensive use was also made of 'multipliers', i.e. news distribution channels such as AlphaGalileo, ScienceDaily, UNECE/FAO Forest Information Billboard, FAO Infosylva.

A dissemination plan was made for each ThinkForest event, and the results from dissemination activities were monitored and logged, using an off-the-shelf system (Meltwater) (see Table 5, Post-event media coverage).

11 press releases/news items were published in 2019:

18.12.2019 [Green deal needs plantation forests](#)

10.12.2019 [A new equilibrium for plantation forests](#)

25.11.2019 [Workshop "Europe's future policy after 2020 – pathways for the future"](#)

15.11.2019 [China-Europe forest bioeconomy discussed](#)

11.10.2019 [Ministers call for increased international cooperation on forest resilience](#)
27.08.2019 [Connecting science, sound and storytelling](#)
05.06.2019 [Janez Potočnik becomes new ThinkForest president](#)
14.05.2019 [Göran Persson awarded EFI Fellowship](#)
11.04.2019 [EFI building bridges to China](#)
08.04.2019 [International cooperation needed to deal with forest disturbances](#)
04.04.2019 [Living with bark beetles: New perspectives on an alarming problem](#)

Selected press releases were sent to a distribution list of approx. 200-300 journalists, depending on the topic (see section 3.4 Media impacts).

Enlarging the MDTF

The MDTF started in January 2015 with 8 countries: Austria, Finland, France, Germany, Ireland, Italy, Norway and Sweden. In 2016 Spain joined, in 2017 the Czech Republic and in 2018 Lithuania. However, at the end of 2018, France stepped down from the MDTF.

Currently Central-, Northern-, Southern and Eastern Europe are all represented in the MDTF. During 2019, active efforts to engage more European countries to MDTF were taken by the EFI Director and Assistant Director, in particular, Netherlands, Poland and Slovenia.

3. Impacts

In general, the EFI MDTF Policy Support work has during 2019 received very positive feedback and it has reached a wide audience. The impact indicators given in this Report show a robust continuation of MDTF activities impact (see Appendix). In addition, the direct responses received from the network (see below), from the discussions EFI staff have had with policy makers, stakeholders and research institutes during 2019, as well as the numerous requests for expert presentations or statements based on the MDTF work support this conclusion. Besides the information reported below, during meetings and discussions that EFI's Director and Assistant Director had during 2019 with European Parliament MEPs, European Commission staff, national ministries and stakeholders, very positive feedback was given for the MDTF policy support work. These included several meetings of EFI Director with His Royal Highness Prince of Wales, and discussion with European Commission officials (e.g., John Bell, Director Healthy Planet, DG Research & Innovation), national government Ministers and civil servants (e.g. Minister Ibrahim Baylan, Sweden; Minister Andrew Doyle, Ireland; Minister Jari Leppä, Finland; Minister Krista Mikkonen, Finland; Minister Luis Planas, Spain), EFI Associate Member representatives, etc. In summary, the work has been very well received and pointed that it is a unique and needed platform for pan-European forest-based sector science-policy work.

3.1 Downloads

All MDTF publications are available in printed and online formats. Print copies were distributed at ThinkForest events, to policy makers in Brussels via EFI's Brussels Liaison Office, and were also sent to EFI's network of member organisations.

The electronic copies of these studies again proved extremely popular. Included in the table below are details of all major *MDTF* publications produced to date (2015 onwards).

Title	Publication date	No of copies printed and distributed in 2019	No of electronic copies downloaded 2019	Lifetime copies downloaded
FSTP9 (Plantation forests)	Dec 2019	600	105	105
FSTP8 (Bark beetles)	Apr 2019	600	4,504	4,504
FSTP 7 (Substitution effects of wood-based products)	Nov 2018	n/a	2,679	4,345
FSTP 6 (Climate-Smart Forestry)	Mar 2018	n/a	1,699	3,214
WSCTU 8 (Forest-based bioeconomy), plus Summary	Dec 2017	n/a	2,595	8,175
FSTP 5 (Circular bioeconomy) (EN, CN, RU)	Oct 2017	600 (CN and RU)	2,122	7,069
FSTP 5 Summaries (EN, FR, DE, IT, ES, CN, RU)	Nov 2017-Apr 18	n/a	1,867	3,928
WSCTU 7 (Natura 2000) plus Summary	Sept 2017	n/a	497	4,076
FSTP 4 (Forest bioeconomy indicators)	Nov 2016	n/a	2,596	8,278
FSTP 3 (Forest biomass, carbon neutrality)	Oct 2016	n/a	1,268	16,799
FSTP 2 (A new role for forests)	Dec 2015	n/a	751	11,590
FSTP 1 (EUTR-FLEGT)	Apr 2015	n/a	726	8,761

3.2. Impact and feedback from stakeholders and network

In general, the importance of the MDTF work was acknowledged in 2019 by major policy makers both in Europe and in China. For example, a joint declaration by the Ministers of Agriculture of seven Eastern European countries called for strengthened international cooperation and contributions to EFI's work in improving resilience and adaptation of forests to climate change.¹

The EFI Director had several meetings with His Royal Highness Prince of Wales (HRH), and in those meetings discussed also the work based on MDTF publications. HRH, with the support of the World

¹ <https://data.consilium.europa.eu/doc/document/ST-12883-2019-INIT/en/pdf>

Economic Forum, established the Sustainable Markets Council in September 2019, and the EFI Director was invited to be a member of this forum.

Mr. Peng Youdong, Vice Minister National Forestry and Grassland Administration, China stressed in his opening speech of the MDTF event held in Finnish Embassy, Beijing on 14 November the important role EFI is playing in advancing the circular bioeconomy, and providing the expertise and support for this also in China.

The lead author of the study, Prof. Tomáš Hlásný presented the study results and implications also in the Czech Republic Parliament in June 2019. On October 2019, the Czech Parliament decided a few important legal reforms to the Czech forest law that help to improve the resilience of forests in the future. The MDTF work on bark beetles was used as one input in this process.

In summary, both the direct and indirect impacts of the MDTF work carried out in past years and in 2019 have had significant impact at a very high level of policy.

ThinkForest seminars

In summary, the events have been considered to be timely and tackling topical issues. In particular, participants have appreciated that issues high on the political agenda have been brought to the discussion, and additional science-based information has been provided by the publications and ThinkForest events. ThinkForest events have been considered important e.g. by European Parliament and European Commission staff and Brussels-based stakeholders. Below are some examples of the comments received.

ThinkForest event on How to Respond to Forest Disturbances in Europe (4 April)

This was the 3rd ThinkForest organized in cooperation with a MDTF country's Ministry (Ministry of Agriculture, the Czech Republic), and first time with another organization, Forest Europe. The event was held at the Hotel Grandium, Prague. It had wide reach, including an audience from the Czech Republic that usually does not attend the ThinkForest events in Brussels. During the event, it was also followed by 311 viewers via webstreaming and after the event a video recording was watched by an additional 1,154 viewers. See above for some of the impacts of this study and event.

ThinkForest event on the Future of Plantation Forests in Europe (17 December)

This ThinkForest event was organized in the International Press Centre in Brussels and gathered 68 participants. During the event, it was followed virtually by 107 viewers, and after the event by another 160 viewers. Discussion during the event, in particular during the panel was very lively.

'It was great to attend the event. I've signed up to receive your newsletters. I particularly like the format of the panel, which was new to me, of using the statements from each of the panellists to prompt discussion – I think it worked really well and introduced some very interesting discussion. Environment & Transport | Scottish Government EU Office

A new science-policy study ‘Plantation forests in Europe: challenges and opportunities’ was presented at this event. However, since the publication was launched so late in 2019 (17 December), it is still too early to judge its impact.

After each ThinkForest event, a **news release** on the event has been published at the EFI website. **As a follow-up, stakeholders have published news on their own websites** (see Table below).

ThinkForest event	Number of (web)articles
<i>ThinkForest event on Forest Disturbances in Europe, 4 April 2019</i>	3 ministry 6 industry (agriculture/forestry) 3 other
<i>ThinkForest event on Future of Plantation Forests in Europe, 17 December 2019</i>	1 ministry

The detailed information is available in Table 4.

3.3. Expert presentations, statements and hearings

Two EFI *From Science to Policy* –series studies were published during 2019. The authors of the studies, and the Chief Editor of the publications, have presented the study results in many different forums. However, since the FSTP no. 9 was published very late in the year (10 December), there were few presentations of it.

Below, is a summary of the presentations, expert statements and hearings held in various policy and science-policy forums. In 2019, 32 presentations were held.

Publication	Presenter / event
"Leading the way to a European circular bioeconomy strategy", FSTP5 (Published, Dec. 2017)	<ol style="list-style-type: none"> 1. Hetemäki, L. Circular Bioeconomy in the European Union- "China-Europe Forest Bioeconomy" seminar, Embassy of Finland Residence, Beijing, 14 November 2019 2. Hetemäki, L. The forest Bioeconomy outlook in the EU. Forest Bioeconomy Studia Generalia -lecture, University of Eastern Finland, 30 October 2019, Joensuu. 3. Hetemäki, L. The forest Bioeconomy and climate change. World Bioeconomy Forum, 12 September 2019, Ruka. 4. Mauser, H. Forest-related Policy Making in the EU. University of Oxford Brussels Field trip, 15 March 2019. Brussels. 5. Hetemäki, L. European forest bioeconomy: key sectors and principles. Young Leadership Programme 2019, 11 March 2019, Joensuu Science Park.

<p>“Climate-Smart Forestry: mitigation impacts in three European regions”, FSTP 6 (Published March 2018)</p>	<ol style="list-style-type: none"> 1. Nabuurs, G.-J. Invited talk ‘Dutch forest climate policies’ National climate action conference, den Bosch, 3 Dec. <u>2019</u> 2. Nabuurs, G.-J. Invited keynote at Thinktank of Mondi-IUFRO event on future wood supply from Europe, 26 Nov. <u>2019</u> 3. Nabuurs, G.-J. Hardwood supply in future. Invited presentation at Int Hardwood conference, Berlin, 21 Nov. <u>2019</u> 4. Nabuurs, G.-J.: Wood supply in future from EU forests. Invited keynote at Raw Materials week, Brussels, 18 Nov. <u>2019</u> 5. Mauser, H.: What is Climate Smart Forestry?, PEFC EU Policy Seminar 26 Sep. 2019, Brussels 6. Nabuurs, G.-J. Keynote ‘Climate-Smart Forestry’ at CLIMO Cost action, Tatras, Slovakia, 8 Sep. <u>2019</u> 7. Nabuurs, G.-J. Invited talk ‘European forest policy in the frame of bioenergy-IEA workshop, Athens, Georgia, USA, 1-3 May <u>2019</u> 8. Nabuurs, G.-J. Invited talk ‘Role of European forest management’ at Global Carbon project meeting RECCAPP2, Gotemba, Japan, 19-23 March <u>2019</u> 9. Nabuurs, G.-J. Invited lecture at the science seminar of VERIFY H2020 project ‘Impact of forest management on European Forests’ carbon balance’ Reading ECMWF, 13 March <u>2019</u> 10. Nabuurs, G.-J. Invited talk at Green Deal Sustainable Forest Products: ‘Chances for sustainable forestry from climate point of view’. Ridderkerk Netherlands. 27 Nov 2018 11. Nabuurs, G.-J. Invited talk Prince Edward Island University (UPEI). Sustainable forestry practices for PEI: compatible ideas from Europe. 18 Nov 2018 12. Nabuurs, G.-J. Invited talk at Universite Laval Quebec. European forests: challenges in meeting climate mitigation goals. 15 Nov. 2018 13. Nabuurs, G.-J. Purdue University, Lafayette, IN, USA. Invited talk: European forests issues under climate change. 12 Nov 2018 14. Nabuurs, G.-J. IEA Task 43. Invited lecture ‘Role of European forests in provision of biomass under LULUCF Forest Reference level’. Uppsala. 30 August 2018. 15. Nabuurs, G.-J. Invited Key note at Royal Swedish Academy, Stockholm. ‘A principle choice – manage forest for wood production or leave it as a carbon sink’. 12 March 2018 16. Nabuurs, G.-J. Invited keynote at KNAW symposium. ‘Multi functionality in European Forests – the EASAC report’. 19 February 2018 17. Nabuurs, G.-J. Invited talk at European Parliament: ‘Bioenergy policy post 2020. Can Europe’s forests supply sustainably under climate smart forestry?’ Organised by Skogs- industrierna, Brussels, 9 Jan. 2018
<p>“Substitution effects of wood-based products in climate mitigation”, FSTP 7</p>	<ol style="list-style-type: none"> 1. Leskinen, P, Climate change mitigation as driver towards bioeconomy, Barents Forest Forum, Umeå 16.10.<u>2019</u>, Keynote. 2. Leskinen, P, The role of wood-based products in climate change mitigation, Koli Forum, Koli, 9.10.<u>2019</u>, invited presentation. 3. Leskinen, P, Forests in climate change mitigation and sustainable bioeconomy, Forum Wood Building Nordic, Helsinki, 27.9.<u>2019</u>, Keynote. 4. Hans Verkerk, Pekka Leskinen, Giuseppe Cardellini, Elias Hurmekoski, Roger

<p><i>(Published, Dec. 2018)</i></p>	<p>Sathre, Jyri Seppälä, Carolyn Smyth & Mariana Hassegawa. Substitution effects of wood-based products in climate change mitigation. Poster presented at the XXV IUFRO World Congress, 25.9.<u>2019</u>, Curitiba, Brazil</p> <ol style="list-style-type: none"> 5. Hans Verkerk, Climate-Smart Forestry: the missing link. CMCC-EFI webinar: Forests: solutions and perspectives to fight climate change, 21 March <u>2019</u>. 6. Hans Verkerk, European forest under climate change and Climate-Smart Forestry, YLP Eurasia, Joensuu, 11 March <u>2019</u>. 7. Leskinen, Pekka. Invited talk on Forest bioeconomy in climate change mitigation at World Resources Forum. Antwerp, Belgium. 26 February <u>2019</u> 8. Verkerk, H. Climate Smart Forestry, BioMonitor and other outlook activities at EFI. Workshop on Exchange of Experiences in Forest Sector Outlook Studies and Related Work, Koli, Finland. 14 February <u>2019</u> 9. Verkerk, H. 2018. Mitigating climate change through Climate-Smart Forestry. FORMASAM kick-off meeting, 12-14 November 2018, Wageningen.
<p>“Living with bark beetles: impacts, outlook and management options”, FSTP 8 <i>(Published, April 2019)</i></p>	<ol style="list-style-type: none"> 1. Hlásny, T., Presentation of the report at the meeting of the Slovak Academy of Agriculture Sciences, Zvolen, Slovakia, 17.11.<u>2019</u> 2. Hlásny, T., Presentation of the report at the Wood Forum (Virkenforum), Stockholm, Sweden, 11.9.<u>2019</u> 3. Hlásny, T., Two interviews with Swedish journalist, 11.9.<u>2019</u>, https://www.landskogsbruk.se/skog/all-avverkning-koncentreras-till-dod-skog-i-tjeckien/?fbclid=IwAR34PcGU5IWJNDE6kl-I0dSHTokZ07zk_oXifW-efl8FbDcStV7c_jCXSk 4. Svoboda, M., Presentation of the report in the FECOF meeting, Prague, Czech Republic, 20.10.<u>2019</u> 5. Hlásny, T. Presentation of the report at the General Assembly of the European Organization of the Sawmill Industry, Vienna, Austria, 18.6.<u>2019</u> 6. Hlásny, T., Presentation of the report in the meeting with senators in the Czech Parliament, Prague, Czech Republic, 10.6.<u>2019</u> 7. Hlásny, T., Input to the Czech TV, Prague, Czech Republic, 4.4.<u>2019</u> 8. Hlásny, T., Presentation of the report at SURE project meeting, Prague, Czech Republic, 3.4. <u>2019</u>
<p>“Plantation forests in Europe: challenges and opportunities” <i>(Published, Dec. 2019)</i></p>	<ol style="list-style-type: none"> 1. Freer-Smith P. US Forest Service Forests and Fire Ecology Lecture series 12 March <u>2020</u> Invited talk title: Forest Land Use and Management Strategies to deliver European Climate and Bioeconomy Policies’ 2. Freer-Smith, P., Presentation of the preliminary results of the study at the EFI Annual Conference Scientific seminar, Aberdeen, UK, 19.9.<u>2019</u>

3.4. Media impacts

Media invitations

Press invitations were distributed by email, using an off-the-shelf system, Meltwater. This allows you to create distribution lists based on country and the journalist's 'beat' (area of specialism), and to monitor whether each invitation has been opened.

Meltwater covers all journalists in the following countries: Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Netherlands, Norway, Sweden, Switzerland, UK, USA. In addition, a separate in-house list of Brussels-based correspondents is used; this was updated in summer 2019.

Event	Mailing list size	Press invitation to event (% read)	Media attendance	Press release post-event (% read)	Media articles
ThinkForest: The Future of Plantation Forests in Europe, 17.12.2019, Brussels	226	23.5%	0	26.2%	4
ThinkForest: How to Respond to Forest Disturbances in Europe, 4 April 2019, Prague	168	15.7%	6 (including Reuters)	13.7%	17
EFI event on China-Europe Forest Bioeconomy, 14 November 2019, Beijing	n/a	n/a	4	n/a	3

Media attendance and immediate coverage of events is often limited, with journalists mostly using events as an opportunity to gain background information on a subject. It is not possible to know how many journalists watch the livestream.

Media coverage

Post-event media coverage and ongoing media monitoring was also carried out via the Meltwater system. The forest disturbances event, held in Prague in April, received the widest media coverage during 2019, reaching many Czech, Slovak, Finnish and Norwegian print, online and radio outlets, as well as an article in Reuters (See Table 5 for more details). The China-Europe forest bioeconomy event in Beijing in November also received good coverage, including in China Daily and trade news.

3.4.1 Sound Reporting Co-Lab media bootcamp

The [Sound Reporting Co-Lab](#) is a 6-month media support programme from EFI's Lookout Station that helps journalists produce sound-based stories around climate change impacts on forests, biodiversity and local communities. This project was supported by the MDTF with 7,000 euros in 2019 (other funders included EUFORGEN, SURE project, the Polish Forest Research Institute (IBL) and Hindenburg Systems).



On location in Bialowieza forest (photo: E.Hermanowicz/EUFORGEN)

A bootcamp took place in the Bialowieza forest, Poland in July, focusing on bark beetles and their impacts on ecological, social and industrial systems. A group of journalists from 6 media/teams heard experts from EFI, the Polish Forest Research Institute (an EFI member organisation) and the University of Warsaw share their scientific insights into the complex and disputed situation in Bialowieza. This holistic view on the issue was complemented by practical sound training from a team of award-winning trainers from Cornell University and National Public Radio (US) to connect science, sound and storytelling.

As well as hearing from scientists and experts in a seminar room, the journalists also had a chance to visit three different forests to make field recordings: old forest unaffected by bark beetles; forest that is currently under attack; and forest that was attacked four years ago.

During the rest of 2019, the Sound Reporting Co-Lab provided mentorship and expert support for the journalists as they developed their stories, including a series of expert meetings. Experts included Tomas Hlasny, lead author of the From Science to Policy study on bark beetles published in 2019.

The journalists' outputs are expected during 2020.

4. Reporting of expenses

4.1 Background

The general background principle for reporting of the funding and budgeting of the MDTF for 2019 is given here. Due to the time lag between closing of the accounts, as of 20 January 2020 (time of writing this) the financial accounts for EFI 2019 have not yet been closed.

4.2 Expenditures by cost category

In 2019 the MDTF funded partial salaries of the Assistant Director managing the MDTF, Communication Officer responsible for the administration and event organisation, Administrative Officer responsible for administrative procedures (e.g. contracting) of MDTF SC, Head of Communications responsible for the MDTF communication, and Brussels Liaison Officer supporting the dissemination and increasing the impact of the MDTF work and networking in Brussels (all positions partly funded by MDTF). These salary costs were linked to the general management, planning, administration, communication, networking, and coordination of the MDTF work. All the other salaries paid from MDTF to EFI staff were related directly to specific policy support activities and Work Packages.

Besides the salaries, expenses related to the expenditure categories listed under the MDTF Guidelines (shown also in Chapter 1.2) were covered by the MDTF funds.

According to MDTF Guidelines, 13% is allocated to overheads (indirect costs). Compared to common practices, this is a very low share. For example, in European Commission Horizon 2020 overheads is 25% for research and innovation projects. Indeed, in the MDTF case, the 13% overheads can be viewed to cover the usage of EFI brand, some of the EFI staff costs (e.g., Director's work input, ad hoc and small administration work input), maintenance of administration software (e.g. budgeting software), office rent and office maintenance costs, etc. The staff costs related to the MDTF activities (e.g., coordination, management, administration, EFI lawyer costs related to subcontracting and country agreements, working for the publications and ThinkForest events) are reported under MDTF salaries, not overheads.

The activities under MDTF have been organized for administrative and cost following purposes under Work Packages (WP). In 2019, costs were related to following WPs:

1. FPS Multi-Donor Trust Fund General
2. FPS MDTF WP3: Climate substitution impacts (2018)
3. FPS MDTF WP4: Europe post-2020
4. FPS MDTF WP5: Afforestation and plantation
5. FPS MDTF WP6: Bark beetle
6. FPS MDTF WP7: China-Europe forest bioeconomy
7. FPS MDTF WP8: Sound reporting co-lab
8. FPS MDTF WP9: Public perception on forests

5. Current and emerging forest-related policy issues and trends in Europe²

According to the MDTF Guidelines “EFI will provide on a yearly basis a broad overview (summary) of the current and emerging European forest-related policy issues and trends”. This chapter seeks to fulfil this objective.

An upcoming EFI *From Science to Policy* report on “European forest governance post-2020” will broadly assess governance options to meet international and European challenges for future forest policy-making in Europe (Wolfslehner et al. 2020). This chapter, however, focuses on some significant changes in the general EU framework that took place in 2019 and are likely to mark a turning point in forest-related policy making for the coming years. What are these changes, and how could they impact on the European forest sector in the new decade?

5.1 Changes in the EU governance framework in 2019

5.1.1 European Parliament

In the newly elected European Parliament with 60% new members, the centre parties lost their traditional majority. Liberal and green-oriented groups gained more power. As the composition of the European Parliament is now more fragmented and diverse, decision making will become more complicated. Majority building will be more case by case, as there appear not to be many shared policies between the political groups.

5.1.2 European Commission

The new College of Commissioners from 27 EU Member States, led by President von der Leyen, is more diverse regarding the personal political background and party affiliation of Commissioners than the previous College under President Juncker. The hierarchy within the College has been changed by establishing a new level of 3 Executive Vice-Presidents, in addition to 5 Vice-Presidents. Both levels have coordinating power in specific policy fields over the remaining Commissioners. It has to be seen how this new hierarchy will work in practice. The Mission Letters from the President to each Commissioner raise questions on the distribution of some tasks. In particular, the portfolio of Executive Vice-President Timmermans cuts across almost the whole College.

President von der Leyen requested the Commissioners to include in their cabinets more staff members from the European Commission services, and fewer external people. The impact of this measure has to be seen. Currently there are concerns that the cabinets contain too many former European Parliament aides and diplomats who until recently worked for national governments.

5.1.3 Political guidelines 2021-2024

The political guidelines of President von der Leyen establish a strategic orientation for EU policy making that differs from those of proceeding terms. The two previous presidents Barroso and Juncker mainly prioritized economy, growth and employment topics. President Barroso in his second term (2010-2014)

² Lauri Hetemäki and Harald Mauser, European Forest Institute

focused on a successful exit from the economic crisis with a vigorous and coordinated EU-wide economic strategy for restarting economic growth and ensuring long-term sustainability and competitiveness. Fighting unemployment, reinforcing social cohesion, turning the challenge of a sustainable Europe to a competitive advantage, and leading on climate change were also parts of this orientation. President Juncker (2014-2019) strived for a new boost for jobs, growth and investment, a connected digital single market, a resilient energy union with a forward-looking climate change policy, a deeper and fairer internal market with a strengthened industrial base, and a deeper and fairer economic and monetary union.

The new political guidelines for the European Commission 2019-2024 are presented as a unique aspiration of living in a natural and healthy continent. These guidelines reflect the general political trend that stresses the importance and urgency of tackling climate change and meeting the Paris Climate Agreement. A European Green Deal should help Europe to be the first climate-neutral continent. Preserving Europe's natural environment is highlighted as an important element of this endeavour. The political guidelines also prioritize an economy that works for people, a Europe fit for the digital age, and protecting the European way of life.

5.1.4 The European Green Deal

The European Green Deal is introducing a new political narrative and direction by setting a clear focus on climate, sustainability and biodiversity conservation for all policy areas. The main objective of the Deal is the EU's carbon neutrality by 2050. This objective is widely shared and the approach in the document represents a new kind of sustainability thinking within the Commission. The Deal acknowledges the need for a systemic transformation, not only piecemeal policy changes, to achieve goals set by the Paris Climate Agreement, Sustainable Development Goals and Convention of Biological Diversity. The political importance of the Deal is evident also from the requirement that "All EU actions and policies will have to contribute to the European Green Deal objectives" (EC 2019, p. 3). Also, the Commission is ready to promote procedures for deciding on the new directives to support the Deal's objectives that require only qualified majority voting rather than by unanimity.³

The new political guidelines, in particular the European Green Deal, present needed and ambitious goals. They reflect the mood in the EU Member States, where environmental issues are perceived to be more important and urgent. But it is this very matter of urgency, and the sometimes narrow scope of the actions put forward by the Deal that could prove to be its pitfall. Von der Leyen may have dug the pit herself by announcing that the new Commission would complete the European Green Deal within 100 days. This has resulted in a hurry in the preparatory work, and probably is also reflected in the narrow scope of forestry issues. It gives an impression that maybe there has not been sufficient time for consultation with experts and stakeholders. This is likely to be reflected in future in how well the Commission is able to handle trade-

³ "The Commission will propose to revise the Energy Taxation Directive, focusing on environmental issues, and proposing to use the provisions in the Treaties that allow the European Parliament and the Council to adopt proposals in this area through the ordinary legislative procedure by qualified majority voting rather than by unanimity." (EC 2019, p.5).

offs, create ownership and support for the Deal. Without sufficient ownership, the Deal will not work efficiently in practice.

The financial framework to bring to reality the new policy orientation is still missing. An approved EU budget for 2021-2027 will not be possible until the second half of 2020 under the German Presidency. Yet, the ambitious timetable of the European Green Deal strives for concrete achievements very soon. For example, the Climate Law should be finalized by February 2020, before an agreement on the Multi Annual Financial Framework has been concluded. Also, the new EU Industrial Strategy and the Biodiversity Strategy should be adopted by March 2020. Against this background, it has to be seen to what extent the EU Member States will support all the goals and the very tight timeline, and engage in the design and implementation of the announced policies and legislation.

5.1.5 Forests in the new political orientations

Forests are hardly mentioned explicitly in the political guidelines of President von der Leyen, in the mission letters to the Commissioners, in written answers by the Commissioners-designate to the written questions from the European Parliament Committees, or in the hearings of the European Parliament Committees with the Commissioners-designate. If at all, most of any statements on forests express problems (not opportunities) like deforestation, threats to forests and biodiversity, and argue for forest and biodiversity restoration and protection. With respect to climate action, forests are mainly addressed as a carbon sink. There is no single statement on the multiple benefits forests provide to society and the benefits which forest-based bioindustry could contribute to a more sustainable and climate-neutral society, and how they could help to contribute to the Sustainable Development Goals.

In summary, there are many new actors in the EU policy arena with a quite diverse understanding of forests and the forest-based sector. To enable them to take sound decisions, solid information and evidence on the complexity, diversity and long timeframe of forest issues will be needed to support proper assessment of the implications of the new political orientations. This situation stresses the importance of disseminating and communicating evidence-based information to the European Parliament, European Commission and the Member States on the multiple roles that EU forests and the forest sector play. This is in essence the work that the EFI Policy Support Facility, supported by the Multi Donor Trust Fund, is already doing.

5.2 Forest-related EU policy making: new thinking with narrower scope

The changes in the EU governance framework described above already strongly affect the role of forests and their use, as well as the relevance of forest-based value chains, in upcoming EU policy making and legislative processes.

5.2.1 Evidence of a paradigm shift

The guiding paradigm in forest policy at EU and pan-European level has been the *multifunctional use of forests* to benefit society with a broad range of products and services, respecting the ecological, economic and social dimensions of sustainability. The long-lasting dispute between conservation interests on the

one hand, and wood production interests on the other, was handled within this framework of multifunctionality, but mostly limited to those actors responsible for forest policy in the strictest sense. The balance between the impacts of these two main interests on EU policy making periodically shifted. For example, the “Green Paper on Forest Protection and Information in the EU: Preparing forests for climate change” in 2010 promoted stronger protection of forests. In recent years, nature conservation and biodiversity policy received less attention in EU discussions, due to the growing role of climate change related topics and economic issues, like the circular economy and bioeconomy. The forest-based sector has been acknowledged as a major enabler and contributor to these new economic models.

Recently, this situation has begun to change, with more emphasis on the so-called “climate and biodiversity crises”. Nature conservation and biodiversity are becoming more important again in all relevant EU policy discussions. Together with the urgency from climate policy on negative emissions, there is a growing pressure to shift the main paradigm of forest policy. Instead of multifunctional use, the protection and restoration of biodiversity and the improvement of carbon storage in forest ecosystems are established as priority objectives for the management of forests. This shift is already executed in two recent policy documents:

(1) The communication on the **European Green Deal** from December 2019, within its chapter on “Preserving and restoring ecosystems and biodiversity”, addresses the increasing pressure on forest ecosystems as a result of climate change. Improving the forested area in quantity and quality by sustainable re- and afforestation and the restoration of degraded forests is stated as a need. This should *“increase absorption of CO₂ while improving the resilience of forests and promoting the circular bio-economy. Building on the 2030 Biodiversity Strategy, the Commission will prepare a new EU Forest Strategy covering the whole forest cycle and promoting the many services that forests provide. The new EU Forest Strategy will have as its key objectives effective afforestation, and forest preservation and restoration in Europe, to help to increase the absorption of CO₂, reduce the incidence and extent of forest fires, and promote the bio-economy, in full respect for ecological principles favourable to biodiversity. The national strategic plans under the common agricultural policy should incentivise forest managers to preserve, grow and manage forests sustainably.”*

In addition, the new EU Biodiversity Strategy could *“include quantified objectives, such as increasing the coverage of protected biodiversity-rich land and sea areas building on the Natura 2000 network. Member States should also reinforce cross-border cooperation to protect and restore more effectively the areas covered by the Natura 2000 network. The Commission will identify which measures, including legislation, would help Member States improve and restore damaged ecosystems to good ecological status, including carbon-rich ecosystems.”* The Commission will also *“consider drafting a nature restoration plan and will look at how to provide funding to help Member States to reach this aim. All EU policies should contribute to preserving and restoring Europe’s natural capital.”* These intentions will affect forest areas and their use.

The actions in the European Green Deal proposed specifically on forests raise questions regarding other land-use requirements, the role of forests and wooden products in mitigating GHG emissions, in regional

development, and in the transition to a circular bioeconomy. EU countries are diverse regarding forests, their management and the economic importance of the forest-based sector. Therefore, a one-size-fits-all approach is not feasible. For countries like Spain, the problem from a climate perspective may be increasing risks of severe forest fires because of high fuel loads due to too much biomass in the forests, rather than too little. Spain's forest area has increased by 40% in the past four decades. For those Member States with already high forest coverage and a long tradition in sustainable forest management including obligatory regeneration, a new EU Forest Strategy with priorities on afforestation and reforestation could be less effective in climate mitigation than promoting the role of the forest-based sector in the transition to a more sustainable and climate neutral society by strongly contributing to a circular bioeconomy. Yet, in the communication on the European Green Deal, there is no single reference to the EU Bioeconomy Strategy that was just updated in October 2018.

(2) In preparing a **new EU legislation on sustainable finance** (Taxonomy), the Finnish Presidency of the Council of the EU reached in December 2019 an agreement in the trilogue negotiations on the Taxonomy regulation. This agreement also *includes a definition of sustainable forest management that differs remarkably from the currently used definitions* introduced by the Forest Europe Process and referred to in the EU Forest Strategy, as it states: "In the context of this Regulation, 'sustainable forest management should be understood by considering practices and use of forests and forest land that contribute to enhancing biodiversity or to halting or preventing degradation of ecosystems, deforestation and habitat loss; by considering the stewardship and use of forests and forest land in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems, as defined in Resolution H1 General Guidelines for the Sustainable Management of Forests in Europe, MCPFE 1993; and by considering Regulation (EU) 2018/841[2] (Comment: LULUCF), Regulation (EU) No 995/2010[3] (Comment: EUTR), Directive (EU) 2018/2001[4] (Comment: REDII) and European Forest Strategy: for forests and the forest based sector,"

The *text in Italic* indicates new elements that were added to the current definition of sustainable forest management established by the Forest Europe process. In essence, the new definition implies that whatever the reasons for loss of or pressure on biodiversity, the first priority for sustainable forest management is to enhance biodiversity or halt or prevent degradation of it.

This sustainable finance (Taxonomy) definition is an outcome of a legislative process to improve the European Capital Markets Union. In this process, the forest administrations and stakeholders were hardly involved. The importance of this feature is heightened by the fact that European Commission has very little "in-house" expertise in forest issues. It can be expected that this definition will be referred to also in other upcoming EU policies.

To implement the Taxonomy regulation, a delegated act is under preparation that will stipulate for forest activities three cumulative qualitative and quantitative mitigation criteria which shall result in substantial greenhouse gases sequestration and soil and biodiversity maintenance and/or improvement. Only forest management fulfilling all three criteria would be assessed as sustainable. One of these criteria requires a

progressive increase of above ground carbon stocks over the economic life time, to be reported every 5-10 years. This would be in many cases in contrary to forest management needs. Serving other societal interests, or adaptation to climate change (e.g. harvesting in order to replant more mixed-species), forest measures can lead to temporary reduction of carbon storage and sequestration capacity. Forest management has so far been regarded as sustainable, even if the carbon stocks and sequestration capacity are decreased for a number of years that can be longer than the time intervals used in the Taxonomy for reporting the steady progress in carbon storage. Also climate change can impede forest growth and consequently reduce the carbon storage capacity in the coming decades. Management of such forests cannot result in an increasing above ground carbon stock and therefore would not fulfill this sustainability criterion. In essence, the requirements seem to be at odds with the natural dynamics of forest growth and the different stages they go through in their long cycle.

The shifting focus of the role of forests and the new definition of sustainable forest management stated in these two policy documents raises the following questions:

- Are the suggested policies helping to utilize fully the potential which EU forests and forest sector have for climate mitigation and adaptation, and the different measures which are likely to be implied in the Member States depending on the structure of their forests and forest sector?
- Is the new approach paving the way towards confrontations between different uses of forests, rather than helping to avoid them? Are the policies in line with maximizing the potential synergies and minimizing trade-offs between different functions of forests, e.g. between biodiversity and bioeconomy (see Hetemäki et al. 2017)?
- How well are the suggested actions in line with the views of IPCC (2018) on the multiple role of forests in mitigating climate change, or the different roles forests play in achieving the SDGs? Or with the other science-based reports pointing to the multiple roles European forests need to play in climate mitigation and in moving towards more sustainable economy (e.g. Berndes et al. 2016, Hetemäki et al. 2017, Leskinen et al. 2018, Nabuurs et al. 2015, Wolfslehner et al. 2016)?

In short, it appears that the new approach adopted by the European Commission in forest-related policies takes a rather narrow view on the potential role the European forest-based sector can play in helping climate change mitigation and reaching the Sustainable Development Goals. It tends to see more problems than opportunities in the EU forest-based sector. Moreover, the connection of mitigation to climate adaptation in forests and what measures it requires seems missing (e.g. the role of forest disturbances and adaptation to these).

The Commission's shifting focus of the role of forests may also bring new risks for achieving goals in other EU policies, as demonstrated by the following examples of the EU industry, energy and agricultural policies.

5.2.2 Industry policy

The renewed EU Industrial Policy Strategy from 2017 aims to maintain and reinforce Europe's industrial leadership in the age of globalisation, sustainability challenges and rapid technological change. It strives to facilitate investment in new technologies and embrace changes brought on by increased digitisation and the transition to a low-carbon and more circular economy. To implement this strategy, an Industry

2030 High Level Industrial Roundtable was established by the European Commission in December 2017 that provided in June 2019 its final report, 'A vision for industry until 2030'. This envisages an industrial transformation that takes full account of the global Sustainable Development Goals. A new European industrial model must ensure Europe remains a leader in technology, innovation and sustainability. A particular focus on developing strategic value chains and value-creating networks is recommended. Europe's industry should become climate-neutral, circular and resource-efficient, with reliable access to low carbon energy and raw materials.

In 2018, the Strategic Forum for Important Projects of Common European Interest was established to identify key strategic value chains in Europe and propose a common vision for joint actions and investments between the EU, Member States and industry. These strategic value chains are interlinked and integrated industrial activities with great potential to contribute to Europe's green and digital transformation, and to improve Europe's industrial competitiveness. The forum selected 6 strategic value chains, one of them low-CO₂ emission industry. This includes the chemicals industry that should develop new chemical production plants based on non-fossil feedstocks, like sustainable biomass. Besides being an alternative for fossil raw materials, biomass will have a role in balancing the energy use in processes and for negative emissions in combination with carbon capture, utilisation and storage (CCUS). The use of alternative feedstocks from biomass and other materials is key to the reduction of CO₂ emissions for the chemical industry and especially the reduced usage of fossil carbon sources for petrochemicals. An appropriate EU regulatory framework should be created that supports the deployment of low CO₂ emissions technologies, including securing the supply of materials for the energy transition and the low CO₂ emissions industry.

In November 2019, the High Level Group on Energy Intensive Industries published the masterplan on the transformation of EU energy-intensive industries to enable a climate neutral, circular economy by 2050. Among others, the chemical and pulp and paper industries are also included. Ensuring access to alternative feedstock sources by promoting the use of renewable and (carbon-based) recyclables beyond energy production is identified as a strategic priority.

In parallel to the energy-intensive industries, in November 2019 the forest-based industries in the EU presented a "Forest-based Industries 2050: a vision for sustainable choices in a climate-friendly future". The European forest-based industries, as defined in this document, include the wood working industries, the industries manufacturing pulp, paper and paper products, the furniture, printing and bioenergy industries. They jointly aim to be the most competitive, innovative and sustainable provider of net-zero carbon solutions for a climate neutral Europe. An important precondition to successfully reach this 2050 vision is the supply of raw material in the right quantity and quality. To this aim, the provision of secondary raw materials will have to be increased by boosting material collection and recycling. At the same time, the industry will still need primary raw materials, provided sustainably from available wood resources and without compromising other forest functions and services. With support from research and innovation, an increase in the sustainable harvesting possibilities in Europe of at least 30% by 2050 from today's levels is envisaged.

The European Green Deal includes a 'Renovation wave' initiative for the building sector and a Circular Economy Action Plan, including a sustainable products initiative and particular focus on resource intense sectors such as textiles, construction and plastics. For both initiatives, wood as feedstock and wooden products will be important contributors.

In summary, more use of sustainably sourced biomass for energy generation and material production is stated as a key element for the future development of EU industries. This is in line with the intentions of the updated EU Bioeconomy Strategy. Biomass from sustainably managed forests can provide an important share of the alternative feedstock needed, avoiding the competition for food and feed uses agricultural biomass faces.

5.2.3 Energy policy

In recent years the EU has agreed a comprehensive update of its energy policy framework to facilitate the transition away from fossil fuels towards cleaner energy, and to deliver on the EU's Paris Agreement commitments for reducing greenhouse gas emissions. The changes will provide an important contribution to the EU's long-term strategy of achieving carbon neutrality by 2050. Renewable energy sources are a crucial element of this future policy. The original renewable energy directive from 2009 requires the EU to fulfil at least 20% of its total energy needs and at least 10% of transport fuels from renewable sources by 2020. In December 2018, the revised renewable energy directive entered into force, establishing a new binding renewable energy target for 2030 of at least 32% of the total final energy consumption, with a clause for a possible upwards revision by 2023. It also establishes sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass fuels.

The European Green Deal strives for a higher greenhouse gas emission reductions target for 2030 than previously agreed, namely 50% reduction on CO₂ emissions relative to 1990 level (earlier it was 40%). Further decarbonising of the energy system is critical to reach these climate objectives. The power sector should be based largely on renewable sources. The EU's energy supply needs to be secure and affordable for consumers and businesses.

In 2017, about 14% of the EU gross inland energy consumption came from renewables and biofuels, of which about 62% were produced from biofuels and renewable waste. Forestry accounts for more than 60% of all EU domestic biomass supplied for energy purposes. The domestically sourced biomass supply will need to grow to meet the 2020 and 2030 targets. Although the supply from agriculture and from waste will need to grow much more than the supply from forests and forest-based industries, forest biomass will continue to be an important contributor to energy security and the mitigation of energy poverty.

5.2.4 Common Agricultural Policy

In June 2018, the European Commission presented the legislative proposals for the Common Agricultural Policy (CAP) after 2020. The future CAP must be modernised to meet broad new challenges and to be more coherent with other EU policies to maximise its contribution to the Sustainable Development Goals. It will need to support the transition towards a fully sustainable agricultural sector and the development of vibrant rural areas, especially in view of emerging opportunities for action in the areas of trade, the

bioeconomy, renewable energy, the circular and the digital economies. Significant synergies will be obtained by including, for each Member State, under one strategic framework of the CAP Strategic Plan the implementation of interventions also supporting other EU policies, like climate, environment and the bioeconomy. The European Green Deal requires that these plans incentivise forest managers to preserve, grow and manage forests sustainably.

Strengthening the socio-economic fabric of rural areas is stipulated as one of the three general objectives of the new CAP. To achieve this, specific objectives are stated, amongst them

- support for viable farm income and resilience across the Union to enhance food security;
- contribute to climate change mitigation and adaptation, as well as sustainable energy;
- attract young farmers and facilitate business development in rural areas;
- promote employment, growth, social inclusion and local development in rural areas, including bioeconomy and sustainable forestry.

Forest-based value chains could strongly contribute to achieving all these objectives, in particular by, but not limited to, their crucial role in the bioeconomy. Forest management and the processing of wood are important contributors to the economic development, employment, innovation, identity and dynamism of rural regions. The proper inclusion of forests and the forestry sector is crucial, in particular to

- strengthen the contributions of land-based production systems to the bioeconomy. They have to respond to growing biomass needs for food and non-food applications and to demands from other sectors/policies on ecosystem services generated by the same natural systems.
- support prosperous territorial development adapted to ongoing changes in the rural and urban landscapes, increasing their resilience.

The three policies presented above (industry, energy, agriculture) will need biomass from sustainably managed forests to achieve their objectives. How these objectives are made compatible with the forest-related policies outlined in the European Green Deal is still unclear.

Enabling EU forests and the forest-based sector to optimally contribute to relevant EU policies in view of upcoming challenges will need innovation, investments and the forest owners' interest in active management of their resources. Today, mainly selling wood enables forest owners to generate income. Maybe in future significant income can be generated by also selling carbon sequestration and biodiversity. However, in the current situation, the impediments of providing wood to markets pose risks for the economic sustainability of forestry. Moreover, the impacts on economic sectors interested to change to renewable biobased feedstock in their transition to a more sustainable and climate-friendly business model, as requested by the EU policies above, have to be carefully assessed. The European Green Deal proposal has not yet addressed these issues.

In general, the role that current and new forest-based products need to play in the transformation to a low-carbon and sustainable economy is still missing in the Green Deal. The focus on environmental aspects is too narrow, e.g. by failing to see the necessity of using renewable biological resources to substitute for fossil and non-renewable ones. Moreover, there is a lack of acknowledgement of the high relevance of

wood products in the daily life of EU citizens, and of the important role of markets in the decision-making of forest owners, managers and the wood-processing industries.

5.3 Green Deal: a promising start, but not yet there

The Green Deal proposal's strength is that it responds to the call. It reflects the mood in the EU Member States, where environmental issues are perceived to be more important and urgent. The Deal represents also a new kind of sustainability thinking within the Commission, which acknowledges that increased efforts are needed for climate change mitigation and adaptation. The main objective of the Green Deal is the EU's carbon neutrality by 2050. There is broad consensus on this goal, but not necessarily on all the means to achieve it.

The European Green Deal includes several actions directly affecting forests and the forest-based sector. But from the forest sector perspective, the Green Deal proposal has still too narrow a scope. Many of the potential problems related to forests are well acknowledged, but the opportunities are scarcely mentioned. There is a need to develop Green Deal policies to better utilize the opportunities that EU forests and the forest sector offer to contribute to a low carbon economy and Sustainable Development Goals, also via circular bioeconomy. Neither are forests in EU countries carved from the same tree. Therefore, one-size-fits-all policies are not necessarily the best for all Member States. The Green Deal proposal needs to better acknowledge this in its future development.

The European Commission has set a very ambitious timetable for the Green Deal (see Annex below). Some important policies and legislation should be finalized in the first half of 2020 or until the end of 2020. Given the complexity of forest-related issues and the long time period that must necessarily be assessed, this timetable poses serious challenges for sound decision making to reach an optimal balance of all the benefits which forests provide to society, not only a few. Maximizing synergies and minimizing potential trade-offs between the diverse needs for forests in society, and the impacts from dynamic natural conditions, markets and societal developments, requires a thorough analysis, forest sector know-how, and the involvement of stakeholders. Using more time to engage forest sector expertise and stakeholder views would allow better use of the evidence-base, and a wider perspective of the forest sector's potential to contribute to the Green Deal's strategic objective: carbon neutrality by 2050. This would also create more shared ownership for the policy, and therefore also more effective policy implementation. In summary, the Green Deal proposal is a promising start, but still needs clear improvements

Finally, the European Green Deal raises also a more fundamental question for the EU forest sector. With the Deal, the EU has an increasing influence on each Member State's forest sector and stakeholders. Indeed, the Deal is another good example of how the EU is *de facto* formulating and implementing forest policy, even though this is the competence of the Member States. The Green Deal proposal, and the history of forest-related policy making in the EU, also indicate that there is a need for better strategic vision and policy coordination on forests. Coordination of forest-related issues between different services of the European Commission and with the Member States is weak. It is also problematic that the European

Commission has strikingly scarce forest expertise. This is reflected e.g. in the narrow understanding of some key forest sector features in the Green Deal and the Taxonomy proposals. Without official forest policy status, the forest sector's ability to influence its own cause in the EU is also limited. The Commission's preparatory work and the forest-based sector suffer from these shortcomings. The current situation is not optimal, and improvements are needed.

References

- Berndes, G., Abt, B., Asikainen, A., Cowie, A., Dale, V., Egnell, G., Lindner, M., Marelli, L., Paré, D., Pingoud, K. & Yeh, S. 2016. Forest biomass, carbon neutrality and climate change mitigation. From Science to Policy 3. European Forest Institute. <https://doi.org/10.36333/fs03>
- European Commission 2019. European Green Deal. Brussels, 11.12.2019 COM(2019) 640 final.
- Freer-Smith, P.H., G., Muys, Bozzano, M., Drössler, L., Farrelly, N., Jactel, H., Korhonen, J., Minotta, G., Nijnik, M. and Orazio, C. 2019. Plantation forests in Europe: challenges and opportunities. From Science to Policy 9. European Forest Institute. <https://doi.org/10.36333/fs09>
- Hetemäki, L., Hanewinkel, M., Muys, B., Ollikainen, M., Palahí, M. and Trasobares, A. 2017. Leading the way to a European circular bioeconomy strategy. From Science to Policy 5. European Forest Institute. <https://doi.org/10.36333/fs05>
- IPCC, 2018. Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.
- Leskinen, P., G. Cardellini, S. Gonzalez-Garcia, L. Gustavsson, E. Hurmekoski, R. Sathre, J. Seppälä, C. Smyth, T. Stern, and H. Verkerk. 2018. Substitution effects of wood-based products in climate change mitigation. From Science to Policy 6, European Forest Institute. <https://doi.org/10.36333/fs06>
- Nabuurs, G-J., Delacote, P., Ellison, D., Hanewinkel, M., Lindner, M., Nesbit, M., Ollikainen, M. & Savaresi, A. (2015). A new role for forests and the forest sector in the EU post-2020 climate targets. From Science to Policy 2. European Forest Institute. <https://doi.org/10.36333/fs02>
- Wolfslehner, B., Linser, S., Pölzl, H., Bastrup-Birk, A., Camia, A. & Marchetti, M. 2016. Forest bioeconomy – a new scope for sustainability indicators. From Science to Policy 4. European Forest Institute. <https://doi.org/10.36333/fs04>
- Wolfslehner, B., McDermott, C., Kleinschmit, D., Aggestam, F., Winkel, G., Pölzl, H., Roux, J-L., Candel, J., Eckerberg, K., Secco, L., Lackner, M., Sotirov, M. and Feindt, P. 2020 (forthcoming). European forest governance post-2020. From Science to Policy 10. European Forest Institute.

Annex to the Communication on the European Green Deal Roadmap - Key actions
(selection of activities of relevance for forests and the forest-based sector)

Actions	Timetable
Climate ambition	
Proposal on a European 'Climate Law' enshrining the 2050 climate neutrality objective	March 2020
Comprehensive plan to increase the EU 2030 climate target to at least 50% and towards 55% in a responsible way	Summer 2020
Proposals for revisions of relevant legislative measures to deliver on the increased climate ambition, following the review of Emissions Trading System Directive; Effort Sharing Regulation; Land use, land use change and forestry Regulation; Energy Efficiency Directive; Renewable Energy Directive; CO ₂ emissions performance standards for cars and vans	June 2021
New EU Strategy on Adaptation to Climate Change	2020/2021
Clean, affordable and secure energy	
Assessment of the final National Energy and Climate Plans	June 2020
Strategy for smart sector integration	2020
'Renovation wave' initiative for the building sector	2020
Industrial strategy for a clean and circular economy	
EU Industrial strategy	March 2020
Circular Economy Action Plan, including a sustainable products initiative and particular focus on resource intense sectors such as textiles, construction, electronics and plastics	March 2020
Initiatives to stimulate lead markets for climate neutral and circular products in energy intensive industrial sectors	From 2020
Sustainable and smart mobility	
Assessment of legislative options to boost the production and supply of sustainable alternative fuels for the different transport modes	From 2020

Greening the Common Agricultural Policy / 'Farm to Fork' Strategy	
Examination of the draft national strategic plans, with reference to the ambitions of the European Green Deal and the Farm to Fork Strategy	2020-2021
Preserving and protecting biodiversity	
EU Biodiversity Strategy for 2030	March 2020
Measures to address the main drivers of biodiversity loss	From 2021
New EU Forest Strategy	2020
Measures to support deforestation-free value chains	From 2020
Mainstreaming sustainability in all EU policies	
Renewed sustainable finance strategy	Autumn 2020
Review of the relevant State aid guidelines, including the environment and energy State aid guidelines	2021
Align all new Commission initiatives in line with the objectives of the Green Deal and promote innovation	From 2020
Integration of the Sustainable Development Goals in the European Semester	From 2020
Working together – a European Climate Pact	
Launch of the European Climate Pact	March 2020
Proposal for an 8 th Environmental Action Programme	2020

6. Conclusions

The year 2019 was the 2nd year of operation of the new cycle of MDTF (2018-2020). In 2019, two ThinkForest seminars and two *From Science to Policy* reports were published. In addition, MDTF also organised a seminar on “China-Europe Forest Bioeconomy” together with the Embassy of Finland in Beijing on 14 November 2019. Work to still enlarge the MDTF with new countries in the future also took place in 2019 (with Netherlands, Poland and Slovenia). The cooperation with the European Commission continued, for example, with the bioeconomy work.

Despite acknowledging the difficulties of measuring the impact of MDTF science-policy support work (the impacts are likely to be gradual and at least partly indirect), the indicators related to ThinkForest event participation, publication downloads, requested expert presentations, statements and hearings based on the studies, social media activities, and direct communication from the network members, all indicate great interest in MDTF work and activities.

The importance of the MDTF work was acknowledged or disseminated in 2019 in many policy and important fronts. For example, a joint declaration by the Ministers of Agriculture of seven Eastern European countries called for strengthened international cooperation and contributions to EFI’s work in improving resilience and adaptation of forests to climate change; the EFI Director had several meetings with His Royal Highness Prince of Wales (HRH), and in those meetings discussed also the work based on MDTF publications; Vice Minister National Forestry and Grassland Administration, China acknowledged in Beijing on 14 November the important role EFI is playing in advancing the circular bioeconomy, and providing the expertise and support for this also in China; the lead author of the “Living with bark beetles” presented the study results and implications also in the Czech Republic Parliament. In summary, both the direct and indirect impacts of the MDTF work carried out in past years and in 2019 have had significant impact.

Since there is no other similar platform, or other organization, engaging in such a pan-European forest-based sector related science-policy work, it is difficult to compare (benchmark) the work to others. In fact, exactly because of this, many policy makers and EFI Associate Member organizations have again expressed their interest to support EFI MDTF work. Given these responses and the information provided in this Report, the MDTF work appears to have reached well the set objectives for 2019.

Finally, the EFI Policy Support Facility team gratefully acknowledges the donors and Steering Committee for supporting the work, and providing strategic guidance for it. All the members of the Steering Committee have been very supportive. We wish to thank the Steering Committee and its Chair in 2019, Tomas Krejzar, Ministry of Agriculture, Czech Republic for efficient work and support. Also, we wish to thank all the scientists who have contributed to the studies and activities in 2019! The support from the EFI Director has also been very important for this work.

Annexes

Table 1: Online statistics

Table 2: Number of ThinkForest participants according to background

Table 3: Stakeholder follow-up articles related to events and publications

Table 4: Media coverage

Table 5: Publication citations

Table 1: Online statistics**Publication statistics**

Title	Publication date	No of copies printed and distributed in 2019	No of electronic copies downloaded 2019	Lifetime copies downloaded
FSTP9 (Plantation forests)	Dec 2019	600	105	105
FSTP8 (Bark beetles)	Apr 2019	600	4,504	4504
FSTP 7 (Substitution effects of wood-based products)	Nov 2018	n/a	2,679	4,345
FSTP 6 (Climate-Smart Forestry)	Mar 2018	n/a	1,699	3,214
WSCTU 8 (Forest-based bioeconomy), plus Summary	Dec 2017	n/a	2,595	8,175
FSTP 5 (Circular bioeconomy) (EN, CN, RU)	Oct 2017	600 (CN and RU)	2,122	7,069
FSTP 5 Summaries (EN, FR, DE, IT, ES, CN, RU)	Nov 2017-Apr 18	n/a	1,867	3,928
WSCTU 7 (Natura 2000) plus Summary	Sept 2017	n/a	497	4,076
FSTP 4 (Forest bioeconomy indicators)	Nov 2016	n/a	2,596	8,278
FSTP 3 (Forest biomass, carbon neutrality)	Oct 2016	n/a	1,268	16,799
FSTP 2 (A new role for forests)	Dec 2015	n/a	751	11,590
FSTP 1 (EUTR-FLEGT)	Apr 2015	n/a	726	8,761

Policy support electronic newsletter

Three editions of the policy support newsletter, *Science Informing Policy-making* were sent by email to subscribers during 2019. Note – a fourth edition was sent in early January 2020, due to the ThinkForest event in late December 2019.

Edition	Date	Number of subscribers	% read
1-2020	08.01.2020	945	39.3%
3-2019	13.09.2019	869	35.1%
2-2019	05.06.2019	851	46.0%
1-2019	23.04.2019	837	49.3%

Electronic event invitations

Four event invitations were sent by email to subscribers during 2019:

Event	Date	Number of subscribers	% read
Watch the livestream: Thinkforest Seminar on the Future of plantation forests in Europe	16.12.2019	731	41.9%
Register now: Thinkforest Seminar on the Future of plantation forests in Europe	03.12.2019	729	45.4%
Join via live stream: ThinkForest seminar on How to Respond to Forest Disturbances in Europe, 4 April 2019	03.04.2019	616	45.8%
Register now: ThinkForest seminar on How to Respond to Forest Disturbances in Europe, 4 April 2019	28.01.2019	590	47.0%

Social media

Twitter

1,629 tweets were sent out during the course of 2019, and by the end of the year, the EFI Twitter account had 8,853 followers. This represents an increase of 1,422 new followers during 2019.

	Tweets	Gain in followers
Total 2019	1,629	1,422
Total 2018	1,517	1,315
Total 2017	1,995	1,288
Total 2016	1,837	1,505
Total 2015	1,803	1,106

EFI's other social media channels were also utilised:

Other channels	No of policy support-related posts, 2019
Linked In	11
Facebook	30

Videos

Two policy support videos were published on the EFI YouTube channel in 2019:

Video	Published	No of views 2019
ThinkForest: The Future of Plantation Forests in Europe	17.12.2019	267
ThinkForest: How to Respond to Forest Disturbances in Europe	04.04.2019	1,388

Previous video material:	Published	No of views 2019	Lifetime views
Climate policy and forest bioeconomy	04.12.2018	335	617
Role of bioeconomy in controlling forest fires	29.05.2018	222	904
Looking ahead to a circular European bioeconomy	07.11.2017	85	808
Implementing Natura 2000 in forests: lessons learned and looking ahead	27.09.2017	41	630
Leading the way to a new European bioeconomy strategy	10.05.2017	351	1,770
Building an innovative and resilient forest bioeconomy	15.11.2016	33	603
Building the bioeconomy: insights from European strategies	08.06.2016	51	978
Climate policy after COP21: Implications for the European forest-based sector	15.03.2016	11	568
7 videos from COP21 event: Climate policy targets – How can European forests contribute?	04.01.2016	129	1,198
Towards Paris 2015: How can the forest sector contribute?	Oct 2015	23	906
Bioeconomy is the future (<i>Göran Persson</i>)	Nov 2015	306	3,519
A new role for forests and the forest sector in climate targets (<i>Gert-Jan Nabuurs</i>)	Nov 2015	55	774

Website

In March 2018, EFI launched its new website, with a dedicated section for the Policy Support Facility (www.efi.int/policysupport).

This contains three main areas: Our work, ThinkForest and Publications. These pages showcase policy support information, and signpost users to related information which is now integrated into other areas

of the website (eg events, publications, news). The analytics from 2019 show an upturn in both unique visitors and page views, particularly to the ThinkForest area of the website.

Web pages	Page views 2019	Page views 2018	Unique visitors 2019	Unique visitors 2018
Policy support main landing page (policysupport/)	1,736	1,405	1,259	761
Our work (policysupport/ourwork)	346	457	264	269
ThinkForest (policysupport/thinkforest/) plus subpages	10,025	6,563	7,458	1,737
Publications (policysupport/publications/)	702	576	545	291

Table 2: Number of ThinkForest and other participants according to background

Participant background	ThinkForest: How to Respond to Forest Disturbances in Europe 4 April 2019, Prague	ThinkForest: The Future of Plantation Forests in Europe 17 December 2019, Brussels	EFI event: China-Europe Forest Bioeconomy 14 November, Beijing
European Parliament	-	-	-
European Commission	-	4	3
Council of the EU	-	-	-
Ministries	27	5	6
Embassies, perm. representations	-	5	6
Forest industry	4	13	7
Forest owner	10	2	-
NGO	7	7	5
Other stakeholder group	7	17	7
Research	55	13	4
Other (<i>e.g. international org. incl. EFI</i>)	16	6	7
Media	6	-	4
TOTAL	132	69	49

Number of MDTF countries represented in ThinkForest/other related events
(out of 10 countries)

Participant background	How to Respond to Forest Disturbances in Europe 4 April 2019, Prague	The Future of Plantation Forests in Europe 17 December 2019, Brussels	EFI event: China-Europe Forest Bioeconomy 14 November, Beijing
Ministries in total.	27	5	6
From MDTF countries.	16	4	-
Embassies, perm. representations in total.	-	2	6
From MDTF countries.	-	1	4

Table 3: Stakeholder follow-up articles related to events and publications

ThinkForest event on How to Respond to Forest Disturbances in Europe, 4 April 2019, Prague		
Publisher / Stakeholder	Specified, article name	Link
Norwegian government	Insektskader fører til at skogen i Europa dør	https://www.regjeringen.no/no/aktuelt/insektskader-forer-til-at-skogen-i-europa-dor/id2640164/
Ministry of Agriculture and Rural Development of the Slovak Republic	Kalamitu v lesoch zvládneme, ak budeme postupovať v súlade s vedeckými poznatkami	http://www.mpsr.sk/sk/index.php?navID=1&id=14084&start
Czech Ministry of Agriculture (Ministerstvo zemědělství České republiky)	Ministr Toman zahájil mezinárodní konferenci ThinkForest Jak odpovědět na poškození lesů v Evropě	Facebook
Forest Owners Association of Lithuania	Kaip tvarkytis su dažnėjančiomis ir gausėjančiomis kenkėjų invazijomis miškuose?	https://forest.lt/go.php/lit/Kaip-tvarkytis-su-daznejanciomis-ir-gausejanciomis-kenkeju-invazijomis-miskuose/6284
Friends of the Earth (Czech Republic)	Ministerstvo zemědělství nezvládlo rajonizaci lesů	http://hnutiduha.cz/aktualne/ministerstvo-zemedelstvi-nezvladlo-rajonizaci-lesu
Friends of the Earth (Czech Republic)	Boj s kůrovcem dosavadními způsoby je zbytečný a škodlivý, vzkazují vědci z mezinárodní konference vládě a lesníkům	http://www.hnutiduha.cz/aktualne/boj-s-kurovcem-dosavadnimi-zpusoby-je-zbytecny-skodlivy-vzkazuji-vedci-z-mezinarodni
NIBIO	Klimaendringer baner vei for barkbillene i Europa	https://www.nibio.no/nyheter/klimaendringer-baner-vei-for-barkbillene-i-europa
Skogsnorge	Klimaendringer baner vei for barkbillene i Europa	http://www.skogsnorge.no/
Česká lesnická společnost (Czech Forestry Society)	Jak reagovat na narušení lesů v Evropě?	http://www.cesles.cz/163-jak-reagovat-na-naruseni-lesu-v-evrope
Silvarium.cz	Konference EFI v Praze: jak reagovat na narušení lesů v Evropě?	http://www.silvarium.cz/lesnictvi/konference-efi-v-praze-jak-reagovat-na-naruseni-lesu-v-evrope
Slovenia Forest Service	Evropski forum ThinkForest v Pragi na temo soočanja z naravnimi ujmami in njihovimi posledicami v gozdovih	http://www.zgs.si/aktualno/novice/news_article/evropski_forum_tinkforest_v_pragi_na_temo_soočanja_z_naravnimi_ujmami_in_njihovimi_posled_541/index.html
Slovak Centre of Scientific and Technical Information	Vedecké poznatky by mali prispieť k riešeniu kalamity v lesoch	http://vedanadosah.cvtisr.sk/vedecke-poznatky-by-mali-prispiet-k-rieseniu-kalamity-v-lesoch

ThinkForest event on 17 December 2019		
Publisher / Stakeholder	Specified, article name	Link
Department of Agriculture, Food and the Marine, Ireland	Minister Doyle opens Brussels event on the Future of Plantation Forests in Europe	https://www.agriculture.gov.ie/press/pressreleases/2019/december/title,137142,en.html

Table 4: Media coverage related to events

ThinkForest event on How to Respond to Forest Disturbances in Europe, 4 April 2019, Prague			
Publisher	Type of publication	Article name	Link
AlphaGalileo	Global news distributor	International cooperation needed to deal with forest disturbances	https://www.alphagalileo.org/en-gb/Print/itemId/177610/userId/-1/cultureCode/en-GB
Reuters	Global news agency	Climate change to blame as bark beetles ravage central Europe's forests	https://www.reuters.com/article/us-centraleurope-environment-barkbeetle/climate-change-to-blame-as-bark-beetles-ravage-central-europes-forests-idUSKCN1S21LA
Hospodářské noviny	Czech daily newspaper	Současný způsob boje s kůrovcem nefunguje, zjistil tým vědců. Když se lesy nezmění, kalamit se nezbavíme, říkají	https://domaci.ihned.cz/c1-66547730-soucasny-zpusob-boje-s-kurovcem-nefunguje-zjistil-tym-vedcu-kdyz-se-lesy-nezmeni-kalamit-se-nezbavime-rikaji
Hospodářské noviny	Czech daily newspaper	Česká "lesní fabrika" zkrachovala. Příkladem nám může jít Bavorsko, kde si s kůrovcem poradili, říká děkan brněnské lesnické fakulty Jankovský	https://domaci.ihned.cz/c1-66547580-ceska-lesni-fabrika-zkrachovala-prikladem-nam-muze-jit-bavorsko-kde-si-s-kurovcem-poradili-rika-dekan-brnenske-lesnicke-fakulty-jankovsky
Deník	Czech regional daily newspaper	Vědci varují: Sázejte různé druhy stromů, jinak kůrovec nezmizí	https://www.denik.cz/z_domova/vedci-varuji-sazejte-ruzne-druhy-jinak-kurovec-nezmizi-20190403.html
Ekolist.cz	Czech web portal	Hnutí DUHA: Boj s kůrovcem dosavadními způsoby je zbytečný a škodlivý, vzkatují vědci z mezinárodní konference vládě a lesníkům. Rajonizace lesů z pera ministra Miroslava Tomana se jejich doporučeními neřídí a kalamitu neřeší	https://ekolist.cz/cz/zpravodajstvi/tisk-ove-zpravy/boj-s-kurovcem-dosavadnimi-zpusoby-je-zbytecny-a-skodlivy-vzkatuji-vedci-z-mezinarodni-konference-vlade-a
Ekolist.cz	Czech web portal	Hnutí DUHA: Ministerstvo zemědělství nezvládlo rajonizaci lesů. Letos proto hrozí zvýšené použití nebezpečné chemie	https://ekolist.cz/cz/zpravodajstvi/tisk-ove-zpravy/ministerstvo-zemedelstvi-nezvladlo-rajonizaci-lesu.letos-proto-hrozi-zvysene-pouziti-nebezpecne-chemie
Radio Praha	Czech radio	Experts: Bark beetle infestations to get worse	https://www.radio.cz/en/section/news/experts-bark-beetle-infestations-to-get-worse
Metsälehti	Finnish forestry newspaper	Metsäinstituutti haluaa uuden mallin	https://www.metsalehti.fi/uutiset/metsainstituutti-haluaa-uuden-mallin-kaarnakuoriaisten-torjuntaan/

		kaarnakuoriaisten torjuntaan	
Metsälehti	Finnish forestry newspaper	Kirjanpainaaja on sotkenut Euroopan puumarkkinat	https://www.metsalehti.fi/uutiset/kirjanpainaaja-on-sotkenut-euroopan-puumarkkinat/
Loz.news (Lokale Online Zeitung für das Herzogtum Lauenburg)	German online newspaper	Grüne warnen vor Gifteinsatz in den Forsten	https://www.loz-news.de/herzogtum-lauenburg/4357-gruene-warnen-vor-gifteinsatz-in-den-forsten
Bondebladet	Norwegian weekly newspaper	Følger barkbillens herjinger med argusøyne	https://www.bondebladet.no/landbruk/folger-barkbillens-herjinger-med-argusoyne/
WebNoviny	Slovak news portal	Zmena klímy zasahuje aj lesy na Slovensku, okrem požiarov ich ohrozujú nové druhy škodcov	https://www.webnoviny.sk/zmena-klimy-zasahuje-aj-lesy-na-slovensku-okrem-poziarov-ich-ohrozuju-nove-druhy-skodcov/
WebNoviny	Slovak news portal	Kalamitu v lesoch zvládneme, ak budeme postupovať v súlade s vedeckými poznatkami	https://www.webnoviny.sk/kalamitu-v-lesoch-zvladneme-ak-budeme-postupovat-v-sulade-s-vedeckymi-poznatkami/
Nas Vidiek	Slovak news portal	Les stojí pred novými výzvami. Ohrozuje ho zmena klímy aj úplne noví škodcovia	https://nasvidiek.sk/les-stoji-pred-novymi-vyzvami-ohrozuje-ho-zmena-klimy-aj-uplne-novi-skodcovia/
LES medium	Slovak wood magazine and journal	Kalamity v lesoch zvládneme, ak využijeme vedecké poznatky	http://www.lesmedium.sk/o-com-sa-pise/kalamity-v-lesoch-zvladneme-ak-vyuzijeme-vedecke-poznatky
Norsk Skogbruk	Norwegian trade journal for forestry	Klimaendringer baner vei for barkbillene i Europa	http://www.norsk-skogbruk.no/2019/04/12/klimaendringer-baner-vei-for-barkbillene-i-europa/

Embassy of Finland – EFI Seminar on China-Europe Forest Bioeconomy, 14 November 2019, Beijing			
China Daily	Chinese daily news	中欧林业生物经济研讨会 会在京举行	https://cn.chinadaily.com.cn/a/201911/16/WS5dcff6a9a31099ab995ec51e.html
China Pulp and Paper	Magazines publisher	中欧林业生物经济研讨会 会成功举办	https://mp.weixin.qq.com/s/eBTJnaf8146crgF_Fsu0IA
ChinaPaper.net	News portal	中欧林业生物经济研讨会 会成功举办	http://www.chinapaper.net/news/show-42492.html

ThinkForest event on The Future of Plantation Forests in Europe, 17 December 2019, Brussels			
EIN Newswire	Press portal	Minister Doyle opens Brussels event on the Future of Plantation Forests in Europe	https://www.einnews.com/pr_news/505078180/minister-doyle-opens-brussels-event-on-the-future-of-plantation-forests-in-europe
Agenparl.eu	Italian politics portal	Minister Doyle opens Brussels event on the Future of Plantation Forests in Europe	https://agenparl.eu/minister-doyle-opens-brussels-event-on-the-future-of-plantation-forests-in-europe/
Irish Examiner	Irish regional newspaper	Forestry expected to have a wide role in economy, Doyle tells audience	https://www.pressreader.com/ireland/irish-examiner/20191219/282144998243713
EU reporter	EU news portal	Green Deal needs plantation forests	https://www.eureporter.co/frontpage/2019/12/19/greendeal-needs-plantation-forests/

Other

Sound Reporting Co-Lab, 11-12 July 201, Poland			
Cornell Chronicle	Cornell University news site	Audio storytelling workshop to train journalists	http://news.cornell.edu/stories/2019/07/audio-storytelling-workshop-train-journalists#.XSQbZ2WtIiY
Press	Polish journalism magazine/news portal	Outriders oraz dziennikarze z Europy i USA szkolą się w Białowieży z opowiadania dźwiękiem	https://www.press.pl/tresc/57899,w-bialowiezy-dziennikarze-szkola-sie-z-opowiadania-dzwiekiem

STT / Audiomedia Oy 27.06.2019	Finnish news agency	Metsäpolitiikassa voidaan yhdistää taloudelliset ja ilmastopolitiikan tavoitteet	https://www.sttinfo.fi/tiedote/metsa-politiikassa-voidaan-yhdistaa-taloudelliset-ja-ilmastopolitiikan-tavoitteet?publisherId=4627873&releaseId=69861269
Forest.fi 17.06.2019	News from Finnish forest & forest sector	Janez Potočnik, ThinkForest: Forest policy can combine economic and climate policy goals	https://forest.fi/article/janez-potocnik-thinkforest-forest-policy-can-combine-economic-and-climate-policy-goals/

Table 5

Publication citations

**Published during 2019**

From Science to Policy 1: Assessment of the EU Timber Regulation and FLEGT Action Plan Published 21 April 2015			
Citations			
Axel Marx	In Olga Martin-Ortega and Claire Methven O'Brien (eds) (2019) Public Procurement and Human Rights- Opportunities, Risks and Dilemmas for the State as Buyer	Chapter 8: Public procurement and human rights: current role and potential of voluntary sustainability standards	https://www.elgaronline.com/view/edcoll/9781788116305/9781788116305.00017.xml
Claudia Ituarte-Lima, Amelie Dupraz-Ardiot, Constance L. McDermott	Int Environ Agreements (2019)	Incorporating international biodiversity law principles and rights perspective into the European Union Timber Regulation	https://doi.org/10.1007/s10784-019-09439-6
Andrighetto, Nicola	University of Padua, PhD thesis, 2018	Impacts and interaction of political and economic driving forces in the international timber trade	http://paduaresearch.cab.unipd.it/10680/
Pauline Pirlot, Tom Delreux and Christine Farcy	In European Union External Environmental Policy: Rules, Regulation and Governance Beyond Borders. Springer, Camilla Adelle, Katja Biedenkopf, Diarmuid Torney (eds). (Available online 15.11.2017)	Forests: A Multi-sectoral and Multi-level Approach to Sustainable Forest Management	https://link.springer.com/chapter/10.1007/978-3-319-60931-7_9
Laura Secco, Matteo Favero, Mauro Masiero, Davide Matteo Pettenella	Land Use Policy, Volume 62, March 2017 (published online 28.12.2016)	Failures of political decentralization in promoting network governance in the forest sector: Observations from Italy	http://dx.doi.org/10.1016/j.landusepol.2016.11.013

Niels Janzen, Holger Weimar	Drewno. 2016, Vol. 59 Issue 197	Market coverage of the EUTR - what share of wood imports into the EU is covered by the EUTR?	http://drewno-wood.pl/pobierz-255
Y T Tegegne	University of Helsinki PhD thesis, 2016	FLEGT and REDD+ synergies and impacts in the Congo Basin: lessons for global forest governance	https://helda.helsinki.fi/bitstream/handle/10138/169117/FLEGTand.pdf?sequence=1
	European Environment Agency Report No 5/2016 (Published 29.04.2016)	European forest ecosystems - State and trends	http://www.eea.europa.eu/publications/european-forest-ecosystems
K Matsson,	SLU Master's thesis (2015)	The impact of the EU Timber Regulation on the Bosnia and Herzegovinian export of processed wood	http://stud.epsilon.slu.se/8077/1/Matsson_K_20150622.pdf
Ines Gavrilut, Aureliu-Florin Halalisan, Alexandru Giurca, and Metodi Sotirov	Forests 2016, 7(1), 3 (Published 22.12.2015)	The Interaction between FSC Certification and the Implementation of the EU Timber Regulation in Romania	http://www.mdpi.com/1999-4907/7/1/3/html
	UNECE (Published 10.11.2015)	Forest Products Annual Market Review 2014-2015	https://issuu.com/unpublications/docs/9789210575607/41
Mauro Masiero, Davide Pettenella, and Paolo Omar Cerutti	Forests 2015, 6, 3452-3482 (Published 30.09.2015)	Legality Constraints: The Emergence of a Dual Market for Tropical Timber Products?	http://www.cifor.org/publications/pdf_files/articles/ACerutti1502.pdf
Holger Weimar, Niels Janzen and Matthias Dieter	Thünen Institute of International Forestry and Forest Economics Thünen Working Paper 45 (Published 08.2015)	Market coverage of wood imports by the EU Timber Regulation	https://www.ti.bund.de/media/publikationen/thuenen-workingpaper/ThuenenWorkingPaper_45.pdf
Nicola Andrighetto, Davide Pettenella and Mauro Masiero	IUFRO Proceedings of the 13th International Symposium: Legal Aspects of European Forest Sustainable	Illegal Activities in the Italian Wood-Energy Sector and Potential Impacts on Regulation (EU) 995/2010 (EU Timber Regulation)	http://www.unitbv.ro/Portals/64/internationalizare/Proceedings%20IUFRO_Brasov_2015.pdf

	Development, May 2015		
Ed Pepke	Dovetail Partners (Published 28.04.2015)	Impacts of Policies to Eliminate Illegal Timber Trade	http://www.dovetailinc.org/ report_pdfs/2015/dovetailtr adepolicyimpacts0515.pdf
Presentations			
Georg Winkel, EFI	IUFRO WFSE Seminar "Forests & development: from development discourses to providing data for decision making", Helsinki, 1.3.2016	Green protectionism or a breakthrough for sustainable management - different narratives on illegal logging across the globe	http://www.iufro.org/scienc e-for- policy/article/2016/03/15/f orests-and-development- from-development- discourses-to-providing- data-for-decision-making/
Stakeholders			
	Illegal Deforestation Monitor, 29.09.2016	Comment: Why voluntary policies will not stop deforestation	http://www.farmlandgrab.o rg/post/view/26549- comment-why-voluntary- policies-will-not-stop- deforestation

From Science to Policy 2: A new role for forests and the forest sector in the EU post-2020 climate targets

Published 1 December 2015

Citations

Savaresi, Annalisa and Perugini, Lucia	Journal for European Environmental & Planning Law, April 5, 2019.	The Land Sector in the 2030 EU Climate Change Policy Framework: A Look at the Future	https://ssrn.com/abstract=3366948
Leonel J.R. Nunes, Catarina I.R. Meireles, Carlos J. Pinto Gomes and Nuno M.C. Almeida Ribeiro.	Sustainability 2019, 11(19), 5276	Forest Management and Climate Change Mitigation: A Review on Carbon Cycle Flow Models for the Sustainability of Resources	https://doi.org/10.3390/su11195276
Bravo-Oviedo A., Pretzsch H., del Río M. In: Bravo-Oviedo A., Pretzsch H., del Río M. (eds)	Dynamics, Silviculture and Management of Mixed Forests. Managing Forest Ecosystems, vol 31.	Mixed Forests' Future	https://link.springer.com/chapter/10.1007/978-3-319-91953-9_12
Marius Aleinikovas, Gediminas Jasinevičius, Mindaugas Škėma, Lina Beniušienė, Benas Šilinskas and Iveta Varnagirytė-Kabašinskienė.	Forests 2018, 9(12), 737	Assessing the Effects of Accounting Methods for Carbon Storage in Harvested Wood Products on the National Carbon Budget of Lithuania	https://www.mdpi.com/1999-4907/9/12/737
Kauppi, P., Hanewinkel, M., Lundmark, T., Nabuurs, G.J., Peltola, H., Trasobares, A. and Hetemäki, L.	European Forest Institute, 2018.	Climate Smart Forestry in Europe	http://www.efi.int/sites/default/files/files/publication-bank/2018/Climate_Smart_Forestry_in_Europe.pdf
Inazio Martínez de Arano, Marc Palahí, Christine Farcy, Eduardo Rojas, Lauri Hetemäki.	Mediterráneo Económico [núm. 31] Bioeconomía y Desarrollo sostenible	"PERSPECTIVAS DE UNA BIOECONOMÍA FORESTAL EN EL MEDITERRÁNEO	http://www.publicacionescajamar.es/pdf/publicaciones-periodicas/mediterraneo-economico/31/mediterraneo-economico-31.pdf#page=64
Jasinevičius, Gediminas.	Dissertations in Social Sciences and Business Studies; 179. University of Eastern Finland, 2018.	The role of wood products in climate change mitigation. Carbon accounting methods and scenario analysis in two European countries	http://epublications.uef.fi/pub/urn_isbn_978-952-61-2892-4/urn_isbn_978-952-61-2892-4.pdf

Kolesnichenko E.A., Sokolinskaya Y.M.	Proceedings of the Voronezh State University of Engineering Technologies. 2018;80(2):490-496. (In Russ.)	Organizational and economic features of the functioning of small enterprises of the forest sector of economics and the causes of strengthening the deformation of enterprise activity.	https://doi.org/10.20914/2310-1202-2018-2-490-496
Andrey L. D. Augustynczik, Rasoul Yousefpour & Marc Hanewinkel.	Scientific Reports volume 8, Article number: 14964 (2018)	Multiple uncertainties require a change of conservation practices for saproxylic beetles in managed temperate forests	https://www.nature.com/articles/s41598-018-33389-9
Sebastiaan Luyssaert, Guillaume Marie, Aude Valade, Yi-Ying Chen, Sylvestre Njakou Djomo, James Ryder, Juliane Otto, Kim Naudts, Anne Sofie Lansø, Josefine Ghattas & Matthew J. McGrath.	Nature, 562, pages 259–262 (2018)	Trade-offs in using European forests to meet climate objectives	https://www.nature.com/articles/s41586-018-0577-1
GJ Nabuurs, E Arets, JP Lesschen, MJ Schelhaas.	Wageningen Environmental Research report 2886.	"Effects of the EU-LULUCF regulation on the use of biomass for bio-energy	https://library.wur.nl/WebQuery/wurpubs/fulltext/449788
Krzysztof Jabłoński, Włodzimierz Stempski	Folia Forestalia Polonica, Series A – Forestry, 2018, Vol. 60 (1), 3-10	An attempt to assess the monetary value of carbon absorbed in the Polish forest sector	https://depot.ceon.pl/bitstream/handle/123456789/15286/DOI%2010.2478-ffp-2018-0001.pdf?sequence=1&isAllowed=y
Gert-Jan Nabuurs, Pieter Johannes Verkerk, Mart-Jan Schelhaas, José Ramón González Olabarria, Antoni Trasobares, Emil Cienciala.	From Science to Policy 6, European Forest Institute	Climate-Smart Forestry: mitigation impacts in three European regions	https://www.efi.int/sites/default/files/files/publication-bank/2018/efi_fstp_6_2018.pdf
Artti Juutinen, Anssi Ahtikoski, Mika Lehtonen, Raisa Mäkipää, Markku Ollikainen.	Forest Policy and Economics, vol 90, May 2018	The impact of a short-term carbon payment scheme on forest management	https://www.sciencedirect.com/science/article/pii/S1389934117303544
Roberto Pilli, Andrea Pase.	iForest Biogeosciences and Forestry, vol 11, pp79-89	Forest functions and space: a geohistorical perspective of European forests	http://www.sisef.it/iforest/contents/?id=ifor2316-010

Rasoul Yousefpour, Andrey Lessa Derzi, Augustynczyk, Christopher P. O. Reyer, Petra Lasch-Born, Felicitas Suckow & Marc Hanewinkel.	Nature: Scientific Reports 8, Article number: 34 5 (2018)	Realizing Mitigation Efficiency of European Commercial Forests by Climate Smart Forestry	http://www.nature.com/articles/s41598-017-18778-w
Giorgio Vacchiano, Roberta Berretti, Raoul Romano, Renzo Motta.	iForest Biogeosciences and Forestry, vol. 11, pp. 1-10	Voluntary carbon credits from improved forest management: policy guidelines and case study	http://www.sisef.it/eforest/contents/?id=ifor2431-010
Krzysztof JABŁOŃSK, Włodzimierz STEMPSKI.	Journal Of Civil Engineering, Environment and Architecture (Czasopismo Inżynierii Lądowej, Środowiska I Architektury), 2017 z. 64, nr 4/I	Roles of forests and forest management in sequestration of greenhouse gases (Rola lasów i leśnictwa w pochłanianiu gazów cieplarnianych)	http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.baztech-a7229aba-5e9d-4550-916f-6b86c58fa336/c/jablonski_stempski_rola_4_2017.pdf
G. Winkel (ed)	What Science Can Tell Us 8, European Forest Institute.	Towards a sustainable European forest-based bioeconomy – assessment and the way forward.	http://www.efi.int/sites/default/files/files/publication-bank/2018/efi_wsctu8_2017.pdf
Gert-Jan Nabuurs, Philippe Delacote, David Ellison, Marc Hanewinkel, Lauri Hetemäki and Marcus Lindner	Forests 2017, 8(12), 484 (published 6.12.2017)	By 2050 the Mitigation Effects of EU Forests Could Nearly Double through Climate Smart Forestry	http://www.mdpi.com/1999-4907/8/12/484
Lauri Hetemäki, Marc Hanewinkel, Bart Muys, Markku Ollikainen, Marc Palahí and Antoni Trasobares.	From Science to Policy 5, European Forest Institute.	Leading the way to a European circular bioeconomy strategy	http://www.efi.int/files/attachments/publications/efi_fstp_5_2017.pdf
Christian Temperli, Golo Stadelmann, Esther Thürig, Peter Brang	European Journal of Forest Research, published online 19.07.2017	Timber mobilization and habitat tree retention in low-elevation mixed forests in Switzerland: an inventory-based scenario analysis of opportunities and constraints	https://link.springer.com/article/10.1007/s10342-017-1067-y
Quentin Kleindienst, Arnaud Besserer, Marie-Laure Antoine, Christelle Perrin, Jean-François Bocquet, Laurent Bléron	International Biodeterioration & Biodegradation, Volume 123, September 2017	Predicting the beech wood decay and strength loss in-ground	http://www.sciencedirect.com/science/article/pii/S0964830517303955
Gediminas Jasinevičius, Marcus Lindner, Pieter	Forests 2017, 8(4), 133,	Assessing Impacts of Wood Utilisation Scenarios for a	http://www.mdpi.com/1999-4907/8/4/133/htm

Johannes Verkerk and Marius Aleinikovas		Lithuanian Bioeconomy: Impacts on Carbon in Forests and Harvested Wood Products and on the Socio-Economic Performance of the Forest-Based Sector	
Christian Temperli, Golo Stadelmann, Esther Thürig, Peter Brang	European Journal of Forest Research, (published online 9.04.2017)	Silvicultural strategies for increased timber harvesting in a Central European mountain landscape	http://link.springer.com/article/10.1007/s10342-017-1048-1
Gediminas Jasinevičius, Marcus Lindner, Emil Cienciala, Markku Tykkyläinen	Journal of Industrial Ecology, (published online 23.01.2017).	Carbon Accounting in Harvested Wood Products: Assessment Using Material Flow Analysis Resulting in Larger Pools Compared to the IPCC Default Method	http://onlinelibrary.wiley.com/doi/10.1111/jiec.12538/full
Richard Sikkema, Jean Francois Dallemand, Cristina T. Matos, Marijn van der Velde & Jesus San-Miguel-Ayanz	Scandinavian Journal of Forest Research just-accepted (2016): 1-17 (Published online 20.10.2016)	How can the ambitious goals for the EU's future bioeconomy be supported by sustainable and efficient wood sourcing practices?	http://www.tandfonline.com/doi/abs/10.1080/02827581.2016.1240228
Pere Pons and Josep Rost	Conservation Biology, 2016 (Published 4.10.2016)	The challenge of conserving biodiversity in harvested burned forests	http://onlinelibrary.wiley.com/doi/10.1111/cobi.12767/abstract
Roberto Pilli, Giacomo Grassi, Werner A. Kurz, Jose V. Moris, Raúl Abad Viñas	Carbon Balance and Management, 2016, 11: 20 (Published 26.08.2016)	Modelling forest carbon stock changes as affected by harvest and natural disturbances. II. EU-level analysis	http://link.springer.com/article/10.1186/s13021-016-0059-4
Marion Pause, Christian Schweitzer, Michael Rosenthal, Vanessa Keuck, Jan Bumberger, Peter Dietrich, Marco Heurich, Andrés Jung and Angela Lausch	Remote Sensing 2016, 8(6), 471 (Published 3.06.2016)	In Situ/Remote Sensing Integration to Assess Forest Health—A Review	http://www.mdpi.com/2072-4292/8/6/471/htm
Alexandre Strapasson, Jeremy Woods and Kofi Mbuk	Grantham Institute, Briefing paper No 17, March 2016	Land use futures in Europe: How changes in diet, agricultural practices and forestlands could help reduce greenhouse gas emissions	https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/Land-Use-

			Futures-in-Europe---web-version-v3.pdf
Philippe Delacote, A. Maarit, I. Kallio	Journal of Forest Economics, Volume 23, April 2016 (Published online 17.2.2016)	Forests and climate: New insights from forest sector modeling	http://www.sciencedirect.com/science/article/pii/S1104689916000040
Giulia Corradini	University of Padova, PhD thesis (Published 31.01.2016)	Market based instruments applications to non-wood forest products and services	http://paduaresearch.cab.unipd.it/9501/
Presentations			
Gert-Jan Nabuurs, Alterra	ThinkForest Roundtable Discussion, Brussels, 30.05.2017	Presentation of ThinkForest study 'Climate-Smart Forestry: quantification of mitigation impacts in three case regions in Europe'	http://www.efi.int/portal/policy_advice/thinkforest/past_events/roundtable/
Gert-Jan Nabuurs, Alterra	Invited Distinguished lecture at WSL, Birmensdorf, 31.01.2017	EU forests and the forest sector in the climate mitigation targets: facing new challenges.	http://www.slf.ch/dienstleistungen/events/index_EN?viewevent=wsl_distlect_2017_0131
Gert-Jan Nabuurs, Alterra	"Contribution of Forests to Climate Change Mitigation", EUSTAFOR/EP Intergroup seminar, European Parliament 24.01.2017	"Forests & Climate: The impact of forests and forestry on the EU Climate and Energy policy"	http://ebcd.org/event/forests-climate-impact-forests-forestry-eu-climate-energy-policy
Marcus Lindner, EFI	"Landwirtschaft und Umwelt": Wege für mehr Klimaschutz, BMEL, Berlin. 13.12.2016		http://www.bmel.de/DE/Landwirtschaft/Nachhaltige-Landnutzung/Klimawandel/Texte/FachtagungKlimaschutzgutachten.html
Rupert Oliver, Forest Industries Intelligence	74th session of the UNECE Committee on Forests and the Forest Industry, Geneva 18-.10.2016	Cited in: Overview of European wood market	https://www.unece.org/fileadmin/DAM/timber/meetings/20161018/coffi74-item3a1-01-oliver.pdf

Lauri Hetemäki, EFI	Climate Diplomacy Week seminar, Helsinki 16.09.2016	EU climate policy and forest-based sector	http://www.syke.fi/download/noname/%7B28B8406A-F556-4540-939C-377D48C5F641%7D/121633
Marcus Lindner, EFI	Sustainable production of forest biomass for Northern Europe in a climate change context. Copa and Cogeca working party on forestry, Brussels 08.06.2016		
Hans Verkerk, EFI	USSE Seminar, San Sebastián, Spain 25.05.2016	The role of European forests in mitigating climate change.	
Marcus Lindner, EFI	Sustainable production of forest biomass for Northern Europe in a climate change context. Joint EFINORD – SNS seminar, Oslo 24.05.2016	A new role of forests and the forest sector in the EU post-2020 climate targets	http://www.efinord.efi.int/portal/efinord_sns_-_nkj_joint_seminar_24_may_2016_afternoon_presentations_available/
Gert-Jan Nabuurs, Alterra	Managing European Forests Responsibly for People, Climate and Nature conference, EUSTAFOR, Brussels 05.04.2016	Keynote presentation: “A new role for forests and the forest sector in the EU post-2020 climate targets”	http://eustafor.eu/uploads/FINAL_Program_Managing-European-Forests-Responsibly_4_2016_Website.pdf
Gert-Jan Nabuurs, Alterra	UNECE, Joint ECE/FAO Working Party on Forest Statistics, Economics and Management, Geneva 24.03.2016	Post Paris: the role of Research	http://www.unece.org/index.php?id=41852#/
Gert-Jan Nabuurs, Alterra	Imperial College London 03.02.2016	Lecture, The post-Paris role of the EU's forests in combating climate change	http://www3.imperial.ac.uk/newsandeventspggrp/imperialcollege/administration/energyfutureslab/eventsummary/event_2-2-2016-12-52-42

Antti Arasto, VTT	Aalto University 15.1.2016	Lecture on Sustainability and availability of biomass	https://mycourses.aalto.fi/pluginfile.php/182706/mod_folder/content/0/Lecture%202_Arasto-150116.pdf?forcedownload=1 .
Policymakers			
	European Academies Science Advisory Council (EASAC) policy report 32, April 2017	Multi-functionality and sustainability in the European Union's forests	http://www.easac.eu/fileadmin/PDF_s/reports_statements/Forests/EASAC_Forests_web_complete.pdf
	Staatsbosbeheer, Netherlands (Published 10.2016)	Actieplan bos en hout	https://www.staatsbosbeheer.nl/~media/09-nieuws/actieplan_bos_en_hout.pdf?la=nl-nl
Paul Brannen, MEP	UK Parliament (17.10.2016)	Submission to the 2016 House of Commons Inquiry "Forestry in England"	http://www.northeastlabour.eu/sites/default/files/attachments/Forestry%20in%20England%20-%20inquiry%20submission%20Paul%20Brannen%20MEP.docx
Media			
	Agriland.ie, 08.07.2019	Forests can provide 20% of Irish climate solution – conference	https://www.agriland.ie/farming-news/forests-can-provide-20-of-irish-climate-solution-fii-conference/
	independent.ie, 11.07.2019	Forestry can deliver 20pc of our climate action targets	https://www.independent.ie/business/farming/forestry-enviro/forestry/forestry-can-deliver-20pc-of-our-climate-action-targets-38292518.html
Paul Brannen, MEP	The Journal (UK regional newspaper)	Monthly column, March 2016	http://www.northeastlabour.eu/pauls-latest-journal-column-5
Paul Brannen, MEP	Revolve Media	Value of Wood in Construction – Interview with MEP Paul Brannen	http://revolve.media/the-value-of-wood-in-construction-interview-with-mep-paul-brannen/
Stakeholders			
ROJO SERRANO, L., TORNOS CASTILLO, L.	Sociedad Espanola de Ciencias Forestales	La Política Forestal Internacional en el horizonte 2030: Principales líneas de trabajo, retos y oportunidades.	http://secforestales.org/publicaciones/index.php/congresos_forestales/article/viewFile/19303/19018
	Institute for Applied Ecology /	Forest Vision Germany	https://www.greenpeace.de/sites/www.greenpeace.de/

	Greenpeace, Feb 2018		files/publications/20180228-greenpeace-oekoinstitut-forest-vision-methods-results.pdf
	FAO Forestry	Climate change newsletter, April 2017/4	http://forestry.fao.org/msgfocus.com/q/13Vgk1dQieLHNhe2BSRaH/wv
	EUSTAFOR	EUSTAFOR Position Paper on the European Commission's legislative proposals on land use, land use-change and forestry (LULUCF) and effort-sharing mechanism	http://www.eustafor.eu/uploads/EUSTAFOR_II_Position_Paper_LULUCF.pdf
	FEDENATUR (European Association of Periurban Parks)	Publication: A new role for forests and the forest sector in the EU post-2020 climate targets	http://www.fedenatur.org/im/others/pub-detail/publication-a-new-role-for-forests-and-the-forest-sector-in-the-eu-post-2020-climate-targets
	Sveaskog	Report on Eustafor's April 2016 event, featuring study	http://www.sveaskog.se/press-och-nyheter/nyheter-och-pressmeddelanden/2016/skogen-pa-kartan-i-bryssel/
	Skog supply: Skogen på kartan i Bryssel	Report on Eustafor's April 2016 event, featuring study	http://www.skog-supply.se/article/view/247794/skogen-pa-kartan-i-bryssel#.Vwx6pvJPrlU
	EUSTAFOR	Brochure: European state forests boost the bioeconomy	http://www.eustafor.eu/uploads/eustafor_brochure_bioeconomy_web.pdf
	UNAC (União das Organizações de Agricultores para o Desenvolvimento da Charneca), Portugal	Newsletter: Após a assinatura do Acordo de Paris sobre as alterações climáticas (COP 21 Paris) - qual a relevância para as Florestas?	http://us12.campaign-archive2.com/?u=8f90a6ab57bf9bcdec71ad13d&id=76268c3628&e=48c2147fed
	CEPF	Confederation of European Forest Owners' position on the inclusion of LULUCF in the EU 2030 Climate and Energy framework	http://www.cepf-eu.org/vedl/CEPF%20position%20on%20LULUCF_June%202016.pdf
	Groen Kennisnet	Groeiende vraag naar hout	https://www.groenkennisnet.nl/nl/groenkennisnet/show/Groeiende-vraag-naar-hout.htm

From Science to Policy 3: Forest biomass, carbon neutrality and climate change mitigation

Published 12 October 2016

Citations

Emily Webster.	Review of European, Comparative and International Environmental Law. Published online 6 December 2019.	Transnational legal processes, the EU and RED II: Strengthening the global governance of bioenergy	https://doi.org/10.1111/reel.12315
Leonel J.R. Nunes, Catarina I.R. Meireles, Carlos J. Pinto Gomes and Nuno M.C. Almeida Ribeiro.	Sustainability 2019, 11(19), 5276	Forest Management and Climate Change Mitigation: A Review on Carbon Cycle Flow Models for the Sustainability of Resources	https://doi.org/10.3390/su11195276
Donald G.Hodges, Binod Chapagain, Pattarawan Watcharaanantapong, Neelam C.Poudyal, Keith L.Kline, Virginia H.Dale	Renewable and Sustainable Energy Reviews Volume 113, October 2019, 109205	Opportunities and attitudes of private forest landowners in supplying woody biomass for renewable energy	https://doi.org/10.1016/j.rser.2019.06.012
Michael Norton, Andras Baldi, Vicas Buda, Bruno Carli, Pavel Cudlin, Mike B. Jones, Atte Korhola, Rajmund Michalski, Francisco Novo, Július Oszlányi, Filipe Duarte Santos, Bernhard Schink, John Shepherd, Louise Vet, Lars Walloe, Anders Wijkman	Global Change Biology, Bioenergy. Online 22 August 2019	Serious mismatches continue between science and policy in forest bioenergy	https://doi.org/10.1111/gcb.b.12643
Søren Larsen, Niclas Scott Bentsen & Inge Stupak	Energy, Sustainability and Society volume 9, Article number: 33 (2019)	Implementation of voluntary verification of sustainability for solid biomass—a case study from Denmark	https://doi.org/10.1186/s13705-019-0209-0
Elisa Pieratti, Alessandro Paletto, Isabella De Meo, Claudio Fagarazzi, Matteo Giovanni Rillo Migliorini	Annals of Forest Research, 2019	Assessing the forest-wood chain at local level: A Multi-Criteria Decision Analysis (MCDA) based on the circular bioeconomy principles	http://dx.doi.org/10.15287/af.2018.1238
Savaresi, Annalisa and Perugini, Lucia	Journal for European	The Land Sector in the 2030 EU Climate Change Policy	https://ssrn.com/abstract=3366948

	Environmental & Planning Law, April 5, 2019	Framework: A Look at the Future	
Lauri Hetemäki	Forest Policy and Economics Volume 105, August 2019, Pages 10-16.	The role of science in forest policy–Experiences by EFI	https://doi.org/10.1016/j.forpol.2019.05.014
Manoj Kumar, Jhariya Dhiraj, Kumar Yadav, Arnab Banerjee, Abhishek RajRam, Swaroop Meena	Chapter in "Sustainable Agriculture, Forest and Environmental Management" pp 285-326	Sustainable Forestry Under Changing Climate	https://link.springer.com/chapter/10.1007/978-981-13-6830-1_9
Chloe Margaret Papier, Helen Mills Poulos, Alejandro Kusch	Climatic Change (2019)	Invasive species and carbon flux: the case of invasive beavers (Castor canadensis) in riparian Nothofagus forests of Tierra del Fuego, Chile	https://doi.org/10.1007/s10584-019-02377-x
Chloé Pelletier, Yann Rogaume, Léa Dieckhoff, Guillaume Bardeau, Marie-Noëlle Pons, Anthony Dufour	Applied Energy Volume 235, 1 February 2019, Pages 1381-1388	Effect of combustion technology and biogenic CO2 impact factor on global warming potential of wood-to-heat chains	https://www.sciencedirect.com/science/article/pii/S0306261918317653
Niclas Silfverstrand	MSc Thesis, Chalmers University of Technology, 2019	Land use and land use change - Implications on biogenic carbon balance	https://odr.chalmers.se/bitstream/20.500.12380/256857/1/256857.pdf
Karthikeyan Natarajan	PhD Thesis, University of Eastern Finland. Dissertationes forestales 273	Mapping investment environment by optimizing the forest bioenergy production plant locations	https://dissertationesforestales.fi/pdf/article10194.pdf
Raul Fernandez Lacruz	PhD Thesis, Swedish University of Agricultural Sciences, 2019	Improving supply chains for logging residues and small-diameter trees in Sweden	https://pub.epsilon.slu.se/16161/7/fernandez_lacruz_r_190522.pdf
Doblas Miranda et al.	In: State of Mediterranean Forests 2018. FAO. Chapter 5, p. 72-89	Drivers of degradation and other threats	http://www.fao.org/3/CA2081EN/ca2081en.PDF
Chloé Pelletier, Yann Rogaume, Léa Dieckhoff, Guillaume Bardeau,	Applied Energy, Volume 235, 1	Effect of combustion technology and biogenic CO2 impact factor	https://www.sciencedirect.com/science/article/pii/S0306261918317653

Marie-Noëlle Pons, Anthony Dufour	February 2019, Pages 1381-1388	on global warming potential of wood-to-heat chains	
Alessandro Paletto, Isabella De Meo, Paolo Cantiani, Ugo Chiavetta, Claudio Fagarazzi, Gianluigi Mazza, Elisa Pieratti, Giovanni Matteo Rillo Migliorini, Alessandra Lagomarsino	L'Italia Forestale e Montana. Vol 73, No 3 (2018)	Forest-wood chain analysis in the perspective of circular (bio)economy: the case study of Monte Morello forest	http://ojs.aisf.it/index.php/ifa/article/view/1086
Mumee Gogoi, Kaberijyoti Konwar, Nilutpal Bhuyan, Ramesh Chandra Borah, Alok Chandra Kalita, Hari Prasad Nath, Nabajyoti Saikia	Bioresource Technology Reports, Volume 4, December 2018, Pages 40-49.	Assessments of pyrolysis kinetics and mechanisms of biomass residues using thermogravimetry	https://www.sciencedirect.com/science/article/pii/S2589014X18300793
Timothy D. Searchinger, Tim Beringer, Bjart Holtsmark, Daniel M. Kammen, Eric F. Lambin, Wolfgang Lucht, Peter Raven & Jean-Pascal van Ypersele.	Nature Communications volume 9, Article number: 3741 (2018). Published online 12 Sept 2018.	Europe's renewable energy directive poised to harm global forests	https://www.nature.com/articles/s41467-018-06175-4
Monikankana Saikia, Asadulla Asraf Ali, Ramesh Chandra Borah, Maitreyee S Bezbarua, Binoy K Saikia, Nabajyoti Saikia.	Energy, Ecology and Environment (published 7 July 2018).	Effects of biomass types on the co-pyrolysis behaviour of a sub-bituminous high-sulphur coal	https://link.springer.com/article/10.1007/s40974-018-0097-8
Carlos A. Gonzalez-Benecke, Dehai Zhao, Lisa J. Samuelson, Timothy A. Martin, Daniel J. Leduc and Steven B. Jack.	Forests 2018, 9(6)	Local and General Above-Ground Biomass Functions for Pinus palustris Trees	http://www.mdpi.com/1999-4907/9/6/310
Atsushi Yoshimoto, Patrick Asante, Shizu Itaka.	Current Forestry Reports, September 2018, Volume 4, Issue 3	Incorporating Carbon and Bioenergy Concerns Into Forest Management	https://link.springer.com/article/10.1007/s40725-018-0080-9
Annette Cowie, Göran Berndes.	Forests and the climate – manage for maximum wood production or leave the forest as a carbon sink? Working paper,	Assessing the climate effects of forestry and biomass production: the outcome depends on questions asked and how these are answered	http://www.ksla.se/wp-content/uploads/2017/12/2018-03-12-13-Conference-Forests-and-the-climate-Working-paper.pdf#page=8

	March 2018 ksla.se		
G Grassi, R Pilli, J House, S Federici, WA Kurz	Carbon Balance and Management, 2018 (Published: 17 May 2018)	Science-based approach for credible accounting of mitigation in managed forests	https://cbmjournal.springeropen.com/articles/10.1186/s13021-018-0096-2
Joachim H. A. Krug.	Carbon Balance and Management, 2018 (published online 3 January 2018)	Accounting of GHG emissions and removals from forest management: a long road from Kyoto to Paris	https://cbmjournal.springeropen.com/articles/10.1186/s13021-017-0089-6
Andreas Schober, Nenad Šimunović, Andras Darabant & Tobias Stern.	Journal of Sustainable Forestry, published online 8 Feb 2018	Identifying sustainable forest management research narratives: a text mining approach	https://www.tandfonline.com/doi/abs/10.1080/10549811.2018.1437451
Parish, E. S., A. J. Herzberger, C. C. Phifer, and V. H. Dal.	Ecology and Society 23(1):28.	Transatlantic wood pellet trade demonstrates telecoupled benefits	https://www.ecologyandsociety.org/vol23/iss1/art28/
Riitta Hänninen, Elias Hurmekoski, Antti Mutanen, Jari Viitanen.	Current Forestry Reports, pp1-10, online 31 January 2018	Complexity of Assessing Future Forest Bioenergy Markets—Review of Bioenergy Potential Estimates in the European Union	https://link.springer.com/article/10.1007/s40725-018-0070-y
Tuğba Deniz, Alessandro Paletto.	Journal of Forestry Research, online 11 January 2018	Effects of bioenergy production on environmental sustainability: a preliminary study based on expert opinions in Italy and Turkey	https://link.springer.com/article/10.1007/s11676-018-0596-7
Gallo Barbosa Lima, Patricia.	PhD thesis, (2017), Brandenburg University of Technology Cottbus-Senftenberg	Brazil in the Global Forest Governance: the Brazilian Initiative of Developing a National Strategy on REDD+ Policies	http://deposita.ibict.br/bitstream/deposita/27/2/PatriciaGalloBLima.pdf
Fraser Larock	MSc Thesis, (2018), University of British Columbia	The potential of increasing the use of BC forest residues for bioenergy and biofuels	https://open.library.ubc.ca/cIRcle/collections/ubctheses/24/items/1.0363339
Francesco Pittau, Felix Krause, Gabriele Lumia, Guillaume Habert	Building and Environment (Available online 11.12.2017)	Fast-growing bio-based materials as an opportunity for storing carbon in exterior walls	https://www.sciencedirect.com/science/article/pii/S0360132317305644
Lauri Hetemäki, Marc Hanewinkel, Bart Muys, Markku Ollikainen, Marc	From Science to Policy 5, European Forest Institute.	Leading the way to a European circular bioeconomy strategy	http://www.efi.int/files/attachments/publications/efi_fst_p_5_2017.pdf

Palahí and Antoni Trasobares.			
Luana Ladu, Knut Blind	Current opinion in Green and Sustainable Chemistry, available online 23.09.2017	Overview of policies, standards and certifications supporting the European bio-based economy	http://www.sciencedirect.com/science/article/pii/S2452223617300767
Pekka Lauri, Nicklas Forsell, Anu Korosuo, Petr Havlík, Michael Obersteiner, Annika Nordin	Forest Policy and Economics, Volume 83, October 2017, Pages 121-130	Impact of the 2 °C target on global woody biomass use	http://www.sciencedirect.com/science/article/pii/S1389934117300412
Andrzej Węgiel, Stanisław Małek, Ernest Bielinis, Donald L. Grebner, Krzysztof Polowy & Joanna Skonieczna	Scandinavian Journal of Forest Research, published online 20.07.2017	Determination of elements removal in different harvesting scenarios of Scots pine (<i>Pinus sylvestris</i> L.) stands	http://www.tandfonline.com/doi/abs/10.1080/02827581.2017.1352019
Niclas Scott Bentsen	Renewable and Sustainable Energy Reviews, volume 73, June 2017	Carbon debt and payback time – Lost in the forest?	http://www.sciencedirect.com/science/article/pii/S1364032117302034
Dale, V. H., Kline, K. L., Parish, E. S., Cowie, A. L., Emory, R., Malmshheimer, R. W., Slade, R., SMITH, C. T., Wigley, T. B., Bentsen, N. S., Berndes, G., Bernier, P., Brandão, M., Chum, H. L., Diaz-Chavez, R., Egnell, G., Gustavsson, L., Schweinle, J., Stupak, I., Trianosky, P., Walter, A., Whittaker, C., Brown, M., Chescheir, G., Dimitriou, I., Donnison, C., Goss Eng, A., Hoyt, K. P., Jenkins, J. C., Johnson, K., Levesque, C. A., Lockhart, V., Negri, M. C., Nettles, J. E. and Wellisch, M.	GCB Bioenergy (Volume 9, Issue 8, August 2017) (published online 25.04.2017)	Status and prospects for renewable energy using wood pellets from the southeastern United States	http://onlinelibrary.wiley.com/doi/10.1111/gcbb.12445/full
Jonker, J.G.G.	Dissertation, (2017) Utrecht University	Quantification and comparison of the economic and GHG performance of biomass supply chains	https://dspace.library.uu.nl/handle/1874/351376

	European Environment Agency Report No 30/2016 (Published 09.12.2016)	Environmental indicator report 2016 – In support to the monitoring of the 7th Environment Action Programme	http://www.eea.europa.eu/airs/2016/natural-capital/forest-utilisation
Presentations			
Gabriela Lacobuta, Niklas Höhne	Cited in Contribution to 2017 Interconnections Conference, Bonn 12-13 May 2017	Low-carbon transition under Agenda2030: Climate-development trade-offs and synergies	http://interconnections2017.org/wp-content/uploads/2017/02/112.pdf
Lauri Hetemäki, EFI	29.03.2017, Nordic-Baltic Bioenergy conference, Helsinki	Carbon neutrality of biomass	https://nordicbalticbioenergy.eu/#programme
Marcus Lindner, EFI	"Landwirtschaft und Umwelt": Wege für mehr Klimaschutz, BMEL, Berlin. 13.12.2016		http://www.bmel.de/DE/Landwirtschaft/Nachhaltige-Landnutzung/Klimawandel/Texte/FachtagungKlimaschutzgutachten.html
Gustaf Egnell, Swedish University of Agricultural Sciences	Sustainable use of bioenergy seminar (hosted by Christofer Fjellner MEP), European Parliament 07.12.2016	"Forest Biomass, Carbon Neutrality and Climate Change Mitigation," outcomes of the latest From Science to Policy report	http://www.forestindustries.se/news/news/2016/12/crowded-seminar-on-sustainable-bioenergy/ https://www.svensktnaringsliv.se/english/sustainable-use-of-bioenergy_663595.html
Marcus Lindner, EFI	Sustainable Forest Biomass in light of Paris COP21, EBCD seminar, European Parliament 1.12.2016	"Forest Biomass, Carbon Neutrality and Climate Change Mitigation," outcomes of the latest From Science to Policy report	http://ebcd.org/wp-content/uploads/2016/11/DraftAgenda-4.pdf
Göran Berndes	EU Bioenergy Sustainability Policy –seminar, Finnish Permanent Representation in Brussels	Bioenergy and its impact on greenhouse gas mitigation – science and policy implications	http://tem.fi/en/eu-bioenergy-sustainability-policy

	07.10.2016		
Policymakers			
	International Energy Agency Bioenergy	Technology Roadmap: Delivering Sustainable Bioenergy	http://www.iea.org/publications/freepublications/publication/Technology_Roadmap_Delivering_Sustainable_Bioenergy.pdf
John M Bryden, Nicholas Clarke, Anders C Hansen, Atle W Hegnes, Valborg Kvakkestad, Karen Refsgaard	NORDREGIO Policy brief 2017:3, published May 2017	Bioenergy and rural development in Europe: Policy recommendations from the TRIBORN research and stakeholder consultations, 2014-17	http://www.diva-portal.org/smash/get/diva2:1095928/FULLTEXT01.pdf
	European Academies Science Advisory Council (EASAC) policy report 32, April 2017	Multi-functionality and sustainability in the European Union's forests	http://www.easac.eu/fileadmin/PDF_s/reports_statements/Forests/EASAC_Forests_web_complete.pdf
Media			
	Energia Uutiset, 23.03.2017	Perustelemattomia väitteitä biotaloudesta	http://www.energiuutiset.fi/etusivu/perustelemattomia-vaitteita-biotaloudesta.html
	Bioenergy International	NBB 2017: Forests and political pricing paved the road to bioenergy HEL	https://bioenergyinternational.com/opinion-commentary/nbb-2017-forests-political-pricing-paved-road-bioenergy-hel
	Canadian Biomass magazine	Climate benefits of biomass energy	http://www.canadianbiomassmagazine.ca/pellets/climate-benefits-of-biomass-energy-6004
	Médiaterre (French sustainable development portal)	La biomasse forestière, la neutralité carbone et la mitigation des changements climatiques	http://www.mediaterrre.org/actu,20161016162212,1.html
	ENDS Waste and Bioenergy		http://www.endswasteandbioenergy.com/
	Alpha Galileo (science news)	New science-policy study: Forest biomass, carbon neutrality and climate change mitigation	http://www.alphagalileo.org/ViewItem.aspx?ItemId=168822&CultureCode=en
Stakeholders			
	IEA Bioenergy	Is energy from woody biomass positive for the climate?	http://www.ieabioenergy.com/wp-content/uploads/2018/01/FAQ_WoodyBiomass-Climate_final-1.pdf

	SVEBIO (18 May)	De europeiska akademierna ger återigen ut en ovetenskaplig rapport	https://www.svebio.se/pres/s/blogginlagg/de-europeiska-akademierna-ger-aterigen-ut-en-ovetenskaplig-rapport
	SVEBIO	Göran Berndes, 2017 års mottagare av Jan Häckners bioenergipris	https://www.svebio.se/pres/s/pressmeddelanden/goran-berndes-2017-ars-mottagare-av-jan-hackners-bioenergipris
	Chalmers University	Göran Berndes får bioenergipris	http://www.chalmers.se/sv/styrkeomraden/energi/nyheter/Sidor/Goran-Berndes-far-bioenergipris.aspx
	EUSTAFOR, CEPF, COPA and COGECA, UEF, FECOF, and USSE	Position Paper on the Commission Proposal for a Directive of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (recast) – COM(2016) 767 final: Sustainably managed forests are a proven source of sustainable biomass for bioenergy	https://www.eustafor.eu/uploads/20171004_RED_recast_Joint_Position.pdf
	Forest Energy Blog (Cost Action FP0902 and IEA Bioenergy Task 43)	"Forest biomass, carbon neutrality and climate change mitigation" - a new report now published!	http://blog.forestenergy.org/2016/10/forest-biomass-carbon-neutrality-and.html
	Climate Etc Forum	Week in review, science edition	https://judithcurry.com/2016/10/22/week-in-review-science-edition-60/
	Chalmers University, Sweden	Ambitiös rapport ger nya insikter om biomassans roll för klimatet	http://www.chalmers.se/sv/institutioner/ee/nyheter/Sidor/Ambiti%C3%B6s-rapport-ger-nya-insikter-om-biomassans-roll.aspx
	Chalmers University, Sweden	New insight into the climate change effects of biomass	http://www.chalmers.se/en/departments/ee/news/Pages/New-insight-in-forest-biomass.aspx
	GREBE renewable energy blog	Forest biomass, carbon neutrality and climate change mitigation	https://greberenewableenergyblog.wordpress.com/2016/10/27/forest-biomass-carbon-neutrality-and-climate-change-mitigation/
	Latvian Forest Owners' Association	Ziemeļvalstīs aktuāla enerģijai izmantojamās koksnes nākotne	http://www.mezaispasnieki.lv/lv/jaunumi/zieme%C4%BCvalst%C4%ABs_aktu%C4%81la_ener%C4%A3ijai_izmanto

			jam%C4%81s koksnes n%C4%81kotne/
	CEPF	Debate over climate benefits of bioenergy continues – new EFI study sheds light on the issue	http://www.cepf-eu.org/artikkel.cfm?ID_art=937
	CEPF newsletter, November 2016	Debate over climate benefits of bioenergy continues – new EFI study sheds light on the issue	http://us9.campaign-archive1.com/?u=847fd77a8fc19389ad80399f3&id=dac7f152af&e=a379a399ef
	FOCALI (Swedish research network)	EFI report: Forest biomass, carbon neutrality and climate change mitigation	http://www.focali.se/en/articles/artikelarkiv/european-forest-institute-report-forest-biomass-carbon-neutrality-and-climate-change-mitigation
	Nordic Forest Research	New publication: Forest biomass, carbon neutrality and climate change mitigation	http://www.nordicforestresearch.org/blog/2016/11/10/new-publication-forest-biomass-carbon-neutrality-and-climate-change-mitigation/
	EUSTAFOR	Press release 01.12.2016 The day after the European Commission publishes its Clean Energy package European state forest managers provide evidence of the sustainability of forest biomass	http://www.eustafor.eu/uploads/EUSTAFOR_press_release_Sustainability_of_Forest_Biomass_20161201_a.pdf
	Global Wood Markets	Sustainable Forest Biomass in the light of COP21 (Paris) conference at the European Parliament	https://www.globalwoodmarketsinfo.com/european-forests-biomass-potential-discussed-during-sustainable-forest-biomass-conference/
	EOS – European Organisation of the Sawmill Industry	Sustainable Forest Biomass in the light of COP21 (Paris)	http://www.eos-oes.eu/en/news.php?id=1114
	EUSTAFOR	Evidence of sustainability of forest biomass presented today by State Forest Managers	http://www.eustafor.eu/evidence-of-sustainable-forest-management-presented-today-by-state-forest-managers/
	Wood Pellet Association of Canada	Climate benefits of biomass energy	http://www.pellet.org/wpac-news/climate-benefits-of-biomass-energy

From Science to Policy 4: Forest bioeconomy – a new scope for sustainability indicators

Published 15 November 2016

Citations

Gun Lidestav, Maria Johansson, Emily S. Huff.	Chapter in: Services in Family Forestry, Teppo Hujala, Anne Toppinen, Brett J. Butler (eds).	Gender Perspectives on Forest Services in the Rise of a Bioeconomy Discourse	https://doi.org/10.1007/978-3-030-28999-7_15
Agus C.	In: Keswani C. (eds) Bioeconomy for Sustainable Development. Springer, Singapore	Integrated Bio-cycles System for Sustainable and Productive Tropical Natural Resources Management in Indonesia.	https://doi.org/10.1007/978-981-13-9431-7_11
Genovaite Liobikiene, Tomas Balezentis, Dalia Streimkiene, Xueli Chen.	Sustainable Development, published online: 16 August 2019	Evaluation of bioeconomy in the context of strong sustainability	https://doi.org/10.1002/sd.1984
Alice Ludvig, Ivana Zivojinovic and Teppo Hujala.	Forests 2019, 10(10), 878.	Social Innovation as a Prospect for the Forest Bioeconomy: Selected Examples from Europe	https://doi.org/10.3390/f10100878
Luana Ladu, Enrica Imbert, Rainer Quitzow, Piergiuseppe Morone	Forest Policy and Economics, Available online 23 May 2019	The role of the policy mix in the transition toward a circular forest bioeconomy	https://www.sciencedirect.com/science/article/pii/S138993411830368X
Naveed, Nasir and Watanabe, Chihiro and Neittaanmäki, Pekka	International Journal of Managing Information Technology (IJMIT) Vol.11, No.2, May 2019	Co-Evolutionary Coupling via a Digital-Bio Ecosystem - A Suggestion for a New R&D Model in the Digital Economy	https://ssrn.com/abstract=3411412
Schweier, J., Magagnotti, N., Labelle, E.R. et al.	Current Forestry Reports (2019)	Sustainability Impact Assessment of Forest Operations: a Review	https://doi.org/10.1007/s40725-019-00091-6
Zorić Martina, Đukić Igor, Kljajić Ljubomir, Karaklić Dragić, Orlović Saša	Topola 2019, br. 203, str. 53-63	The possibilities for improvement of ecosystem services in Tara National Park	https://scindeks.ceon.rs/article.aspx?artid=0563-90341903053Z
Erik Gawel, Nadine Pannicke and Nina Hagemann	Sustainability 2019, 11(11), 3005	A Path Transition Towards a Bioeconomy—The Crucial Role of Sustainability	https://doi.org/10.3390/su11113005
Johanna Witzell, Dan Bergström & Urban Bergsten	Scandinavian Journal of Forest research, Published online: 20 Mar 2019	Variable corridor thinning – a cost-effective key to provision of multiple ecosystem services from young boreal conifer forests?	https://www.tandfonline.com/doi/abs/10.1080/02827581.2019.1596304

G. Baublyte, J. Korhonen, D. D'Amato & A. Toppinen	Scandinavian Journal of Forest Research, Published online: 16 Apr 2019	"Being one of the boys": perspectives from female forest industry leaders on gender diversity and the future of Nordic forest-based bioeconomy	https://doi.org/10.1080/02827581.2019.1598484
Reneema Hazarika and Robert Jandl	Forests 2019, 10(3), 205	The Nexus between the Austrian Forestry Sector and the Sustainable Development Goals: A Review of the Interlinkages	https://www.mdpi.com/1999-4907/10/3/205
Salwa Haddad, Wolfgang Britz and Jan Börner	Forests 2019 10(1), 52	Economic Impacts and Land Use Change from Increasing Demand for Forest Products in the European Bioeconomy: A General Equilibrium Based Sensitivity Analysis	https://www.mdpi.com/1999-4907/10/1/52
Suomala, Tuuli	MSc thesis, University of Helsinki, 2019	Understanding the perceptions of urban citizens concerning a forest-based bioeconomy	https://helda.helsinki.fi/bits/tream/handle/10138/303032/Suomala_Tuuli_Pro_Grad_u_2019.pdf?sequence=2&isAllowed=y
Alessandro Paletto, Isabella De Meo, Paolo Cantiani, Ugo Chiavetta, Claudio Fagarazzi, Gianluigi Mazza, Elisa Pieratti, Giovanni Matteo Rillo Migliorini, Alessandra Lagomarsino.	Italian Journal of Forest and Mountain Environments, vol73, no 3 (2018)	Forest-wood chain analysis in the perspective of circular (bio)economy: the case study of Monte Morello forest	http://ojs.aisf.it/index.php/iform/article/download/1086/1003
Senko S., Kurttila M., Karjalainen T.	Silva Fennica vol. 52 no. 4 article id 7763	Prospects for Nordic intensive forest management solutions in the Republic of Karelia	https://silvafennica.fi/pdf/article7763.pdf
Stefanie Linser, BernhardWolfslehner, Simon R. J. Bridge, David Gritten, Steven Johnson, Tim Payn, Kit Prins, Rastislav Raši and Guy Robertson.	Forests 2018, published online 18 September 2018	25 Years of Criteria and Indicators for Sustainable Forest Management: How Intergovernmental C&I Processes Have Made a Difference	https://www.mdpi.com/1999-4907/9/9/578
Jose Erlin Guerrero, Eric Hansen.	Canadian Journal of Forest Research. Published online 29.08.2018	Cross-sector collaboration in the forest products industry: A review of the literature.	http://www.nrcresearchpress.com/doi/abs/10.1139/cjfr-2018-0032#.W7xEhfZuluU
Stefanie Linser, Bernhard Wolfslehner, Fady Asmar, Simon R. J. Bridge, David Gritten, Vicente Guadalupe, Mostafa Jafari, Steven	Forests 2018, published online 25 August 2018	25 Years of Criteria and Indicators for Sustainable Forest Management: Why Some Intergovernmental C&I Processes Flourished While Others Faded	http://www.mdpi.com/1999-4907/9/9/515

Johnson, Pablo Laclau and Guy Robertson.			
Markus Lier, Martti Aarne, Leena Kärkkäinen, Kari T. Korhonen, Anja Yli-Viikari and Tuula Packalen.	Natural resources and bioeconomy studies 38/2018.	Synthesis on bioeconomy monitoring systems in the EU Member States - indicators for monitoring the progress of bioeconomy	https://www.luke.fi/wp-content/uploads/2018/07/Synthesis-on-bioeconomy-monitoring-systems-in-the-EU-Member-States.pdf
Marco Marchetti, Renzo Motta, Davide Pettenella, Lorenzo Sallustio, Giorgio Vacchiano.	Forest@ vol. 15, pp. 41-50 (May 2018).	Forests and forest-wood system in Italy: towards a new strategy to address local and global challenges	http://www.sisef.it/forest@/contents/?id=efor2796-015
P.Huber, T.Hujala, M.Kurttila, B.Wolfslehner, H.Vacik.	Forest Policy and Economics, available online 19 July 2017	Application of multi criteria analysis methods for a participatory assessment of non-wood forest products in two European case studies	https://www.sciencedirect.com/science/article/pii/S1389934116304452
Chihiro Watanabe, Nasir Naveed, Pekka Neittaanmäki.	Technology in Society, Available online 22 May 2018	Digital solutions transform the forest-based bioeconomy into a digital platform industry - A suggestion for a disruptive business model in the digital economy	https://www.sciencedirect.com/science/article/pii/S0160791X18300095
Tuomas J.Mattila, Jáchym Judl, Catherine Macombe, Pekka Leskinen.	Biomass and Bioenergy, vol 109, February 2018	Evaluating social sustainability of bioeconomy value chains through integrated use of local and global methods	https://www.sciencedirect.com/science/article/pii/S0961953417304403
G. Winkel (ed)	2017. What Science Can Tell Us 8, European Forest Institute.	Towards a sustainable European forest-based bioeconomy – assessment and the way forward.	http://www.efi.int/sites/default/files/files/publication-bank/2018/efi_wsctu8_2017.pdf
Lauri Hetemäki, Marc Hanewinkel, Bart Muys, Markku Ollikainen, Marc Palahí and Antoni Trasobares.	From Science to Policy 5, European Forest Institute.	Leading the way to a European circular bioeconomy strategy	http://www.efi.int/files/attachments/publications/efi_fs_tp_5_2017.pdf
Watanabe, C., Naveed, N., Naveed, K., & Neittaanmäki, P.	Journal of Technology Management for Growing Economies, 8 (2), 191-214.	Transformation of the Forest-based Bioeconomy by Embracing Digital Solutions	https://doi.org/10.15415/jtmge.2017.82005
Dagnija Blumberga, Indra Muizniece, Lauma Zihare, Liga Sniega	Energy Procedia Volume 128, September 2017, Pages 363-367,	Bioeconomy mapping indicators and methodology. Case study about forest sector in Latvia	http://www.sciencedirect.com/science/article/pii/S1876610217338973
Caurla S., Montagné-Huck C	Innovations Agronomiques 56 (2016), 59-70	Quels outils économiques pour analyser les innovations bioéconomiques dans les filières forêt-bois à l'échelle du territoire ?	https://www6.inra.fr/ciag/content/download/6117/45477/file/Vol56-6-Caurla.pdf

Presentations			
Davide Pettenella, Laura Secco, Mauro Masiero.	Productive mountains: landscapes, actors, flows, perspectives. Venice, 21-23.06.18	L'aumento dei prelievi nelle foreste di montagna: un impegno retorico o una opzione reale? / Timber mobilization in mountain forests: a rhetorical commitment or a real option?	https://www.alpinenetwork.org/wp-content/uploads/2018/06/productivemountains_2018_BOOK-OF-ABSTRACTS.pdf#page=46
Sylvain Caurila, LEF, Inra - AgroParisTech	Cited in presentation at Carrefour de l'Innovation Agronomique dédié à l'émergence d'une bioéconomie basée sur la forêt et le bois, 8.12.2016	Quels outils économiques pour analyser les innovations bioéconomiques dans les filières forêt-bois à l'échelle du territoire ?	http://www6.inra.fr/ciag/CiAg-Environnement/Une-bioeconomie-basee-sur-foret-bois
Policymakers			
	COFORD Department of Agriculture, Food and the Marine, Sept 2017	Growing the Irish Forest Bioeconomy	http://www.coford.ie/media/coford/content/publications/cofordarticles/COFORDBioeconomyReport290917.pdf
Stakeholders			
	Veille Agri (MAFF)	Newsletter, 16.01.2017	http://veilleagri.hautetfort.com/archive/2017/01/16/indicateurs-de-gestion-durable-des-forets-et-bioeconomie-eur-5900632.html
	Commonwealth Forestry Association	Newsletter, December 2016	https://issuu.com/cfa_newsletter/docs/webcfa_newsletter_december_2016

From Science to Policy 5: Leading the way to a European circular bioeconomy strategy			
Published 31 October 2017			
Citations			
Peter Freer-Smith, Bart Muys, Michele Bozzano, Lars Drössler, Niall Farrelly, Hervé Jactel, Jaana Korhonen, Gianfranco Minotta, Maria Nijnik, Christophe Orazio	From Science to Policy 9, European Forest Institute	Plantation forests in Europe: challenges and opportunities	https://doi.org/10.36333/fs09
Georg Winkel, Glenn Galloway, Carol J. Pierce	In: Sustainable Development	The Impacts of the Sustainable Development Goals on Forests	https://doi.org/10.1017/9781108765015.021

Colfer, Wil de Jong, Pia Katila and Pablo Pacheco.	Goals: Their Impacts on Forests and People. Pia Katila, Carol J. Pierce Colfer, Wil de Jong, Glenn Galloway, Pablo Pacheco, Georg Winkel (eds.)	and People – Conclusions and the Way Forward	
Anne Toppinen, Mirja Mikkilä, Anni Tuppur, Gerdien de Vries.	Chapter in: Services in Family Forestry, Teppo Hujala, Anne Toppinen, Brett J. Butler (eds).	Sustainability as a Driver in Forestry-Related Services	https://doi.org/10.1007/978-3-030-28999-7_14
Nadezda Stevulova, Viola Hospodarova, Adriana Estokova, Eva Singovszka, Marian Holub, Stefan Demcak, Jaroslav Briancin, Anton Geffert, Frantisek Kacik, Vojtech Vaclavik and Tomas Dvorsky.	Journal of Renewable Materials, 2019, vol.7 no.11	Characterization of Manmade and Recycled Cellulosic Fibers for Their Application in Building Materials	https://doi.org/10.32604/jrm.2019.07556
J. M. Rodriguez-Anton, L. Rubio-Andrada, M. S. Celemín-Pedroche & M. D. M. Alonso-Almeida.	International Journal of Sustainable Development & World Ecology. Published online 21 September 2019	Analysis of the relations between circular economy and sustainable development goals	https://doi.org/10.1080/13504509.2019.1666754
Elisa Pieratti, Alessandro Paletto, Isabella De Meo, Claudio Fagarazzi, Matteo Giovanni Rillo Migliorini	Annals of Forest Research, 2019	Assessing the forest-wood chain at local level: A Multi-Criteria Decision Analysis (MCDA) based on the circular bioeconomy principles	http://dx.doi.org/10.15287/afr.2018.1238
S.Venkata Mohan, Shikha Dahiya, K.Amulya, Ranaprathap Katakojwala, T.K.Vanitha	Bioresource Technology Reports Volume 7, September 2019, 100277	Can circular bioeconomy be fueled by waste biorefineries — A closer look	https://doi.org/10.1016/j.biweb.2019.100277
Lea Ranacher, Alice Ludvig, Peter Schwarzbauer	Forest Policy and Economics, vol 106, Sept 2019	Depicting the peril and not the potential of forests for a biobased economy? A qualitative content analysis on online news media coverage in German language articles	https://doi.org/10.1016/j.forpol.2019.101970

Annukka Näyhä	Forest Policy and Economics Available online 13 June 2019, 101936	Finnish forest-based companies in transition to the circular bioeconomy - drivers, organizational resources and innovations	https://doi.org/10.1016/j.forespol.2019.05.022
Luana Ladu, Enrica Imbert, Rainer Quitzow, Piergiuseppe Morone	Forest Policy and Economics, Available online 23 May 2019	The role of the policy mix in the transition toward a circular forest bioeconomy	https://www.sciencedirect.com/science/article/pii/S138993411830368X
Pasquale Marcello Falcone, Almona Tani, Valentina Elena Tartiu, Cesare Imbriani	Forest Policy and Economics, Available online 13 May 2019	Towards a sustainable forest-based bioeconomy in Italy: Findings from a SWOT analysis	https://doi.org/10.1016/j.forespol.2019.04.014
Armi Temmes, Philip Peck	Forest Policy and Economics Available online 11 April 2019	Do forest biorefineries fit with working principles of a circular bioeconomy? A case of Finnish and Swedish initiatives	https://www.sciencedirect.com/science/article/pii/S1389934118303034
Elias Hurmekoski, Marko Lovrić, Nataša Lovrić, Lauri Hetemäki, Georg Winkel	Forest Policy and Economics, Volume 102, May 2019, Pages 86-99	Frontiers of the forest-based bioeconomy—A European Delphi study	https://www.sciencedirect.com/science/article/pii/S1389934117304434
Matteo Jarre, Anna Petit-Boix, Carmen Prierer, Rolf Meyer, Sina Leipold	Forest Policy and Economics Available online 31 January 2019	Transforming the bio-based sector towards a circular economy - What can we learn from wood cascading?	https://www.sciencedirect.com/science/article/pii/S1389934118303708
David Lazarevic, Petrus Kautto, Riina Antikainen	Forest Policy and Economics Available online 19 January 2019	Finland's wood-frame multi-storey construction innovation system: Analysing motors of creative destruction	https://www.sciencedirect.com/science/article/pii/S138993411830354X
Teresa Enes, José Aranha, Teresa Fonseca, Domingos Lopes, Ana Alves and José Lousada	Energies 2019, 12(8), 1418	Thermal Properties of Residual Agroforestry Biomass of Northern Portugal	https://www.mdpi.com/1996-1073/12/8/1418
Jennifer De Boer, Rajat Panwar, Robert Kozak, Benjamin Cashore	Forest Policy and Economics Available online 19 January 2019	Squaring the circle: Refining the competitiveness logic for the circular bioeconomy	https://www.sciencedirect.com/science/article/pii/S1389934118302168
Päivi Pelli, Annukka Näyhä, Lauri Hetemäki.	In: Christine Farcy, Eduardo Rojas-Briales & Inazio Martinez de Arano (eds.) 2018. Forestry in the Midst of Global Changes	Increasing role of services: trends, drivers and search for new perspectives	https://www.crcpress.com/Forestry-in-the-Midst-of-Global-Changes/Farcy-Rojas-Briales-Arano/p/book/9781138197084
Moritz Albrecht	Local Environment: the International Journal of Justice and Sustainability.	(Re-)producing bioassemblages: positionalities of regional bioeconomy development in Finland	https://www.tandfonline.com/doi/abs/10.1080/13549839.2019.1567482

	Published online: 16 Jan 2019		
Salwa Haddad, Wolfgang Britz and Jan Börner	Forests 2019 10(1), 52	Economic Impacts and Land Use Change from Increasing Demand for Forest Products in the European Bioeconomy: A General Equilibrium Based Sensitivity Analysis	
Katarina Dimic-Misic, Ernest Barcelo, Vesna K Spasojević-Brkić, Patrick A. C. Gane	FME Transactions (2019) 47, 60-69	Identifying the Challenges of Implementing a European Bioeconomy based on Forest Resources: Reality Demands Circularity	https://www.mas.bg.ac.rs/media/istrazivanje/fme/vol47/1/10_dimic-misic_et_al.pdf
Miisa Salmela	MSc Thesis, University of Jyväskylä, 2019	Small and medium sized companies in wood-based circular bioeconomy : barriers and prerequisites to success	https://jyx.jyu.fi/handle/123456789/65189
Linnea Aleksandra Iskanius.	MSc Thesis, University of Helsinki.	From the 2012 Bioeconomy Strategy of the European Commission to its upgraded version of 2018: Similarities and differences from the EU level to Finland, Latvia and Spain's national Bioeconomy Strategies	https://helda.helsinki.fi/bits/tream/handle/10138/305188/Iskanius_Linnea_Pro_gradu_2019.pdf?sequence=2
Sofia Björkén, Elin Bystedt,	MSc Thesis, Swedish University of Agricultural Sciences	Contextual factors influencing the development of a Circular business model in aquaponics - a case study of Peckas Tomater	https://stud.epsilon.slu.se/14930/11/bjorken_s_bystedt_e_190819.pdf
Katarina Dimic-Misic, Ernest Barcelo, Vesna K Spasojević-Brkić, Patrick A. C. Gane.	FME Transactions (2019) 47, 60-69.	Identifying the Challenges of Implementing a European Bioeconomy based on Forest Resources: Reality Demands Circularity	https://www.mas.bg.ac.rs/media/istrazivanje/fme/vol47/1/10_dimic-misic_et_al.pdf
Maria Raimondo, Francesco Caracciolo, Luigi Cembalo, Gaetano Chinnici, Biagio Pecorino and Mario D'Amico	Sustainability 2018, 10(12), 4821.	Making Virtue Out of Necessity: Managing the Citrus Waste Supply Chain for Bioeconomy Applications	https://www.mdpi.com/2071-1050/10/12/4821
Kauppi, P., Hanewinkel, M.,Lundmark, T., Nabuurs, GJ., Peltola, H., Trasobares, A. and Hetemäki, L.	European Forest Institute, 2018.	Climate Smart Forestry in Europe	http://www.efi.int/sites/default/files/files/publication-bank/2018/Climate_Smart_Forestry_in_Europe.pdf
Pekka Leskinen, Giuseppe Cardellini, Sara González-García, Elias Hurmekoski, Roger Sathre, Jyri Seppälä, Carolyn Smyth, Tobias	From Science to Policy 7, European Forest Institute	Substitution effects of wood-based products in climate change mitigation.	http://www.efi.int/sites/default/files/files/publication-bank/2018/efi_fstp_7_2018.pdf

Stern and Pieter Johannes Verkerk.			
Inazio Martínez de Arano, Marc Palahí, Christine Farcy, Eduardo Rojas, Lauri Hetemäki.	Mediterráneo Económico [núm. 31] Bioeconomía y DesArrollo sostenible	Perspectivas De Una Bioeconomía Forestal En El Mediterráneo	http://www.publicacionescajamar.es/pdf/publicaciones-periodicas/mediterraneo-económico-31.pdf#page=64
Alessandro Paletto, Isabella De Meo, Paolo Cantiani, Ugo Chiavetta, Claudio Fagarazzi, Gianluigi Mazza, Elisa Pieratti, Giovanni Matteo Rillo Migliorini, Alessandra Lagomarsino.	L'Italia Forestale e Montana. Vol 73, No 3 (2018)	Forest-wood chain analysis in the perspective of circular (bio)economy: the case study of Monte Morello forest	http://ojs.aisf.it/index.php/iform/article/view/1086
Jaana Korhonen, Alexandru Giurca, Maria Brockhaus and Anne Toppinen.	Sustainability 2018, 10(10), 3785	Actors and Politics in Finland's Forest-Based Bioeconomy Network	https://www.mdpi.com/2071-1050/10/10/3785
Annikka Vainio, Ulla Ovaska, Vilja Varho.	Journal of Cleaner Production. Available online 2 November 2018	Not so sustainable? Images of bioeconomy by future environmental professionals and citizens	https://www.sciencedirect.com/science/article/pii/S0959652618333237
Korhonen J., Koskivaara A., Toppinen A.	Forest Policy and Economics Available online 29 August 2018	Riding a Trojan horse? Future pathways of the fiber-based packaging industry in the bioeconomy	https://www.sciencedirect.com/science/article/pii/S1389934118301722
Elias Hurmekoski, Ragnar Jonsson, Jaana Korhonen, Janne Jänis, Marko Mäkinen, Pekka Leskinen, Lauri Hetemäki.	Canadian Journal of Forest Research, published online 21.08.2018	Diversification of the forest industries: Role of new wood-based products	http://www.nrcresearchpress.com/doi/abs/10.1139/cjfr-2018-0116#.W4ZDYfZuluU
Jānis Zvirgzdiņš, Kaspars Plotka, Sanda Geipele.	Baltic Journal of Real Estate Economics and Construction Management, vol6 issue1	Eco-Economics in Cities and Rural Areas	https://www.degruyter.com/view/j/bjreecm.2018.6.issue-1/bjreecm-2018-0007/bjreecm-2018-0007.xml
Yvonne Jans, Göran Berndes, Jens Heinke, Wolfgang Lucht, Dieter Gerten.	GCB Bioenergy. First published online 03.07.2018	Biomass production in plantations: Land constraints increase dependency on irrigation water	https://onlinelibrary.wiley.com/doi/abs/10.1111/gcbb.12530
Marco Marchetti, Renzo Motta, Davide Pettenella, Lorenzo Sallustio, Giorgio Vacchiano.	Forest@ 15: 41-50.	Forests and forest-wood system in Italy: towards a new strategy to address local and global challenges	http://foresta.sisef.org/contents/?id=efor2796-015

Hans Fredrik Hoen	Journal of Forest Economics, available online 7 Feb 2018	Introduction to special issue on Scandinavian Society of Forest Economics (SSFE) meeting in 2016	https://www.sciencedirect.com/science/article/pii/S1104689918300072
Veijonaho, Simo.	MSc Thesis (2018), University of Helsinki	Forest-based circular bioeconomy business models in Finnish SMEs	https://helda.helsinki.fi/handle/10138/236070
Koskivaara, Atte.	MSc Thesis (2018), University of Helsinki	Future pathways for the emerging bioeconomy: case of the fiber-based packaging sector in Finland	https://helda.helsinki.fi/handle/10138/233316
Brent D. Matthies, Annukka Vainio, Dalia D'Amato,	Ecosystem Services Vol 29 (A), Feb 2018, (published online 20 Dec 2017)	Not so biocentric – Environmental benefits and harm associated with the acceptance of forest management objectives by future environmental professionals	https://www.sciencedirect.com/science/article/pii/S2212041617300815
Felix Preston and Johanna Lehne	Chatham House briefing	A Wider Circle? The Circular Economy in Developing Countries	https://www.chathamhouse.org/sites/files/chathamhouse/publications/research/2017-12-05-circular-economy-preston-lehne-final.pdf
Elena Górriz Mifsud, I. Martínez de Arano.	Cuadernos de la SECF, Publicación de la Sociedad Española de Ciencias Forestales. Núm. 43 (2017)	Avanzando hacia una bioeconomía circular: el papel de los bosques	http://seforestaes.org/publicaciones/index.php/cuadernos_secf/article/view/17533/17310
Presentations			
Ilié Storms, Bruno Verbist, Jos Van Orshoven, Bart Muys.	Landscape management: From data to decision, 17-19.09.2018 Prague, Czech Republic	From forest to biorefinery: Optimising the strategic and tactical decisions in supply chains of woody biomass	https://lirias2repo.kuleuven.be/bitstream/id/518457/
Lauri Hetemäki, EFI	Global Bioeconomy Summit 2018, Berlin. 19.04.2018	Forest-based feedstocks and biorefineries, in session Bioenergy and biorefineries: innovations and futures.	http://gbs2018.com/workshops/industry-biorefineries/
Lauri Hetemäki, EFI	13.03.2018, Estonia	The role of forest sector in circular bioeconomy	http://www.envir.ee/sites/default/files/2018_03_13_hetemaki.pdf
FORBIO	Poster, 14.02.2018	Eihän puita saa tappaa! Kiertotalousstrategia kaupunkilaisille	https://www.aka.fi/globalassets/33stn/rt-2018-kuvat/julisteet/forbio-stn-posteri-14.2.2018-valmis.pdf

Lauri Hetemäki, EFI	Biobase Circular and Biobased Economy Conference, Sweden 22.11.2017	Europe's view on circular and biobased economy	http://www.piteasciencepark.se/evenemang/biobase/
Esko Aho	Stockholm, Sverige och Finland tillsammans kring skogens framtida värde 26.10.2017	Sverige och Finland som skogsnationer i en globaliserad värld – utmaningar och möjligheter	http://www.ksla.se/wp-content/uploads/2017/05/2017-10-26-Inbjudan-Tandem-Forest-Values-web.pdf
Policymakers			
Joint Session of the ECE Committee on Forests and Forest Industry and the FAO European Forestry Commission.	Note by the Secretariat, for the November 19 meeting.	Forests and the circular economy	http://www.unece.org/fileadmin/DAM/timber/meetings/2019/20191104/ECE_TIM_2019_3_FO_EFC_2019_3-E.pdf
Valentina Elena TÂRȚIU, Mihaela ȘTEFĂNESCU, Ana-Maria PETRACHE, Cătălin Răzvan GURĂU.	Institutul European din România	Tranziția către o economie circulară. De la managementul deșeurilor la o economie verde în România	http://ier.gov.ro/wp-content/uploads/2019/03/Final_Studiul-3_Spos-2018_Economie-circulară-1.pdf
	OECD Science, Technology And Industry Policy Papers November 2018 No. 60	Realising the circular bioeconomy	https://doi.org/10.1787/23074957
	European Commission, October 2018	A sustainable bioeconomy for Europe: strengthening the connection between economy, society and the environment. Updated Bioeconomy Strategy.	https://ec.europa.eu/research/bioeconomy/pdf/ec_bioeconomy_strategy_2018.pdf#view=fit&pagemode=none
Varho, Vilja; Rautiainen, Aapo; Peltonen, Mikko; Niemi, Jyrki; Ovaska, Ulla.	Publications of the Ministry of Agriculture and Forestry (Finland) 2018	Biopaths to Carbon Neutrality	http://julkaisut.valtioneuvosto.fi/handle/10024/160591
Yoichi Yoshizawa	Mitsui & Co. Global Strategic Studies Institute Monthly Report March 2018	Bioeconomy Policies Led By Europe And Global Innovations	https://www.mitsui.com/mgssi/en/report/detail/_icsFiles/afieldfile/2018/05/22/180309du_yoshizawa_e.pdf
Stakeholders			
Amos Taylor, Nicolas A. Balcom Raleigh, Sofi Kurki, Marianna Birmoser Ferreira-Aulu, & Markku Wilenius.	First Foresight Report of the BioEcoJust Project, Finnish Futures Research Centre 2/2019	Precursors to a 'good' bioeconomy in 2125: making sense of bioeconomy & justice horizons	https://www.utupub.fi/bitstream/handle/10024/148181/eBook_2-2019.pdf?sequence=1

BioMonitor project	BioMonitor Policy Brief #1 - November 2019	The EU BioEconomy Contribution to Sustainable Development - Measuring the Impact	http://biomonitor.eu/wp-content/uploads/2019/11/2019-11-BIO_policy-brief-no.1.pdf
Pieter Boussemaere, Jan Cools, Michel De Paepe, Cathy Macharis, Erik Mathijs, Bart Muys, Karel Van Acker, Han Vandevyvere, Arne van Stiphout, Frank Venmans, Kris Verheyen, Pascal Vermeulen, Sara Vicca, Tomas Wyns	Institute for European Studies	A net-zero Greenhouse Gas Emissions-Belgium 2050	https://www.ies.be/files/Report_Belgium2050.pdf
C Cabeza, J Gaffey, N Hatvani, K Hendriks, E Lambrecht, H Welck	Agriforvalor project	Potential of biomass sidestreams for a sustainable biobased economy	https://www.steinbeis-europa.de/files/agriforvalor-e-book.pdf
Sten B. Nilsson.	Skogstyrelsen	OMVÄRLDSANALYS SVENSK SKOGSNÄRING Dancing with the future or with wolves?	https://www.skogstyrelsen.se/globalassets/om-oss/regeringsuppdrag/nationella-skogsprogrammet/preliminar-omvarldsanalys-20181125.pdf
Media			
	Mercatos de medio ambiente, 02.11.2017	La transición hacia una bioeconomía circular facilitará el logro de los ODS y el Acuerdo de París	http://www.mercadosdemedioambiente.com/actualidad/la-transicion-hacia-una-bioeconomia-circular-permitira-cumplir-los-ods-y-el-acuerdo-de-paris/

From Science to Policy 6: Climate-Smart Forestry: mitigation impacts in three European regions Published 26 March 2018			
Citations			
Roberts Matisons, Holger Gärtner, Didzis Elferts, Annija Kārklīņa, Andis Adamovičs, Āris Jansons.	Forest Ecology and Management Volume 457, 1 February 2020, 117729	Occurrence of 'blue' and 'frost' rings reveal frost sensitivity of eastern Baltic provenances of Scots pine	https://doi.org/10.1016/j.foreco.2019.117729
Roberts Matisons, Oskars Krišāns, Annija Kārklīņa, Andis Adamovičs, Āris Jansons, Holger Gärtner.	Forest Ecology and Management	Plasticity and climatic sensitivity of wood anatomy contribute to performance of eastern Baltic provenances of Scots pine	https://doi.org/10.1016/j.foreco.2019.117568
Peter Freer-Smith, Bart Muys, Michele Bozzano, Lars Drössler, Niall Farrelly, Hervé Jactel, Jaana Korhonen,	From Science to Policy 9, European Forest Institute	Plantation forests in Europe: challenges and opportunities	https://doi.org/10.36333/fs09

Gianfranco Minotta, Maria Nijnik, Christophe Orazio			
Marcin Klisz, Allan Buras, Ute Sass-Klaassen, Radosław Puchałka, Marcin Koprowski, and Joanna Ukalska.	Frontiers in Plant Science, Published online 2019 Mar 13	Limitations at the limit? Diminishing of genetic effects in Norway spruce provenance trials	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6425888/
Allan Buras and Annette Menzel.	Front. Plant Sci., 11 January 2019	Projecting Tree Species Composition Changes of European Forests for 2061– 2090 Under RCP 4.5 and RCP 8.5 Scenarios	https://www.frontiersin.org/articles/10.3389/fpls.2018.01986/full
Robert Jandl, Thomas Ledermann, Georg Kindermann, Alexandra Freudenschuss, Thomas Gschwantner and Peter Weiss.	Forests 2018, 9(10), 592.	Strategies for Climate-Smart Forest Management in Austria	https://www.mdpi.com/1999-4907/9/10/592
Sergio Noce and Monia Santini.	Deliverable D1.1 of the Climate-KIC funded Pathfinder "MADAMES Mitigation and ADaptation Analysis for Mediterranean Ecosystem Services	Mediterranean Forest Ecosystem Services and their Vulnerability	https://www.cmcc.it/wp-content/uploads/2019/01/Mediterranean-Forest-Ecosystem-Services-and-their-Vulnerability_def.pdf
Matteo Vizzarri, Giulia Fiorese, Roberto Pilli, Giacomo Grassi.	Agriregionieuropa anno 14 n°54, Set 2018	Il settore forestale nel nuovo Regolamento europeo Lulucf	https://agrireregionieuropa.univpm.it/it/content/article/31/54/il-settore-forestale-nel-nuovo-regolamento-europeo-lulucf
Policymakers			
	Departament d'Agricultura, Ramaderia, Pesca i Alimentació. Gabinet Tècnic, Generalitat de Catalunya	Novetats Documentals newsletter, April 2018	http://agricultura.gencat.cat/ca/departament/dar_estadistiques_observatoris/dar_butlletins/dar_butlletins_nd/nd-0207-2018/
Michiel Hekkenberg, Bart Strengers, Jan Ros.	Planbureau voor de Leefomgeving (PBL Netherlands Environmental Assessment Agency)	Betreft: Structurerende rationale voor inzet van duurzame biomassa	https://www.klimaataakkoord.nl/documenten/publicaties/2018/05/24/pbl-notitie-biomassa
Stakeholders			

Tuomo Kalliokoski, Tuula Aalto, Jaana Bäck, Ekaterina Ezhova, Daniela Franz, Sami Haapanala, Eija Juurola, Veli-Matti Kerminen, Pasi Kolari, Liisa Kulmala, Jari Liski, Ivan Mammarella, Laura Matkala, Tuukka Petäjä, Pekka Rantala, Timo Vesala, Markku Kulmala	INAR – Institute for atmospheric and Earth system research, University of Helsinki project	Carbon sink and CarbonSink+ from observations to global potential	https://tuhat.helsinki.fi/ws/files/125247979/Carbon_sink_and_CarbonSink_from_observations_to_global_potential_12062019.pdf
EUSTA FOR et al.	Joint Statement COP24. (5.12.2018)	Forests and the forest sector should play an active role in climate change mitigation and adaptation	https://eustafor.eu/uploads/COP24-joint-statement_final.pdf
	WWF Forest and Climate REDD+ Resource Digest, 2 April 2018	Climate-Smart Forestry: mitigation impacts in three European regions	http://myemail.constantcontact.com/REDD--Resource-Digest---2-April--2018.html?soid=1110646200593&aid=rPN6XtnNUJk
	SNS Nordic Forest Research	Science-policy report from EFI tackles climate change	http://nordicforestresearch.org/blog/2018/04/19/science-policy-report-from-efi-tackles-climate-change/

From Science to Policy 7: Substitution effects of wood-based products in climate change mitigation Published 28 November 2018			
Citations			
Marchetti M, Motta R, Salbitano F, Vacchiano G.	Forest@ 16: 59-65.	Planting trees in Italy for the health of the planet. Where, how and why (Piantare alberi in Italia per il benessere del pianeta. Dove come e perché)	https://www.doi.org/10.3832/efor3260-016
Peter Freer-Smith, Bart Muys, Michele Bozzano, Lars Drössler, Niall Farrelly, Hervé Jactel, Jaana Korhonen, Gianfranco Minotta, Maria Nijnik, Christophe Orazio	From Science to Policy 9, European Forest Institute	Plantation forests in Europe: challenges and opportunities	https://doi.org/10.36333/fs09
Jonathan C. Doelman, Elke Stehfest, Detlef P. van Vuuren, Andrzej Tabeau, Andries F. Hof, Maarten C. Braakhekke,	Global Change Biology, published online 26 October 2019	Afforestation for climate change mitigation: Potentials, risks and trade-offs	https://onlinelibrary.wiley.com/doi/abs/10.1111/gcb.14887

David E.H.J. Gernaat, Maarten van den Berg, Willem-Jan van Zeist, Vassilis Daioglou, Hans van Meijl, Paul Lucas.			
Henrik Heräjärvi, Janni Kunttu, Elias Hurmekoski, Teppo Hujala.	Holzforchung. Published Online: 2019-09-21	Outlook for modified wood use and regulations in circular economy	https://doi.org/10.1515/hf-2019-0053
Tanja Myllyviita, Susanna Sironen, Laura Saikku, AnneHolma, Pekka Leskinen, Ulrika Palme.	Journal of Cleaner Production Volume 236, 1 November 2019, 117641	Assessing biodiversity impacts in life cycle assessment framework - Comparing approaches based on species richness and ecosystem indicators in the case of Finnish boreal forests	https://doi.org/10.1016/j.jclepro.2019.117641
Jyri Seppälä, Tero Heinonen, Timo Pukkala, Antti Kilpeläinen, Tuomas Mattila, Tanja Myllyviita, Antti Asikainen, Heli Peltola	Journal of Environmental Management, Volume 247, 1 October 2019, Pages 580-587	Effect of increased wood harvesting and utilization on required greenhouse gas displacement factors of wood-based products and fuels	https://doi.org/10.1016/j.jenvman.2019.06.031
Janni Kunttu, Elias Hurmekoski, Henrik Heräjärvi, Teppo Hujala, Pekka Leskinen	Forest Policy and Economics Available online 20 June 2019, 101946	Preferable utilisation patterns of wood product industries' by-products in Finland	https://doi.org/10.1016/j.forpol.2019.101946
Henrik Heräjärvi	Wood Material Science & Engineering (2019)	Wooden buildings as carbon storages – Mitigation or oration?	https://doi.org/10.1080/17480272.2019.1635205
Pieter Johannes Verkerk, Joanne Brighid Fitzgerald, Pawan Datta, Matthias Dees, Geerten Martijn Hengeveld, Marcus Lindner, Sergey Zudin	For. Ecosyst. (2019) 6: 5.	Spatial distribution of the potential forest biomass availability in Europe	https://link.springer.com/article/10.1186/s40663-019-0163-5
Luana Ladu, Enrica Imbert, Rainer Quitzow, Piergiuseppe Morone	Forest Policy and Economics, Available online 23 May 2019	The role of the policy mix in the transition toward a circular forest bioeconomy	https://www.sciencedirect.com/science/article/pii/S138993411830368X
Esten Persvingelen	Masters Thesis, University of Bergen, 2019	Impacts on carbon budgets of increased use of Norwegian forest resources for energy	http://bora.uib.no/handle/1956/20197
Raul Fernandez Lacruz	PhD Thesis, Swedish University of Agricultural Sciences, 2019	Improving supply chains for logging residues and small-diameter trees in Sweden	https://pub.epsilon.slu.se/16161/7/fernandez_lacruz_r190522.pdf
Stakeholders			

	Biomonitor project, 09/2019	Framework for measuring the size and development of the bioeconomy	http://biomonitor.eu/wp-content/uploads/2019/10/BioMonitor_Deliverable_1.1_Update_1.pdf
	SLU - Swedish University of Agricultural Sciences	Scenarier för den svenska skogen och skogsmarkens utsläpp och upptag av växthusgaser	https://www.slu.se/globalassets/ew/org/inst/mom/ma/klimatrapportering/ru_lulucf_prognoser_vaxthusgaser_skog_skogsmark_slutrapport.pdf
Jyri Seppälä, Markku Kanninen	Labour Institute for Economic Research, Talous ja yhteiskunta, 1/2019	Metsien hakkuiden kasvattaminen ei ole ilmastoteko	http://www.labour.fi/ty/tylehti/talous-yhteiskunta-1-2019/metsien-hakkuiden-kasvattaminen-ei-ole-ilmastoteko/
Peter Holmgren & Katarina Kolar	SCA	Reporting the overall climate impact of a forestry corporation - the case of SCA	https://www.sca.com/globalassets/sca/hallbarhet/klimatnytta/rapport.pdf
	Wood Campus	New study shows substituting wood results in carbon emission reductions	https://www.woodcampus.co.uk/new-study-shows-substituting-wood-results-in-carbon-emission-reductions/
	LIFE CLIMARK project	COP24 Summit: The role of forests in mitigating climate change	https://lifeclimark.eu/cop24-summit-the-role-of-forests-in-mitigating-climate-change/?lang=en
Media			
Tomas Lundmark	Västerbottens-Kuriren (Swedish newspaper), 20.10.2019	Vägen till fossilfritt Sverige går inte genom ett obrukat skogslandskap	https://www.vk.se/2019-10-20/vagen-till-fossilfritt-sverige-gar-inte-genom-ett-obrukat-skogslandskap
	Biobased News, 10.01.2019	Study analyses contribution of wood products to climate change mitigation	http://news.biobased.eu/study-analyses-contribution-of-wood-products-to-climate-change-mitigation/

From Science to Policy 8: Living with bark beetles: impacts, outlook and management options

Published 4 April 2019

Citations

Rafał Podlaski, Dariusz Wojdan, Monika Żelezik.	Ecological Indicators Volume 109, February 2020, 105789	A quantitative approach for assessing bark beetle infestations: A study of Pityokteines spinidens Reitt. egg gallery densities in windthrown Abies alba Mill.	https://doi.org/10.1016/j.ecolind.2019.105789
---	---	---	---

Gert-Jan Nabuurs, Peter Verweij, Michiel Van Eupen, Marta Pérez-Soba, Helga Pölzl & Kees Hendriks.	Nature Sustainability volume 2, pages 815–818 (2019)	Next-generation information to support a sustainable course for European forests	https://doi.org/10.1038/s41893-019-0374-3
Melissa H. Mageroy, Erik Christiansen, Bo Långström, Anna-Karin Borg-Karlson, Halvor Solheim, Niklas Björklund, Tao Zhao, Axel Schmidt, Carl Gunnar Fossdal, Paal Krokene.	Plant, cell and environment, published online 1 November 2019	Priming of inducible defenses protects Norway spruce against tree-killing bark beetles	https://doi.org/10.1111/pce.13661
Werner Rammer and Rupert Seidl.	Frontiers in Plant Science, 28 October 2019	Harnessing Deep Learning in Ecology: An Example Predicting Bark Beetle Outbreaks	https://doi.org/10.3389/fpls.2019.01327
Laura Dobor, Tomáš Hlásny, Werner Rammer, Soňa Zimová, Ivan Barka, Rupert Seidl.	Journal of Environmental Management	Spatial configuration matters when removing windfelled trees to manage bark beetle disturbances in Central European forest landscapes	https://doi.org/10.1016/j.jenvman.2019.109792
Peter H.W. Biedermann, Jörg Müller, Jean-Claude Grégoire, Axel Gruppe, Jonas Hagge, Almuth Hammerbacher, Richard W. Hofstetter, Dineshkumar Kandasamy, Miroslav Kolarik, Martin Kostovcik, Paal Krokene, Aurélien Sallé, Diana L. Six, Tabea Turrini, Dan Vanderpool, Michael J. Wingfield, Claus Bässler.	Trends in Ecology and Evolution, available online 28 June 2019	Bark Beetle Population Dynamics in the Anthropocene: Challenges and Solutions	https://doi.org/10.1016/j.tree.2019.06.002
Tanin, Sifat Munim	MSc Thesis, Norwegian University of Life Sciences	Testing host choice of Ips typographus in Norway spruce and two North American spruce species, using field studies and lab analysis	https://nmbu.brage.unit.no/nmbu-xmlui/handle/11250/2623665
Adrian Kiser	School of Forestry, Northern Arizona University, Flagstaff	Insect population dynamics drive research publication trends: Publication patterns related to three bark beetle species over the past 50 years.	https://nau.edu/forestry/wp-content/uploads/sites/140/2019.AdrianKiser.InsectPopulationDynamicsResearchPublicationTrends.pdf
Presentations			
Paal Krokene, 04.04.2019.	Vårsamling 2019 for skogbruket i Oppland og Hedmark, Honne	Er det risiko for barkbilleangrep i 2019? I Sverige er det store angrep av barkbiller, aldri tidligere har en så stor del av	https://www.fylkesmannen.no/globalassets/fm-innlandet/07-landbruk-og-mat/kurs-og-

		landet blitt klassifisert som «bekämpningsområde». Vi feirer 40-årsjubileum for barkbilleovervåkingen, med en oppdatert risikovurdering.	konferanser/varsamling-for-skogbruket-i-innlandet/varsamling-2019/paal-krokene---risiko-for-granbarkbilleangrep.pdf
Media			
	Maaseuduntuleva isuus, 26.09.2019	Ennennäkemättömät metsätuhot	https://www.maaseuduntul.evaisuus.fi/puheenaiheet/vieraskolumnit/artikkeli-1.515684

From Science to Policy 9: Plantation forests in Europe: challenges and opportunities			
Published 10 December 2019			
Citations			
Presentations			

What Science Can Tell Us 7: Natura 2000 and forests: Assessing the state of implementation and effectiveness			
Published 27 September 2017			
Citations			
Alessandro Paletto, Tomislav Laktić, Stjepan Posavec, Zuzana Dobšinská, Bruno Marić, Ilija Đordjević, Pande Trajkov, Emil Kitchoukov and Špela Pezdevšek Malovrh.	Šumarski list, 7–8 (2019): 307–318	Nature conservation versus forestry activities in protected areas: The stakeholders' point of view	https://doi.org/10.31298/sl.143.7-8.2
P. Huber, T. Hujala, M. Kurttila, B. Wolfslehner, H. Vacik,	Forest Policy and Economics, Volume 103, June 2019	Application of multi criteria analysis methods for a participatory assessment of non-wood forest products in two European case studies	https://www.sciencedirect.com/science/article/pii/S1389934116304452
Philippe Legrand	Revue forestière française 2018, Numéro 5	Les armillaires (armillaria spp.), champignons indicateurs potentiels de l'ancienneté des forêts	http://documents.irevues.inist.fr/bitstream/handle/2042/70131/RFF_2018_70_5_457_Legrand.pdf?sequence=1

Felix Storch.	PhD Thesis, Albert-Ludwigs-Universität, 2018	Influence of Harvesting Intensity on Species and Structural Diversity of Forests	https://d-nb.info/1172203342/34
Metodi Sotirov, Bas Arts	Land Use Policy Vol 79, December 2018, pp 960-967	Integrated Forest Governance in Europe: An introduction to the special issue on forest policy integration and integrated forest management	https://www.sciencedirect.com/science/article/abs/pii/S0264837717315570
Tomislav Laktić and Špela Pezdevšek Malovrh	Forests 2018, 9(10), 599	Stakeholder Participation in Natura 2000 Management Program: Case Study of Slovenia	https://www.mdpi.com/1999-4907/9/10/599/htm
Gerhard Weiss, Anna Lawrence, Gun Lidestav, Diana Feliciano, Hujala Teppo, Sarvašová Zuzana, Dobšinská Zuzana, Živojinović Ivana.	Forest Policy and Economics Available online 18 October 2018	Research trends: Forest ownership in multiple perspectives	https://www.sciencedirect.com/science/article/pii/S1389934118302570
Gabriel Michanek, Göran Bostedt, Hans Ekvall, Maria Forsberg, Anouschka R. Hof, Johnny de Jong, Jörgen Rudolphi and Astrid Zabel.	Forests 2018, 9(9), 523	Landscape Planning—Paving the Way for Effective Conservation of Forest Biodiversity and a Diverse Forestry?	http://www.mdpi.com/1999-4907/9/9/523
Zuzana Sarvašová, Sonia Quiroga, Cristina Suárez, Tamás Ali, Diana Lukmine, Ilija Djordjevic, Michal Hrib.	Journal for Nature Conservation. Available online 27 July 2018.	Understanding the drivers for Natura 2000 payments in forests: a Heckman selection analysis	https://www.sciencedirect.com/science/article/pii/S1617138116302709
Marko Lovrić, Nataša Lovrić, Ulrich Schraml, Georg Winkel.	Journal for Nature Conservation, Available online 2 March 2018	Implementing Natura 2000 in Croatian forests: an interplay of science, values and interests	https://www.sciencedirect.com/science/article/pii/S1617138117300389
Gerhard Weiss, Anna Lawrence, Teppo Hujala, Gun Lidestav, Liviu Nichiforel, Erlend Nybakk, Sonia Quiroga, Zuzana Sarvašová, Cristina Suarez, Ivana Živojinović.	Forest Policy and Economics, available online 9 April 2018	Forest ownership changes in Europe: State of knowledge and conceptual foundations	https://www.sciencedirect.com/science/article/pii/S1389934117301740
Zuzana Sarvašová, Tamás Ali, Ilija Đorđević, Diana Lukmine, Sonia Quiroga, Cristina Suárez, Michal Hrib, Jacques Rondeux, Konstantinos T. Mantzanas, Kristin Franz	Forest Policy and Economics, Available online 13 Sept 2017	Natura 2000 payments for private forest owners in Rural Development Programmes 2007–2013 - a comparative view	http://www.sciencedirect.com/science/article/pii/S1389934117301703
Stakeholders			
Joana Chiavari, Cristina Leme Lopes	Climate Policy Initiative	Forest and land use policies on private lands: an international	https://climatepolicyinitiative.org/wp-

		comparison Argentina, Brazil, Canada, China, France, Germany, and the United States	content/uploads/2017/10/Full_Report_Forest_and_Land_Use_Policies_on_Private_Lands_-_an_International_Comparison-1.pdf
--	--	---	---

What Science Can Tell Us 8: Towards a sustainable European forest-based bioeconomy – assessment and the way forward

Published 20 December 2017

Citations

Georg Winkel, Glenn Galloway, Carol J. Pierce Colfer, Wil de Jong, Pia Katila and Pablo Pacheco.	In: Sustainable Development Goals: Their Impacts on Forests and People. Pia Katila, Carol J. Pierce Colfer, Wil de Jong, Glenn Galloway, Pablo Pacheco, Georg Winkel (eds.)	The Impacts of the Sustainable Development Goals on Forests and People – Conclusions and the Way Forward	https://doi.org/10.1017/9781108765015.021
Gerhard Weiss, Marla R. Emery, Jari Miina, Mikko Kurttila, Giulia Corradini, Patrick Huber, Harald Vacik.	Chapter in: Services in Family Forestry, Teppo Hujala, Anne Toppinen, Brett J. Butler (eds).	Value Creation and Innovation with Non-wood Forest Products in a Family Forestry Context	https://doi.org/10.1007/978-3-030-28999-7_10
Anne Toppinen, Mirja Mikkilä, Anni Tuppurä, Gerdien de Vries.	Chapter in: Services in Family Forestry, Teppo Hujala, Anne Toppinen, Brett J. Butler (eds).	Sustainability as a Driver in Forestry-Related Services	https://doi.org/10.1007/978-3-030-28999-7_14
Gun Lidestav, Maria Johansson, Emily S. Huff.	Chapter in: Services in Family Forestry, Teppo Hujala, Anne Toppinen, Brett J. Butler (eds).	Gender Perspectives on Forest Services in the Rise of a Bioeconomy Discourse	https://doi.org/10.1007/978-3-030-28999-7_15
Erkki Mäntymä, Liisa Tyrväinen, Artti Juutinen, Mikko Kurttila.	Land Use Policy Available online 18 October 2019, 104095	Importance of forest landscape quality for companies operating in nature tourism areas	https://doi.org/10.1016/j.landusepol.2019.104095
Adam Felton, Therese Löfroth, Per Angelstam, Lena Gustafsson, Joakim Hjältén, Annika M.	Ambio (2019)	Keeping pace with forestry: Multi-scale conservation in a changing production forest matrix	https://doi.org/10.1007/s13280-019-01248-0

Felton, Per Simonsson, Anders Dahlberg, Matts Lindblad, Johan Svensson, Urban Nilsson, Isak Lodin, P. O. Hedwall, Anna Sténs, Tomas Lämås, Jörg Brunet, Christer Kalén, Bengt Kriström, Pelle Gemmel, Thomas Ranius.			
Marius Lazdinis, Per Angelstam, Helga Pülzl	Landscape Ecology, 2019	Towards sustainable forest management in the European Union through polycentric forest governance and an integrated landscape approach	https://doi.org/10.1007/s10980-019-00864-1
Špela Pezdevšek Malovrh, Dženan Bećirović, Bruno Marić, Jelena Nedeljković, Stjepan Posavec, Nenad Petrović and Mersudin Avdibegović	Forests 2019, 10(8), 648	Contribution of Forest Stewardship Council Certification to Sustainable Forest Management of State Forests in Selected Southeast European Countries	https://doi.org/10.3390/f10080648
Jyri Seppälä, Tero Heinonen, Timo Pukkala, Antti Kilpeläinen, Tuomas Mattila, Tanja Myllyviita, Antti Asikainen, Heli Peltola.	Journal of Environmental Management Volume 247, 1 October 2019, Pages 580-587	Effect of increased wood harvesting and utilization on required greenhouse gas displacement factors of wood-based products and fuels	https://doi.org/10.1016/j.jenvman.2019.06.031
Luana Ladu, Enrica Imbert, Rainer Quitzow, Piergiuseppe Morone	Forest Policy and Economics, Available online 23 May 2019	A Path Transition Towards a Bioeconomy—The Crucial Role of Sustainability	https://www.sciencedirect.com/science/article/pii/S138993411830368X
Pipiet Larasatie, Gintare Baublyte, Kendall Conroy, Eric Hansen, Anne Toppinen	Canadian Journal of Forest Research, published 9 April 2019	“From nude calendars to tractor calendars”: The perspectives of female executives on gender aspects in the North American and Nordic forest industries	https://doi.org/10.1139/cjfr-2018-0402
Christian Messier, Jürgen Bauhus, Frederik Doyon, Fanny Maure, Rita Sousa-Silva, Philippe Nolet, Marco Mina, Núria Aquilué, Marie-Josée Fortin and Klaus Puettmann	Forest Ecosystems 2019, 6:21	The functional complex network approach to foster forest resilience to global changes	https://forestecosyst.springeropen.com/articles/10.1186/s40663-019-0166-2
Elias Hurmekoski, Marko Lovrić, Nataša Lovrić, Lauri Hetemäki, Georg Winkel	Forest Policy and Economics, Volume 102, May 2019, Pages 86-99	Frontiers of the forest-based bioeconomy—A European Delphi study	https://www.sciencedirect.com/science/article/pii/S1389934117304434

Marko Lovrić, Nataša Lovrić, Robert Mavsar	Forest Policy and Economics, Available online 28 February 2019	Mapping forest-based bioeconomy research in Europe	https://www.sciencedirect.com/science/article/pii/S1389934118303964
Jennifer De Boer, Rajat Panwar, Robert Kozak, Benjamin Cashore	Forest Policy and Economics Available online 19 January 2019	Squaring the circle: Refining the competitiveness logic for the circular bioeconomy	https://www.sciencedirect.com/science/article/pii/S1389934118302168
Ariane Christin Schmelzenbart, Miriam Lettner, Franziska Hesser, Peter Schwarzbaue	R. Pro Ligno, Vol. 14 N° 4 2018	Barriers and incentives on the market diffusion of lignin composites – a delphi-swot analysis	http://www.proligno.ro/en/articles/2018/4/SCHMELZENBART.pdf
Felix Storch	PhD Thesis, Albert-Ludwigs-Universität, 2018	Influence of Harvesting Intensity on Species and Structural Diversity of Forests	https://d-nb.info/1172203342/34
Raul Fernandez Lacruz	PhD Thesis, Swedish University of Agricultural Sciences, 2019	Improving supply chains for logging residues and small-diameter trees in Sweden	https://pub.epsilon.slu.se/16161/7/fernandez_lacruz_r_190522.pdf
Tuuli Suomala	Masters Thesis, University of Helsinki, 2019	Understanding the perceptions of urban citizens concerning a forest-based bioeconomy	https://helda.helsinki.fi/bits/tream/handle/10138/303032/Suomala_Tuuli_Pro_Grad_u_2019.pdf?sequence=2&isAllowed=y
Maciej Pach et al.	In Bravo-Oviedo A., Pretzsch H., del Río M. (eds) Dynamics, Silviculture and Management of Mixed Forests. Managing Forest Ecosystems, vol 31.	Silviculture of Mixed Forests: A European Overview of Current Practices and Challenges	https://link.springer.com/chapter/10.1007/978-3-319-91953-9_6
Dalia D'Amato, Simo Veijonah, AnneToppinen.	Forest Policy and Economics, available online 7 Dec 2018.	Towards sustainability? Forest-based circular bioeconomy business models in Finnish SMEs	https://www.sciencedirect.com/science/article/pii/S1389934118302600
Elias Hurmekoski, Ragnar Jonsson, Jaana Korhonen, Janne Jänis, Marko Mäkinen, Pekka Leskinen, Lauri Hetemäki.	Canadian Journal of Forest Research, published online 21.08.2018	Diversification of the forest industries: Role of new wood-based products	http://www.nrcresearchpress.com/doi/abs/10.1139/cjfr-2018-0116#.W4ZDYfZuluU
Helga Pülzl, Doris Wydra and Karl Hogl.	Forests 2018, 9(11), 719.	Piecemeal Integration: Explaining and Understanding 60 Years of European Union Forest Policy-Making	https://www.mdpi.com/1999-4907/9/11/719

Jaana Korhonen, Alexandru Giurca, Maria Brockhaus and Anne Toppinen.	Sustainability 2018, 10(10), 3785	Actors and Politics in Finland's Forest-Based Bioeconomy Network	https://www.mdpi.com/2071-1050/10/10/3785
Gerhard Weiss, Anna Lawrence, Gun Lidestav, Diana Feliciano, Hujala Teppo, Sarvašová Zuzana, Dobšínská Zuzana, Živojinović Ivana.	Forest Policy and Economics Available online 18 October 2018	Research trends: Forest ownership in multiple perspectives	https://www.sciencedirect.com/science/article/pii/S1389934118302570
Annikka Näyhä	Journal of Cleaner Production, Available online 25 October 2018	Transition in the Finnish forest-based sector: Company perspectives on the bioeconomy, circular economy and sustainability	https://www.sciencedirect.com/science/article/pii/S0959652618332876
Bogdan Buliga, Liviu Nichiforel.	Journal of Cleaner Production Volume 207, 10 January 2019, Pages 329-342	Voluntary forest certification vs. stringent legal frameworks: Romania as a case study	https://www.sciencedirect.com/science/article/pii/S0959652618330294
Erkki Mäntymaa, Artti Juutinen, Liisa Tyrväinen, Jouni Karhu, Mikko Kurttila.	Journal of Forest Economics, Volume 33, December 2018, Pages 14-24	Participation and compensation claims in voluntary forest landscape conservation: The case of the Ruka-Kuusamo tourism area, Finland	https://www.sciencedirect.com/science/article/pii/S1104689918300084
Rogelja T, Ludvig A, Weiss G., Secco L.	Forest Policy and Economics, Volume 95, October 2018, Pages 147-155	Implications of policy framework conditions for the development of forestry-based social innovation initiatives in Slovenia	https://www.sciencedirect.com/science/article/pii/S1389934118301400
Carlo Ingrao, Jacopo Bacenetti, Alberto Bezama, Vincent Blok, Pietro Goglio, Emmanuel G. Koukios, Marcus Lindner, Thomas Nemecek, Valentina Siracusa, Anastasia Zabaniotou, Donald Huisingh.	Journal of Cleaner Production, volume 204, 10 December 2018, Pages 471-488	The potential roles of bio-economy in the transition to equitable, sustainable, post fossil-carbon societies: Findings from this virtual special issue	https://www.sciencedirect.com/science/article/pii/S0959652618327823
Miriam Lettner, Pia Solt, Björn Röbiger, Daniela Pufky-Heinrich, Anna-Stiina Jääskeläinen, Peter Schwarzbauer and Franziska Hesser.	Sustainability, vol 10, issue 8	From Wood to Resin—Identifying Sustainability Levers through Hotspotting Lignin Valorisation Pathways	http://www.mdpi.com/2071-1050/10/8/2745
Anna Lawrence	Forestry: An International Journal of Forest Research, Volume 91, Issue 4, 1	Do interventions to mobilize wood lead to wood mobilization? A critical review of the links between policy aims	https://academic.oup.com/forestry/article/91/4/401/5040470

	October 2018, Pages 401–418	and private forest owners' behaviour	
Wiersum, K.F.; Wong, J.L.G.; Vacik, H.	International Forestry Review, Volume 20, Number 2, June 2018, pp. 250-262(13)	Perspectives on non-wood forest product development in Europe	https://www.ingentaconnect.com/contentone/cfa/ifr/2018/00000020/00000002/article00009#Refs
Filip Aggestam, Bernhard Wolfslehner.	Forest Policy and Economics, Volume 94, September 2018, Pages 21–26	Deconstructing a complex future: Scenario development and implications for the forest-based sector	https://www.sciencedirect.com/science/article/pii/S1389934117306329
T. Stern, L. Ranacher, C. Mair, S. Berghäll, K. Lähntinen, M. Forsblom and A. Toppinen.	Forests, published 8 May 2018	"Perceptions on the Importance of Forest Sector Innovations: Biofuels, Biomaterials, or Niche Products?"	http://www.mdpi.com/1999-4907/9/5/255
Gerhard Weiss, Anna Lawrence, Teppo Hujala, Gun Lidestav, Liviu Nichiforel, Erlend Nybakk, Sonia Quiroga, Zuzana Sarvašová, Cristina Suarez, Ivana Živojinović.	Forest Policy and Economics, available online 9 April 2018	Forest ownership changes in Europe: State of knowledge and conceptual foundations	https://www.sciencedirect.com/science/article/pii/S1389934117301740
Ida Wallin, Helga Pülzl, Laura Secco, Arnaud Sergent, Daniela Kleinschmit.	Forest Policy and Economics, available online 5 March 2018	Research trends: Orchestrating forest policy-making: Involvement of scientists and stakeholders in political processes	https://www.sciencedirect.com/science/article/pii/S1389934118300170
Eric Hansen, Hans Fredrik Hoen, Erlend Nybakk	Bioproducts Business 3(2), 2018	Competitive Advantage for the Forest-based Sector in the Future Bioeconomy – research question priority	http://biobus.swst.org/bpbj/index.php/bpbj/article/view/36
Riitta Hänninen, Elias Hurmekoski, Antti Mutanen, Jari Viitanen.	Current Forestry Reports, March 2018, vol 4 issue 1	Complexity of Assessing Future Forest Bioenergy Markets— Review of Bioenergy Potential Estimates in the European Union	https://link.springer.com/article/10.1007/s40725-018-0070-y
Filip Aggestam and Helga Pülzl.	Forests 2018, 9(3), 125	Coordinating the Uncoordinated: The EU Forest Strategy	http://www.mdpi.com/1999-4907/9/3/125
Lauri Hetemäki, Marc Hanewinkel, Bart Muys, Markku Ollikainen, Marc Palahí and Antoni Trasobares.	From Science to Policy 5, European Forest Institute.	Leading the way to a European circular bioeconomy strategy	http://www.efi.int/files/attachments/publications/efi_fs_tp_5_2017.pdf
Policymakers			
	International Labour Organization	Promoting decent work and safety and health in forestry. Report for discussion at the	https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---

		Sectoral Meeting on Promoting Decent Work and Safety and Health in Forestry (Geneva, 6–10 May 2019)	sector/documents/meeting-document/wcms_679806.pdf
	European Commission, October 2018	A sustainable bioeconomy for Europe: strengthening the connection between economy, society and the environment. Updated Bioeconomy Strategy.	https://ec.europa.eu/research/bioeconomy/pdf/ec_bioeconomy_strategy_2018.pdf#view=fit&pagemode=none
Stakeholders			
Tuomo Takala, Teppo Hujala, Eeva-Liisa Repo, Jukka Tikkanen, Raili Hokajarvi.	Maaseudun Uusi Aika 2 2019	Kohti monialaisen maa- ja metsätilan integroitua suunnittelua	http://www.mua-lehti.fi/wp-content/uploads/2019/09/MUA-2019-2-Takala-Hujala-Repo-Tikkanen-Hokajarvi.pdf



This Report has been compiled by Lauri Hetemäki (Assistant Director), Rach Colling (Head of Communications), Harald Mauser (Brussels Liaison Officer) and Ulla Vääntinen (Communications Officer, Events), EFI