

Minutes of the Webex Call

ToS on Forest Sector Outlook

Date: 18 October 2018

Participants: Tuula Packalen
(16) Paolo Camin
Jeffrey Prestemon
Prakash Nepal
Birgit Lia Altmann
Udo Mantau
Christian Blanke
Andrzej Talarczyk
Mart-Jan Schelhaas
James Griffiths
Ewa Leszczyszyn
Alexander Moiseyev
Jean-Luc Peyron
Hans Verkerk
Juan Picos
Michal Synek

Agenda:

- 1) Welcome and short introduction**
- 2) Presentation by Nepal Prakash and Jeff Prestemon**
- 3) Discussion**
- 4) Roadmap**
- 5) Plans for the February meeting**
- 6) Next ToS meeting**
- 7) Final comments (including next steps)**

Points discussed/concluded:

- 1) Welcome and short introduction**
 - Birgit Lia Altmann, Secretary to the ToS on Forest Sector Outlook (FSOS) welcomed the participants.
 - Participants shortly introduced themselves
- 2) Presentation by Prakash Nepal and Jeff Prestemon**
 - Prakash Nepal presented the slides (attached to the email); the following additional comments were made:
 - As some of the SSPs are similar, only three SSPs were chosen for the calculations of the reference scenarios
 - With respect to the prioritized scenarios of the FSOS proposal, some of them are covered jointly in the scenarios
 - The model used is an updated version of the GFPM: It contains an updated estimation of the Environmental Kuznet Curve, which more directly addresses rural population and hence the

agriculture-forest margin in making forest area projections, as well as the addition of planted forest projections

- The GFPM does not contain a forest dynamics model, but its results could be taken to feed into such type of models, including national level forest dynamics models (i.e., inventory projection models that include forest sector market variables as predictors, which could use the results of the GFPM to partially drive finer level forest dynamics). It was noted that this was the approach implemented in the last European Forest Sector Outlook Study, which employed EFISCEN to model forest dynamics at finer spatial scales in the European subregion of the ECE.
- Details of the GFPM projections are available by country and could be shared with those who request them (with the understanding that the current results are preliminary and that the number of, and specifics of, the special scenarios will change as the result of further discussions among the FSOS core team and based on today's and additional future comments the broader set of FSOS country representatives)

3) Discussion

- Question: Are **silvicultural methods/forest management change** included in the calculations? Answer: Areas of natural and planted forests and timber stock quantities are aggregate, summary variables defining current and projected forest conditions; consideration of policies and management practices that could enable achievement of the levels of these summary variables at the country and multinational levels could be part of the narrative accompanying discussion of the silvicultural and management implications of various scenarios.
- Question: How is **energy** included? Answer: It only enters through fuelwood; no focus was put on energy as this was a focus area of the last set of FSOS studies (European and North American); the energy sector is not included in the GFPM—the GFPM is a forest sector-only partial equilibrium model, although the storylines accompanying the various Shared Socioeconomic Pathways embed assumptions about how the energy sector may evolve over time.
- Question: Are **residues and recycling material usage** considered? Answer: The model considers it for the paper sector, not for the others. The GFPM has a recovered paper as a modelled product category. The current version of the GFPM specifies that the maximum recovery rate of recovered paper is 80%. The actual recovery, within this range, is determined by the input-output coefficient (unit of recovered paper used to produce per unit of paper products, which differs in individual country) and the specified supply curve of recovered paper, which responds to its price. Although the specified recovery rate of 80% is assumed to remain the same over the projection period, the rate can be modified for the base year and projection years.
- Comment: **Climate change impacts** are not considered (a catastrophe could add or subtract significant amounts of wood to the market). Response: Future changes of climate are not modelled directly in the GFPM (goal for the future); in general, natural catastrophes tend to create short-run, mainly sub-national or national (and less often international) effects on markets; such effects include short-run salvage gluts, which drive down prices, and longer-run inventory reduction effects, which drive up prices and reduce production possibilities in the locations impacted. That said, the forest products market has countervailing influences that tend to dampen the overall international market influences of natural catastrophes affecting markets. Large climate change related shifts in the rates of natural disturbances

would be interesting to model in the future (indeed, the United States' 2020 Resources Planning Act Assessment is doing this for the United States); a discussion of the long-run implications of altered rates of such disturbances, particularly in terms of how forest growth may change and how national markets might be increasingly buffeted by such shocks, might prove a useful addition to this current FSOS.

- Comment: The sensitivity analyses could lack **policy-relevance**. Response: The scenarios carried out so far are based on FSOS country representatives' own suggestions, gathered through outreach by the Secretariat and FSOS leadership in 2018, on the most important policy and management questions and related issues likely to be affecting the forest sector of the ECE region. The scenarios reported today are an attempt to show how global forest sector modelling can provide the information needed to answer these most important questions. For example, the special scenario modelling captures how demand shifts out for wood products (lumber, panels) and provides an assessment of how increased use of wood in the residential multi-family housing and non-residential construction sectors, perhaps enabled by changes in policies allowing more wood used in large buildings, could lead to national and global shifts in production and prices. Similarly, the special scenario modelling also shows how increased forest area and forest stocks, perhaps resulting from the global policy to combat climate change, could lead to global shift in supply of industrial roundwood, manufactured wood products, and their prices.
- Question: What would be the different scenarios' **impact on climate change**? Answer: Carbon sequestration effects can be calculated in a post-modelling calculation, if there is interest. While the effects of climate change on future forest growth (and rates of natural disturbances) are not accounted for in the current version of the GFPM, Nepal and Prestemon are working on a forest growth module that is intended to provide such additional modelling capability. However, it is unlikely that this module will be ready for the current round of the FSOS. However, the GFPM does track forest carbon, and associated models can be applied that additionally tracks carbon sequestered in forest products.
- Question: Could **substitution** effects be taken into account? Answer: This could also be calculated in a post-modelling or side calculation. Prakash Nepal has access to a model that makes estimates of the substitution effects that the use of forest products in construction and other applications has on net carbon savings at national and global levels.
- Several participants affirmed that climate change implications would be very interesting to look at
- Question: Could **negative economic growths shocks** be considered? Answer: In general, negative growth would show when comparing the different SSPs (high growth vs. low growth—e.g., SSP 5 versus SSP3); integrating a series of random shocks into the modelling would translate into lower growth of economies, and this is a topic worthy of future exploration using the GFPM or similar global forest sector models—e.g., addressing issues of how large, short-run negative economic growth shocks translate into permanent effects on forests and the forest sector more broadly.
- Question: What about **trade/trade barriers**? Answer: This would be a much more complicated scenario and there was no time to run it; different SSPs already imply different trade conditions; there is an intention to model trade in the future. Although, Nepal and Prestemon could address increasing trade barriers using the GFPM, they note that a study of the effects of higher trade barriers has been recently completed, and we might suggest that this other study provides at least a first approximation of the effects of rising protectionism: Buongiorno, J., and C. Johnston. 2018. Potential Effects of US Protectionism and Trade Wars

on the Global Forest Sector. Forest Science 64(2): 121–128.

<https://doi.org/10.1093/forsci/fxx001> (free to download)

- **Question:** What about the **growth of a specific wood product** (wood construction)? **Answer:** The scenario on increased consumption was set-up considering an expansion of demand for the use of any product contained within the broad FAO product categories of lumber and wood-based panels. This is indeed a recognized limitation of the GFPM—it's lack of fine product details. However, the scenario contemplating the increased use of wood in any number of products contained within the lumber and panels category is able to describe how such an increase would translate into effects on prices and the paper sector.
- **Question:** Would it be possible to **combine the scenarios**, e.g. high forest area and high wood consumption? **Answer:** Yes, that would be possible and could give interesting insights regarding climate change mitigation.
- **Question:** Is **Africa** included and would it be possible to model an increase of forest plantations and the effect on the ECE market? **Answer:** In the current calculations Africa already sees a bigger increase in planted forest area compared to other regions; a special focus on Africa is possible, but it would be challenging, given the effects of low data quality emerging from such countries on the functioning of the GFPM; however, we they do anticipate adding Nigeria to a special scenario evaluating how rapid population and economic growth among a subsite of large consuming countries might translate into effects on forests and markets in the ECE region.
- **Comment:** Could also be interesting to look at an increase of plantations in **all tropical countries** (Asia, South America and Africa) **Response:** Similar to Africa, the calculations already show a higher increase in plantations in these regions compared to Europe and North America. The FSOS core team will consider how best to evaluate how increased rates of planted forest establishment might affect the global forest sector.
- **Question:** Where is the **data** coming from? **Answer:** It is data from FAOSTAT; sometimes corrections are needed for example to balance imports and exports. However, special information is also collected on a number of other parameters that are critical to modelling the forest sector, including product conversion efficiency, the effects of markets on future product processing capacity, timber stock net growth rates, fibre recycling rates, transport costs, etc. Some of this information will be provided in a document, to be authored by Nepal and Prestemon, laying out the terms of reference of the current FSOS, which is anticipated to be in draft form for review by FSOS members by February 2019.

4) Roadmap

- Birgit Lia Altmann presented the next steps, which are planned as following:
 - Opportunity for other ToS members to comment who couldn't participate in the call
 - Prakash Nepal will summarize the scenario assumptions and results in a background paper to be presented at the event in Koli, Finland, in February (12– 14 February 2019, with a particular focus on FSOS on 14 February); as part of this event, participants will have the opportunity to provide technical feedback.
 - The results of an expanded and refined set of scenarios will be presented at the 41st Session of the Joint ECE/FAO Working Party on Forest Statistics, Economics and Management (27 – 29 March 2019) to receive feedback.
 - Based on the feedback obtained from the Working Party and the ToS, the next steps will be decided in order to reach the final publication; in addition, capacity building activities that can aid in national outlook modelling will be considered.

5) Plans for the February meeting

- Tuula Packalen informed about the general outline of the meeting in Koli, February, 12-14 February, which is as follows:
 - 12 February 2019: The National Forest Inventories towards 2020 in the Context of DIABOLO Project
 - 13 February 2019: Distributed, Integrated and Harmonised Forest Information for Bioeconomy Outlooks
 - 14 February 2019: UNECE Forest Sector Outlook Day
- Birgit Lia Altmann added the general outline for the FSOS day:
 - Prakash Nepal will present the results from the global scenario modelling (after taking in the feedback from this call) – technical feedback from participants – discussion
 - Discussion on how global results feed back into national supply modelling PLUS feedback on capacity building needs for national modelling
 - Presentations from related outlook work, exchange of experiences

6) Next ToS meeting

- Birgit Lia Altmann proposed to have the next ToS meeting back-to-back to the February event in Koli, i.e. on the Friday following the event
- No comments were made on the subject

7) Final comments (including next steps)

- Information of the Webex meeting will be shared with the complete ToS on FSOS; they will have the opportunity to provide additional comments on the set-up of the scenarios (not on individual country results)
- The core team of the ToS will meet, discuss and decide – considering the comments received – if changes/further additions to the scenarios are undertaken
- It is important to have a story-line for the different scenarios
- It is also important not to lose sight of the questions which led to the choice of the different scenarios, i.e. it is important to not only present the results of the scenarios, but provide specific answers to the questions that were raised
- The last two aspects seem particularly important for the set-up/content of the final FSOS preparation; the preparation should be written in a way that is appealing to policy makers