

Explanation of wood fiber balance

Version 2.1.4 of November 15, 2017

1. Purpose
 - a. This wood balance is the result of work over several years and discussions with the ECE/FAO Team of Specialists on Forest Products Statistics. It is a work in progress and we welcome your comments (stats.timber@unece.org).
 - b. This “simple” balance is designed to provide an overview summary of the wood fiber balance, comparing available supply to a calculated demand based on output of forest products.
 - c. Please review the structure of this balance and:
 - i. Let us know if you understand the methodology and layout of this balance
 - ii. Indicate what you think may be missing or may not be needed
 - iii. Provide feedback on the explanation provided here (we have tried to keep it short)
2. We have now sent you the balance with data available for your country.
3. Sources
 - a. The balance shows data for a single country. The source of this information is the ECE/FAO TIMBER database which reflects the data supplied on the Joint Forest Sector Questionnaire (as of July 2017).
 - b. Units are those used on the JFSQ.
 - c. Figures for conversion factors and assumptions (in green) can be adjusted. More information on these can be found under items 5 and 6. You are welcome to change them to fit the characteristics of the wood industry in your country.
4. Data quality
 - a. In some cases (for missing or incorrect figures) data have been repeated or estimated by the secretariat. Such data are shown in yellow on the sheets JQ1 and JQ2.
 - b. Wood fuel is not considered in this balance.
 - c. We have not attempted to track inventory change. This was suggested for industrial roundwood (with windthrow from storms) and for the time being we have not implemented. See comment 8.b.
5. Solid wood equivalent (SWE) conversion factors
 - a. SWE is meant to indicate the amount of green wood (m³) that is contained in one m³ or mt of the product. This is not the same as the amount of wood used to make the product (note that for pulp, the amount of wood contained in the product and the amount used to make it are considered the same). By using SWE we avoid possible doublecounting of raw material use and residue use in another process (e.g. sawdust from sawmilling going to particle board).
 - b. The conversion factors are based on ECE/FAO Discussion Paper 49. **You are of course encouraged to provide your own country-specific factors here.**
 - c. The particle board conversion factor is weighted to be approximately equal between particle board and OSB. Feel free to change this based on your country-specific situation.
 - d. If sawnwood production figures are based on dried wood production rather than wood in the green stage, then the SWE factor should be larger. Nominal sizes can also have this effect.
6. Assumptions / variables (**these can be changed to reflect your country’s situation**)

- a. A share of particle board raw material comes from recovered wood. We have estimated this based on European Panel Federation figures at 35%. If you have a different figure available please change the value in cell M25.
 - b. We assume all agglomerates (basically pellets) are produced from industrial roundwood waste. If this is not the case please change the value in cell M26. They could also be from imported residues which should be reflected in the trade on row # 2.
 - c. We assume all of the available industrial wood fibre is used in the industry. If you have other information please change the value in cell M27. This would include items such as energy use of industrial roundwood, chips used for landscape purposes or animal bedding, or damaged wood.
 - d. For the purposes of making totals any missing data are assumed to be zero (see formulas on row # 13 and 14).
7. Row # explanation
- a. Row # 1 – industrial roundwood is removals of sawlogs (JQ item 1.2.1) and pulpwood (JQ item 1.2.2) minus net trade of total industrial roundwood. Note that on the JFSQ all sources of wood, including from outside the forest, are included.
 - b. Row # 2 – net trade in chips (includes particles and residues, JQ item 3). Imports minus exports. A positive number means net imports of chips. We cannot distinguish energy sector or the residues from primary or secondary processing. [see suggestion 7.c].
 - c. Row # 3 – we are adding into available roundwood the amount of wood in particle board that does not come from fresh material.
 - d. Row # 4 – agglomerates (JQ item 4) in this case are pellets and other densified wood products
 - e. Row # 8 – Particle board includes OSB in the JFSQ structure (JQ item 6.3). In the interests of simplicity we have not separated out the OSB.
 - f. Rows # 10-11 – pulp production (JQ item 7) is meant to be only pulp produced from virgin fibres (recovered fibre pulp is not considered, it is part of JQ item 8.2).
 - g. Row # 13 – solid wood demand is the production of rows 4-12 multiplied by the SWE conversion factor.
 - h. Row # 14 – available wood fibre is the sum of rows 1, 2 and 3 multiplied by the variable for amount of industrial wood fibre leaving the wood sector (see assumption 6.c)
8. Comments received that have not been incorporated
- a. For row # 3 it has been suggested that this should also include other use of recovered wood in the wood industry, highlighting the use of residues in pallet production [suggestion by Jan Oldenburger].
 - b. If we are looking over a long time period we should consider a change in the level of stocks [suggestion from Martti Aarne and Elina Maki-Simola, Surendra Joshi]. This could also include effects of windthrow.
 - c. Include an assumption / variable of the amount of imported chips that do not go to the wood industry, e.g for energy or other uses. [suggestion from Elina Maki-Simola].
 - d. There is a known gap between officially reported data and actual figures [comment by Ewa Leszczyszyn]. Should there be some way to compensate for this in the balance [suggestion from Alex McCusker]?

- e. Include separate rows on balance for OSB and the three different types of fibreboard [suggestion from Ewa Leszczyszyn].