WOOD ENERGY DATA IN FRANCE

Team of Specialists on Forest Products and Wood Energy Statistics,
Geneva, 20 May 2024
Sommaire

1. Issues
2. Method
3. Results
4. Complexity
1. Issues
ISSUES

Data for wood energy sold by professionnals:

• Estimate statistics on all roundwood harvested and removed in France, from forest

• Unit: solid volume over bark in cubic meter (by conversion of tonnes)

• Use: for JFSQ, JWEE but as well for FRA

Problematic:
How collecting data on wood energy harvested by other actors than forestry companies?
How collecting data for others wood energy (chips, briquettes, pellets and wood charcoal...)?
2. Methods
Wood energy from forest

• Content: comprehensive data collected from forestry operators
• Source: administration's mandatory survey conducted every year
• Responses: over 90%
• Wood energy statistics:
  • Roundwood (> 2 meters),
  • Logs (< 2 meters)
  • Wood chips for energy (made in forest)
Extract of our questionary: roundwood, logs (< 2 meters) and wood chips for energy (in tonnes)

- 813-Energie: bois ronds de grande longueur (supérieurs à 2m) et bois ronds pour carbonisation
- 814-Energie: bois en rondins ou bûches de 2m ou moins et souches
- 816-Energie: Plaquettes forestières

830-Total bois énergie

--- 835- dont bois énergie certifiés gestion durable (PEFC ou FSC). Si code 830 > 0, mettre 0 si absence de volume pour ce code.
--- 840- dont bois énergie exportés hors France métropolitaine. Si code 830 > 0, mettre 0 si absence de volume pour ce code.
--- 850- dont bois énergie vendus aux particuliers (en direct ou par un revendeur). Si code 830 > 0, mettre 0 si absence de volume pour ce code.
Estimate of wood non-harvested by forestry companies

Hypothesis:
- What? only wood fuel
- Use? mainly self-consumed, but self-supplying as well
- International trade are considered negligible: no imports or exports
- Source: administration's mandatory survey conducted every year
Estimate of wood non-harvested by forestry companies

Hypothesis:

• What? Non-commercial cut woods (not sold) are not valuable → estimated including natural losses

• Use? mainly self-consumed, but self-supplying as well
Estimate of wood non-harvested by forestry companies

Data sources:
- Environment and Energy Management Agency (ADEME) : provides households wood consumption by study on domestic firewood : punctual statistic survey (last one in 2017)
2. Methods

- Study on domestic wood heating for 2017: ~ 13 millions cubic meters from forest

- Wood energy, logs: 23.1 Mm³
  - Commercial logs: 5.2 Mm³
  - Short circuit: 8.2 Mm³
    - Estovers: 2.2 Mm³
    - Others: 6 Mm³
  - Self-supply: 9.7 Mm³
    - Self-consumption: 6.3 Mm³
    - Partial self-supply: 3.4 Mm³

- 5 Mm³ outside forest

Wood from common forests bought for population use

Wood purchased from private forest owners or farmers

Free wood removed from his own forest or own by other people

Partially purchased wood from his own forest or own by other people
Estimate of wood non-harvested by forestry companies

Data sources:
• Ministry of the ecological and solidarity transition (MTES) : also provides households wood consumption by
  • population census (every year) and housing survey (2013 and 2022) collect data on firewood
  • Data collected in energy units (must be converted)
## Estimate of wood non-harvested by forestry companies

<table>
<thead>
<tr>
<th>Year</th>
<th>ktep</th>
<th>Misters</th>
<th>En Mm³</th>
<th>Pellets</th>
<th>Post-consumer recovered</th>
<th>Logs</th>
<th>Wood Energy from forest</th>
<th>Roundwood &gt; 2m</th>
<th>Forest's chips</th>
<th>Wood ready for use</th>
<th>Import</th>
<th>Exports</th>
<th>Non harvested by companies (Mm³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>6039</td>
<td>41</td>
<td>27,615</td>
<td>1,657</td>
<td>3,375</td>
<td>22,583</td>
<td>7,044</td>
<td>1,276</td>
<td>2,283</td>
<td>3,485</td>
<td>0,000</td>
<td>0,657</td>
<td>21,853</td>
</tr>
<tr>
<td>2015</td>
<td>6437</td>
<td>44</td>
<td>29,340</td>
<td>2,201</td>
<td>3,528</td>
<td>23,611</td>
<td>7,642</td>
<td>1,375</td>
<td>2,875</td>
<td>3,392</td>
<td>0,000</td>
<td>0,711</td>
<td>23,083</td>
</tr>
<tr>
<td>2016</td>
<td>6915</td>
<td>47</td>
<td>31,517</td>
<td>2,837</td>
<td>3,728</td>
<td>24,952</td>
<td>8,037</td>
<td>1,441</td>
<td>3,264</td>
<td>3,332</td>
<td>0,000</td>
<td>0,689</td>
<td>24,597</td>
</tr>
<tr>
<td>2017</td>
<td>6668</td>
<td>45</td>
<td>30,393</td>
<td>3,039</td>
<td>3,556</td>
<td>23,798</td>
<td>8,368</td>
<td>1,930</td>
<td>2,655</td>
<td>3,783</td>
<td>0,032</td>
<td>0,592</td>
<td>22,201</td>
</tr>
<tr>
<td>2018</td>
<td>6478</td>
<td>44</td>
<td>29,506</td>
<td>3,246</td>
<td>3,414</td>
<td>22,845</td>
<td>8,532</td>
<td>1,947</td>
<td>2,702</td>
<td>3,853</td>
<td>0,027</td>
<td>0,625</td>
<td>21,049</td>
</tr>
<tr>
<td>2019</td>
<td>6553</td>
<td>45</td>
<td>29,845</td>
<td>3,285</td>
<td>3,455</td>
<td>23,125</td>
<td>8,061</td>
<td>1,816</td>
<td>2,695</td>
<td>3,529</td>
<td>0,042</td>
<td>0,526</td>
<td>21,699</td>
</tr>
<tr>
<td>2020</td>
<td>5787</td>
<td>39</td>
<td>26,378</td>
<td>2,902</td>
<td>3,052</td>
<td>20,425</td>
<td>8,134</td>
<td>2,023</td>
<td>3,064</td>
<td>3,047</td>
<td>0,032</td>
<td>0,485</td>
<td>18,860</td>
</tr>
<tr>
<td>2021</td>
<td>6625</td>
<td>45</td>
<td>30,200</td>
<td>3,322</td>
<td>3,494</td>
<td>23,384</td>
<td>8,882</td>
<td>1,873</td>
<td>3,421</td>
<td>3,588</td>
<td>0,027</td>
<td>0,485</td>
<td>21,876</td>
</tr>
<tr>
<td>2022</td>
<td>5,878</td>
<td>40</td>
<td>26,790</td>
<td>3,550</td>
<td>3,021</td>
<td>20,219</td>
<td>9,568</td>
<td>1,992</td>
<td>3,790</td>
<td>3,816</td>
<td>0,043</td>
<td>0,684</td>
<td>18,073</td>
</tr>
</tbody>
</table>
Estimate of other wood energy

Data sources :
• Pellets : French association professional Propellets
• Briquettes : French professional association FCBA
• Wood residues : administration's mandatory annual survey
• Black liquor : French association professional COPACEL
• Wood charcoal : French association professional FNB
• Post consumer recovered wood : administration's annual survey
• Energy use by ISIC-sectors : estimation by ministry of energetic transition
Results

Comparison of these data to forest inventory (IFN from IGN):

- Satisfactory quality data: only 5% difference between estimates and forest inventory for wood energy from forest

- Missing data for chips and particules (from other company which produce veneer sheets, wood-based panels, wood pulp...
Complexity

- Lot of different sources
- Lot of conversions
- Lot of estimations (consumption, production data by companies)
- Need more survey’s...