

EFORWOOD IP Board meeting (24) – Minutes

Date: December 18, 2007, 13:00-14:30. Telephone conference.

Participants

IP Board members:

| | |
|----------------------------|--------------------------------|
| Gero Becker (GB), M3 | Present |
| Margarida Tomé (MT), M2 | In place of Jean-Michel Carnus |
| Denis Mc Gowan (DMG), M6 | - |
| Arie Hooimeijer (AH), M4 | - |
| Carl Olsmats (CO), M5 | Present |
| Piotr Paschalis (PP), M0 | Present |
| Risto Päivinen (RP), M1 | Present |
| Kaj Rosén (KR), M0 | Present, chairman |
| Anna von Schenck (AvS), M4 | Present |

Others:

| | |
|--------------------------|--------------------|
| Gunilla Rodfors (GR), M0 | Present, secretary |
| Marcus Lindner (ML), M1 | Present |
| Leif Nutto (LN), M3 | Present |
| Leena Roihuvuo (LR), M1 | Present |
| Diana Vötter (DV), M3 | Present |

- 1. Opening and adoption of agenda** **Responsible**

KR welcomed the participants to the 24th EFORWOOD IP Board meeting.
- 2. Annual Report**

Delivered documents and current situation

GR reported that the Annual Report had been sent to the Commission by e-mail and by courier at 17.30 on Thursday, Dec. 13. KR reported that we received an Acknowledgement of Receipt from the Commission on Dec. 18.

Remaining Audit Certificates from INRA, AFOCEL/FCBA, FR and ALTERRA can (hopefully) be sent to the Commission on Thursday, Dec. 20. GR

KR further reported that our Scientific Officer is informed about the fact that the Implementation Plan lacks information about changes that will be implemented due to the proposal by AIDIMA to reduce their engagement in EFORWOOD. KR
- 3. EC evaluation of the second Annual Report and the Implementation plan for months 25-42**

The meeting on the evaluation of the second Annual Report is still scheduled for January 22-23 but yet without final confirmation from the Commission. An IP Board meeting can probably be set to January 23. Probable location: DG Research. Confirmed evaluators are Angeles Blanco and Franz Schmithuesen. A third evaluator, Anna-Lisa Myllinen, Forest Director at KR

Stora Enso, has still not confirmed her participation.

4. **EAP meeting**

PP reported that a preliminary invitation had been sent to the EAO on Dec. 7. All except Marc van Leemput have accepted. The detailed planning of the meeting agenda will be discussed by KR and PP.

KR, PP

5. **Report on decisions with AIDIMA and FCBA**

CO reported that AIDIMA wishes to significantly reduce its participation in EFORWOOD during the last two years of the project. The proposed reduction for the next 18 months is from 30 to 11 person-months. They have expressed a wish only to carry out data collection for Spain, to drop the coordination of the Iberian Case-study and to finalise their agreed work/deliverables up to Month 24. This has of course implications on who shall carry out the work planned for AIDIMA. The starting position for negotiation by CO and KR is that AIDIMA should fulfil its duties up to Month 30 in accordance with the Implementation Plan for Months 13-30.

The plan of the Coordinator and of the Module Leader (CO) is to have an agreement by the end of January. CO will meet on January 10 with a potential candidate within the EFORWOOD Consortium for taking over the rest of the AIDIMA work, with the aim of this partner to be in full operation with its new tasks in March-April.

KR, CO

When it is clear what the candidate intended to take over actually can take on board, negotiations will start with AIDIMA in accordance with the Consortium Agreement.

How to handle the Iberian Case-study for the future?

The choice was between a) to drop it completely, b) to concentrate on the fibre chain + possibly bio-energy or c) to keep it as it is. The question on who shall coordinate the Iberian Case-study was discussed.

Decision:

- Decisions on how to proceed with the Iberian Case-study will be made at the next IP Board meeting, for which CO will prepare a short proposal.

IPB, CO

6. **Deadlines for data collection (Case studies)**

This is a remaining issue from IP Board meeting 23 (see its Annex 2 to the agenda).

New deadlines for the Baden-Württemberg Case-study

Decisions:

- Appear from the updated "EFORWOOD count-down". C.f. Annex 1 to these minutes.

KR

7. **Report from the Scenario Workshop of Dec. 11, 2007, and implications for the Stakeholder workshop on Scenarios**

It was reported that at the Scenario Workshop of Dec. 11, 2007, in Amsterdam, three main proposals were put forward:

- 1) Renaming of the scenarios in four scenario areas.
- 2) The planned Stakeholder workshop of March 6, 2008, was thought not to be a good idea and was cancelled and will be replaced by a number of small workshops ("road-show-like"), as direct contact with the stakeholders has

proven to be more efficient.

3) The wish to concentrate on European work rather than the case-studies.

There was a discussion at the IP Board around this issue. See further the minutes of the Scenario workshop in Amsterdam Dec. 11, 2007, published on the EFORWOOD portal Project News.

Decision:

- Due to potential limitations in resources, the scenario analysis on the case-studies should preferably be limited to one or a few scenarios. For the full set of analyses, using all proposed scenarios, we should concentrate on the EU-FWC.

Task Force on
Scenarios

8. Next IP Board meetings

Decided at IP Board meeting 23:

- January 17 at 11.00 CET (in preparation of the EC Evaluation, telephone conference),
- January 22 or 23 in Brussels (in connection with the EC Evaluation and EAP-meeting),
- February 14 at 13.00 CET (telephone conference),
- March 6 at 10.00 CET (telephone conference),
- April 3 (telephone conference),
- May 5-7 (in connection with the EFORWOOD Week in Vienna,
- June 18 (telephone conference).

Decision:

- The IP Board meeting of March 6 at 10.00 CET remains despite the cancelling of the Scenario workshop, but is changed from a physical meeting to a telephone meeting.

KR

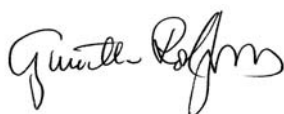
9. Any other business

ToSIA System boundaries

At the system boundaries meeting on Nov. 20 (see Annex 2 to these IP Board minutes) it was among other things decided that products including more than 50 % wood/fibre should be included in the ToSIA analysis. There were no comments from the IP Board on this issue. Further, the system boundary meeting decided that the system boundaries for the ToSIA analysis of EU-FWC as well as for the Baden- Württemberg Case-study should be the "political borders", i.e. the importing harbour in the EU-FWC Case.

This has implications especially for the transport indicator, e.g. imported pulp/pulp wood from Brazil will not be burdened with energy use or emissions in the analysis. The IP Board expressed that it would be an advantage if ToSIA could handle this consequence, e.g. by offering the possibility to include indicator values on transport for imported materials.

Date as above.



Gunilla Rodfors



Kaj Rosén

EFORWOOD Countdown (07-12-18)

| Development of ToSIA | Responsible | Finished month no. |
|---|--------------------|---------------------------|
| ToSIA-FWC 1.0 (incl. ToSIA-E) user-friendly interface | M1/M6 | (45) Aug. -09 |
| ToSIA-FWC 0.5 (incl. ToSIA-E) | M1 | (36) Oct. -08 |
| ToSIA-E | M1 | (36) Oct. -08 |
| ToSIA-U | M6 | (45) |
| ToSIA-FWC Prototype 2 | M1 | (24) Oct. -07 |
| ToSIA-FWC Prototype 1 | M1 | (15) Jan. -07 |

| Indicators/data collection | Responsible | Finished month no. |
|---|---|---------------------------|
| FWC indicators: status after Single FWC application | TF on indicators | (26) Dec. -07 |
| Data collection protocols (Case study applications) | TF on indicators/Data Collection Groups | (26) Dec. -07 |
| Data collection protocols (Case study applications) Class 3 indicators | Data Collection Groups | (26) Dec. -07 |
| Data collection protocols (Case study applications) Class 1 + 2 indicators | Data Collection Groups | (24) Oct. -07 |
| Data collection protocols (Single FWC application) | Data Collection Groups | (19) May -07 |
| FWC Indicators (Draft set 5) | M0 (WP1.1) | (26) Nov. -06 |

| Baseline Futures/Scenarios | Responsible | Finished month no. |
|-----------------------------------|--------------------|---------------------------|
| Specified Scenarios | TF on Scenarios | (30) Apr. -08 |

| | | |
|----------------------------|-----------------|---------------|
| Specified Baseline Futures | TF on Scenarios | (24) Oct. -07 |
|----------------------------|-----------------|---------------|

| Single FWCs | Responsible | Finished month no. |
|---|--------------------|---------------------------|
| Scenario Analysis/Response functions | M1 (M2-5) | (36) Oct. -08 |
| Data collection (Ref. Futures) 2015, 2025 TO BE INCLUDED IN THE CASE STUDIES | M2-5 | (28) Feb. -08 |
| Data collection 2005 | M2-5 | (24) Oct. -07 |
| Specified Chain structures | M2-5 | (18) Apr. -07 |

| Case Studies | Responsible | Finished month no. |
|--|-------------------------|---|
| Scenario Analysis/Response functions | M1 (TF on Case Studies) | (42) Apr. -09 |
| Data collection (Ref. Futures) 2015, 2025 <ul style="list-style-type: none"> - Baden Württemberg - Scandinavia - Iberia | M2-5 | (34) Aug. -08 (32) June -08 (36) Oct. -08 |
| Data collection 2005 <ul style="list-style-type: none"> - Baden Württemberg - Scandinavia - Iberia | M2-5 | (31) May -08 (30) Apr. -08 (32) June -08 |
| Specified Cases | TF on Case Studies | (26) Dec. -07 |

| European FWC | Responsible | Finished month no. |
|--|--------------------|---|
| Scenario Analysis (Scenarios) | M1 (TF on EU FWC) | (45) July -09 |
| Scenario Analysis (Ref. futures) | M1 (TF on EU FWC) | (37) Nov. -08 |
| Data collection 2005, 2015, 2025 | M2-5 | (36) Oct. -08 Update (45) August, including reference futures 2015, 2025 |
| Refined Data collection protocols for the EU FWC | M-2-5 | (27) Jan. -08 |
| Decision on indicators for the EU-FWC | TF on EU | (26) Dec. -07 |

| | | |
|---------------------------|------------------------|---------------|
| | FWC | |
| Defining the European FWC | M-2-5, TF on EU FWC | (24) Oct. -07 |



**Minutes of the EFORWOOD telephone meeting
on system boundaries for Case studies
20 November 2007 from 15.00-16.00 CET**

Participants:

Risto Päivinen (chair), Marcus Lindner (minutes)
Beatrix Szirmay, Vincente Sales, Gus Verhaeghe
Volker Bülle, Franka Brüchert
Diana Vötter, Gero Becker
Anna von Schenk
Carl Olsmat
Erik Valinger
Elisabeth LeNet

- *Issues discussed*
- *Important agreements*
- *Problems identified*
- ***Solutions identified***
- *Next steps*
- *Responsibilities*

AGENDA

1. Round table on possible new issues found and to be agreed
2. Issues presented during the previous discussions:
 - a. System boundaries for transport: Suggestion: import harbour
 - b. Imports at different levels/ products (raw wood, semi elaborate and end products)
 - c. Level of aggregation, coverage of processes to cover 60-80% of the wood material flows
 - d. When the product is still product of 'Forest-Wood Chain?' (for instance what share of the metal/plastic/wood product should be wood?)
3. other matters

Minutes

1. There were no additional issues raised
2. Issues presented during the previous discussions:
 - a) import harbour question
Gero: include transport from outside world? Transport of imported and exported goods has major sustainability implications.

Marcus: We need to draw system boundaries somewhere. If we include transport from exporting harbour to Europe we need to collect all agreed indicator values for this transport process as well. We agreed earlier that within EFORWOOD we cannot assess sustainability of FWCs in other world regions, so part of the sustainability rucksack would always be excluded. A narrow system boundary would be more consistent with the European scope of the assessment. This would thus exclude the transport to Europe and use the incoming harbour in Europe as the system boundary for imports from outside of Europe.

Elisabeth: that way we underestimate the maritime transport impacts!

Gero: the transport within Europe will still be included, but it should be made clear that not the full impacts are included in our assessment.

It was agreed to define the incoming harbour in Europe as system boundary.

Baden-Württemberg case study: where is the system boundary? Should it be the European import harbours as well, or closer to the target region?

Marcus: from theoretical perspective, the administrative borders of BaWue would be the logical border, because the regional case should be treated like a country region in the European FWC analysis.

Franka: a net-balance approach is used in the Baden-Württemberg case study in which the balance between exports and imports is calculated and this net-balance is multiplied with average transport. Currently this approach was linked with average transport distances that go beyond the administrative boundaries of the case study region. But this could be changed to adopt the administrative borders. **The Baden-Württemberg case study TF will reconsider this problem and take a decision by end of November.**

b) Imports at different levels/ products

The import question is mainly an issue for Iberian and BaWue case.

BaWue is using the net-balance approach.

Iberian consumption case will use the Spanish/Portugues harbours and may need some additional information for transport from other main European harbours.

For the Scandinavian Case no import, but the export to other European countries will need to be included.

c) Level of aggregation, coverage of processes to cover 60-80% of the wood material flows

The potential linkage between the case studies was discussed in connection with item b) and c). In each FWC it should be determined by the volume share for the respective products and material flows whether to include an additional import/export flow or not. It should always be the target to reach the 60-80% of the volume flows. But this percentage may not be achievable in all cases.

Vincente: in the Iberian case the target coverage of 60-80% is applied to the consumption of wood products and consequently the contributing resources will probably reach lower percentage coverage.

Risto: this needs to be decided on a case by case basis and lower percentages may have to be accepted.

d) When is the product still a wood product? What is the definition to apply in EFORWOOD? Furniture, packaging and other areas have similar problems to define this system boundary.

M4 and M5 should agree on the system boundaries in this issue. Marcus: from ToSIA perspective both narrow or wider system boundary are feasible, but for the demonstration of the method a more narrow definition would be OK. Risto: The decision will affect the data collection. For example the treatment of waste may be quite different between almost pure wood products and mixed products.

The existing selection of product groups gives already some indication about wood products that should be included. But data availability may also be an

argument in specifying the concrete system boundary here.
M4 and M5 agreed to discuss this matter and propose a solution by 14th of December.

3. Other matters:

Vincente raised the question of setting deadlines for the completion of the three case studies in response to the message of the Coordinator. Vincente will approach the other Case study TF coordinators to coordinate the proposed times.

ANNEX 1: Decision about system boundaries for Baden-Wuerttemberg Case study

From: Franka.Bruechert@forst.bwl.de [mailto:Franka.Bruechert@forst.bwl.de]

Sent: 26 November 2007 16:33

To: Risto Päivinen; Marcus Lindner; fobawi@fobawi.uni-freiburg.de; leif.nutto@fobawi.uni-freiburg.de; diana.voetter@fobawi.uni-freiburg.de; Volker.Boelle@Forst.bwl.de; elisabeth.le-net@afocel.fr

Subject: Eforwood - system boundaries, Baden-Wuerttemberg

Importance: High

Dear Risto, dear Marcus,

please find attached our proposal for the system boundaries for the Baden-Wuerttemberg case. We now consider BW's close borders as the system boundaries. All imports and exports transports are only calculated as distances from the border to location of processing or consumption, respectively from production to the border. Basis for calculation is the average distance of the major mills to the BW north, south, east and west border (where the motorway crosses the border).

Please get back to us in case of any question as soon as possible, as we would like to inform the task force members of this new approach.

Kind regards, Franka

~~~~~  
Franka Brüchert  
Abteilung Waldnutzung  
Forstliche Versuchs- und Forschungsanstalt Baden-Württemberg  
Wonnhaldestr. 4, Freiburg i. Breisgau -  
Postanschrift: Postfach 708, D-79007 Freiburg i. Breisgau

tel : 0049-(0)761-4018 239  
fax: 0049-(0)761-4018 333  
email: franka.bruechert@forst.bwl.de, f.bruechert@web.de  
[www.fva-bw.de](http://www.fva-bw.de)  
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System boundaries for the case study Baden-Württemberg

Background:

Baden-Württemberg is an inland region in Germany. Industry for all three all product chains, i.e. wooden products, fibre product and bio-energy products, are present in the region. The case study will treat imports and exports on a net balance approach.

For the different products the following imports, respectively exports are of major importance:

import of chemical pulp
export of sawn wood

As inland region, Baden-Württemberg owns no oversea harbour. Major volume of wood and goods is transported by rail and haulage.

System boundaries:

For the case study, the region's system boundaries should be defined as the political borders of Baden-Württemberg. Import transport distance will be defined from the border to the location of processing or consumption. Export distance should be defined as the distance from the location of production to the BW border. For the different product classes the following average distances will be considered:

within BW

logs:

| | |
|--|--------|
| long logs, small sawmills | 40 km |
| long logs medium sawmills | 65 km |
| long logs big sawmills | 75km |
| short logs, big sawmills, fibre products, panels | 100 km |

| | |
|---|-------------------------|
| all products within BW except products listed below | 100 km |
| mechanical pulp | 0 km (integrated mills) |
| forest wood chips | 25 km |

| | |
|--|---|
| import: chemical pulp (4 major companies in BW) considered) | 120km (average distance, not weighted) (620km from harbour by rail not considered) |
|--|---|

export: sawn wood (5 biggest mills, export important) 105km average distance to BW border considering export to north, east, south and west (average distance, not weighted) (we will try to find more detailed information on export volumes to Europe and overseas)

ANNEX 2: How to handle mixed material products

From: Carl Olsmats [mailto:carl.olsmats@stfi.se]

Sent: 12 December 2007 17:50

To: Risto Päivinen; Marcus Lindner

Cc: Sales, Vicente; Hans Dahlin; Anna von Schenck; Cathrine Löfgren; gverhaeghe@aidima.es; hannele.lehtinen@poyry.com

Subject: How to handle mixed material products (wood/fibre and e.g plastics) in M4/M5

Dear Risto and Marcus,

in line with the case study boundary meeting Nov 20 decision, have we discussed the mixed material products problem between M4 and M5. Our proposed solution is to rely on the work already done regarding statistical product categories to cover in Eforwood.

In principle should we handle all products where wood/ fibre dominates. This means in principle all products in CPA code 20 (wood), all products in CPA code 21 (paper), some (non-electronic, paper

products) in CPA code 22 (media) , and some products in CPA code 36.1 (furniture). These product categories are listed in the enclosed file.

We do not foresee mixed products to be a problem in bio-energy.

Best regards

Carl

(Attachment: CPA_EFORWOOD Fiber M4M5 only prod in wooden value chain.xls

PRODUCT CLASSIFICATION

| Level | Code | Description | Definition | This item includes | This item also includes | This item excludes |
|-------|---------|---|------------|--------------------|-------------------------|--------------------|
| 2 | DD | WOOD AND PRODUCTS OF WOOD AND CORK (EXCEPT FURNITURE); ARTICLES OF STRAW AND PLAITING MATERIALS | | | | |
| 3 | 20 | WOOD AND PRODUCTS OF WOOD AND CORK (EXCEPT FURNITURE); ARTICLES OF STRAW AND PLAITING MATERIALS | | | | |
| 4 | 20.1 | Wood, sawn, planed or impregnated | | | | |
| 5 | 20.10 | Wood, sawn, planed or impregnated | | | | |
| 6 | 20.10.1 | Wood, sawn or chipped lengthwise, sliced or peeled, > 6 mm thick; railway or tramway sleepers of wood not impregnated | | | | |

**EFORWOOD
MODULE**

Share

Stage

Process

M4

%

M4

%

M4

100 %

M4

100 %

M4

100 %

| | | | | | | |
|---|----------|---|--|--|--|--|
| 7 | 20.10.10 | Wood, sawn or chipped lengthwise, sliced or peeled, > 6 mm thick; railway or tramway sleepers of wood not impregnated | | | | |
| 6 | 20.10.2 | Wood continuously shaped along any of its edges or faces; wood wool; wood flour; wood in chips or particles | | | | |
| 7 | 20.10.21 | Wood, continuously shaped along any of its edges or faces | | | | |
| 7 | 20.10.22 | Wood wool; wood flour | | | | |
| 7 | 20.10.23 | Wood in chips or particles | | | | |
| 6 | 20.10.3 | Wood in the rough; railway or tramway sleepers (cross-ties) of wood, impregnated or otherwise treated | | | | |
| 7 | 20.10.31 | Wood in the rough, treated with paint, stains, creosote or other preservatives | | | | |
| 7 | 20.10.32 | Railway or tramway sleepers (cross-ties) of wood, impregnated | | | | |

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|---|----------|---|--|--|---|---|
| 6 | 20.10.4 | Sawdust and wood waste and scrap | | | | |
| 7 | 20.10.40 | Sawdust and wood waste and scrap | | | | |
| 6 | 20.10.9 | Impregnation of timber services | | | | |
| 7 | 20.10.90 | Impregnation of timber services | | This subcategory includes: – impregnation or chemical treatment services of wood with preservatives or other material | This subcategory also includes: – drying of timber | This subcategory does not include: – waterproofing work, classified in 45.22.20 – disinfection and extermination services in buildings and the like, classified in 74.70.11 |
| 4 | 20.2 | Veneer sheets; plywood, laminboard; particle board, fibre board and other panels and boards | | | | |

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|---|----------|---|--|--|--|--|
| 5 | 20.20 | Veneer sheets; plywood, laminboard; particle board, fibre board and other panels and boards | | | | |
| 6 | 20.20.1 | Boards and panels | | | | |
| 7 | 20.20.11 | Plywood consisting solely of sheets of wood | | | | |
| 7 | 20.20.12 | Other plywood, veneered panels and similar laminated wood | | | | |
| 7 | 20.20.13 | Particle boards and similar boards of wood or other ligneous materials | | | | |
| 7 | 20.20.14 | Fibreboard of wood or other ligneous materials | | | | |
| 7 | 20.20.15 | Finishing services of boards and panels | | This subcategory includes: – Lacquering, varnishing, gilding and painting services of boards and panels | | |
| 6 | 20.20.2 | Veneer sheets; sheets for plywood; densified wood | | | | |

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| 7 | 20.20.21 | Veneer sheets and sheets for plywood and other wood sawn lengthwise, sliced or peeled, of a thickness ≤ 6 mm | | | | |
| 7 | 20.20.22 | Densified wood, in blocks, plates, strips or profile shapes | | | | |
| 4 | 20.3 | Builders' joinery and carpentry, of wood | | | | |
| 5 | 20.30 | Builders' joinery and carpentry, of wood | | | | |
| 6 | 20.30.1 | Builders' joinery and carpentry (except prefabricated buildings), of wood | | | | |
| 7 | 20.30.11 | Windows, French windows and their frames, doors and their frames and thresholds, of wood | | | | |
| 7 | 20.30.12 | Parquet panels, shuttering for concrete constructional work, shingles and shakes, of wood | | | | |
| 7 | 20.30.13 | Builders' joinery and carpentry, of wood, n.e.c. | | | | |

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|---|----------|--|--|----------------------------|--|------------------------------------|
| 6 | 20.30.2 | Prefabricated wooden buildings | | | | |
| 7 | 20.30.20 | Prefabricated wooden buildings | | | | |
| 6 | 20.30.9 | Installation (erection) work of self-manufactured builders' joinery and carpentry of wood, and of self-manufactured prefabricated wooden buildings | | | | |
| 7 | 20.30.90 | Installation (erection) work of self-manufactured builders' joinery and carpentry of wood, and of | | This subcategory includes: | | This subcategory does not include: |

M4 100 %

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self-manufactured prefabricated wooden buildings

– Installation (erection) work of self-manufactured construction elements and other wooden elements for joinery and carpentry work of wood, e.g. doors, windows, door and window frames, staircases, banisters, prefabricated wall coverings, dividing walls and movable partitions

– Erection work of not self-manufactured buildings of woods, classified in 45.21.7

| | | | | | |
|---|----------|--|--|---|---|
| | | | | – Erection work of self-manufactured prefabricated wooden buildings | – Erection work of not self-manufactured joinery work of wood, classified in 45 |
| 7 | 20.30.99 | Industrial services for builders' joinery and carpentry, of wood | | This subcategory includes: | This subcategory does not include: |

M4

100 %

| | | | | – elementary operations within the process of production of the products mentioned, realized by a sub-contractor on materials owned by the requester or for the account of this requester. These operations are paid for the work they represent and can include the provision of the raw materials needed for this work. | – goods of the same range, fully produced by a sub-contractor for the account of a third party. |
|---|-------|-------------------|--|---|---|
| 4 | 20.4 | Wooden containers | | | |
| 5 | 20.40 | Wooden containers | | | |

M4 100 %

M4 100 %

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|---|----------|--|--|---|--|------------------------------------|
| 6 | 20.40.1 | Wooden containers | | | | |
| 7 | 20.40.11 | Pallets, box pallets and other load boards of wood | | | | |
| 7 | 20.40.12 | Other wooden containers and parts thereof | | | | |
| 6 | 20.40.9 | Repair and maintenance services of wooden containers and pallets | | | | |
| 7 | 20.40.90 | Repair and maintenance services of wooden containers and pallets | | This subcategory includes: – Repair and maintenance services of wooden pallets and other wooden load carriers, of wooden cable drums, packaging means and storage containers | | |
| 7 | 20.40.99 | Industrial services for wooden containers | | This subcategory includes: | | This subcategory does not include: |

M4 100 %

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| | | | | | |
|---|------|--|--|--|--|
| | | | | <p>– elementary operations within the process of production of the products mentioned, realized by a sub-contractor on materials owned by the requester or for the account of this requester. These operations are paid for the work they represent and can include the provision of the raw materials needed for this work.</p> | <p>– goods of the same range, fully produced by a sub-contractor for the account of a third party.</p> |
| 4 | 20.5 | Other products of wood; articles of cork, straw and plaiting materials | | | |

M4

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|---|----------|--|--|----------------------------|---------------------------------|------------------------------------|
| 5 | 20.51 | Other products of wood | | | | |
| 6 | 20.51.1 | Other products of wood | | | | |
| 7 | 20.51.11 | Tools, tool bodies, tool handles, broom or brush bodies and handles, boot or shoe lasts and trees, of wood | | | | |
| 7 | 20.51.12 | Tableware and kitchenware, of wood | | | | |
| 7 | 20.51.13 | Wood marquetry and inlaid wood, cases for jewellery or cutlery, statuettes and other ornaments, of wood | | | | |
| 7 | 20.51.14 | Wooden frames for paintings, photographs, mirrors or similar objects and other articles of wood | | | | |
| 6 | 20.51.9 | Repair and maintenance services of wooden products n.e.c. | | | | |
| 7 | 20.51.90 | Repair and maintenance services of wooden products n.e.c. | | This subcategory includes: | This subcategory also includes: | This subcategory does not include: |

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| | | | | – Repair and maintenance services of wooden products of class 20.51 | – Repair and maintenance services of wooden inlay articles | – Repair and maintenance services of seats, classified in 36.11.90 – Repair and maintenance services of other furniture, classified in 36.14.90 |
| 7 | 20.51.99 | Industrial services for other products of wood | | This subcategory includes: | | This subcategory does not include: |

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| | | | | <p>– elementary operations within the process of production of the products mentioned, realized by a sub-contractor on materials owned by the requester or for the account of this requester. These operations are paid for the work they represent and can include the provision of the raw materials needed for this work.</p> | | <p>– goods of the same range, fully produced by a sub-contractor for the account of a third party.</p> |
| 5 | 20.52 | Articles of cork, straw and plaiting materials | | | | |

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| 2 | DE | PULP, PAPER AND PAPER PRODUCTS; RECORDED MEDIA; PRINTING SERVICES | | | | |
| 3 | 21 | PULP, PAPER AND PAPER PRODUCTS | | | | |
| 4 | 21.1 | Pulp, paper and paperboard | | | | |
| 5 | 21.11 | Pulp | | | | |
| 6 | 21.11.1 | Pulps of wood or other fibrous cellulosic material | | | | |
| 7 | 21.11.11 | Chemical wood pulp, dissolving grades | | | | |
| 7 | 21.11.12 | Chemical wood pulp, soda or sulphate, other than dissolving grades | | | | |
| 7 | 21.11.13 | Chemical wood pulp, sulphite, other than dissolving grades | | | | |
| 7 | 21.11.14 | Mechanical wood pulp; semi-chemical wood pulp; pulps of fibrous cellulosic material other than wood | | | | |
| 6 | 21.11.9 | Industrial services for pulp | | | | |

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| 7 | 21.11.99 | Industrial services for pulp | | <p>This subcategory includes:</p> <ul style="list-style-type: none">– elementary operations within the process of production of the products mentioned, realized by a sub-contractor on materials owned by the requester or for the account of this requester. These operations are paid for the work they represent and can include the provision of the raw materials needed for this work. | | <p>This subcategory does not include:</p> <ul style="list-style-type: none">– goods of the same range, fully produced by a sub-contractor for the account of a third party. |
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| 5 | 21.12 | Paper and paperboard | | | | |
| 6 | 21.12.1 | Newsprint, handmade paper and other uncoated paper or paperboard for graphic purposes | | | | |
| 7 | 21.12.11 | Newsprint, in rolls or sheets | | | | |
| 7 | 21.12.12 | Handmade paper and paperboard | | | | |
| 7 | 21.12.13 | Paper and paperboard used as a base for photo-sensitive, heat-sensitive or electro-sensitive paper; carbonizing base paper; wallpaper base | | | | |
| 7 | 21.12.14 | Other paper and paperboard | | | | |
| 6 | 21.12.2 | Toilet tissue stock, uncoated kraftliner and other uncoated paper and paperboard | | | | |
| 7 | 21.12.21 | Toilet or facial tissue stock, towel or napkin stock, cellulose wadding and webs of cellulose fibres | | | | |
| 7 | 21.12.22 | Kraftliner, uncoated | | | | |

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| 7 | 21.12.23 | Other uncoated kraft paper and paperboard; sack kraft paper, creped or crinkled | | | | |
| 7 | 21.12.24 | Fluting paper (corrugated medium), in rolls or sheets | | | | |
| 7 | 21.12.25 | Testliner paper and paperboard, uncoated | | | | |
| 6 | 21.12.3 | Other uncoated paper and paperboard; cigarette paper not cut to size | | | | |
| 7 | 21.12.30 | Other uncoated paper and paperboard; cigarette paper not cut to size | | | | |
| 6 | 21.12.4 | Vegetable parchment, greaseproof papers, tracing papers and glassine and other glazed transparent or translucent papers | | | | |
| 7 | 21.12.40 | Vegetable parchment, greaseproof papers, tracing papers and glassine and other glazed transparent or translucent papers | | | | |

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| 6 | 21.12.5 | Processed paper and paperboard | | | | |
| 7 | 21.12.51 | Composite paper and paperboard, not surface-coated or impregnated | | | | |
| 7 | 21.12.52 | Paper and paperboard, creped, crinkled, embossed or perforated, n.e.c. | | | | |
| 7 | 21.12.53 | Paper and paperboard of a kind used for writing, printing or other graphic purposes, coated with kaolin or with other inorganic substances | | | | |
| 7 | 21.12.54 | Kraft paper and paperboard (other than that of a kind used for writing, printing or other graphic purposes), coated with kaolin or with other inorganic substances | | | | |
| 7 | 21.12.55 | Carbon paper, self-copy paper and other copying or transfer paper, in rolls or sheets | | | | |

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| 7 | 21.12.56 | Paper, paperboard, cellulose wadding and webs of cellulose fibres, coated, impregnated, covered, surface coloured or printed, in rolls or sheets | | | | |
| 7 | 21.12.57 | Other paper, paperboard, cellulose wadding and webs of soft cellulose | | | | |
| 6 | 21.12.6 | Waste and scrap of paper and paperboard | | | | |
| 7 | 21.12.60 | Waste and scrap of paper and paperboard | | | | |
| 6 | 21.12.9 | Industrial services for paper and paperboard | | | | |
| 7 | 21.12.99 | Industrial services for paper and paperboard | | This subcategory includes: | | This subcategory does not include: |

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| | | | | <p>– elementary operations within the process of production of the products mentioned, realized by a sub-contractor on materials owned by the requester or for the account of this requester. These operations are paid for the work they represent and can include the provision of the raw materials needed for this work.</p> | <p>– goods of the same range, fully produced by a sub-contractor for the account of a third party.</p> |
| 4 | 21.2 | Articles of paper and paperboard | | | |

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| 5 | 21.21 | Corrugated paper and paperboard and containers of paper and paperboard | | | | |
| 6 | 21.21.1 | Corrugated paper and paperboard and containers of paper and paperboard | | | | |
| 7 | 21.21.11 | Corrugated paper and paperboard, in rolls or sheets | | | | |
| 7 | 21.21.12 | Sacks and bags of paper | | | | |
| 7 | 21.21.13 | Cartons, boxes and cases, of corrugated paper or paperboard | | | | |
| 7 | 21.21.14 | Folding cartons, boxes and cases, of non-corrugated paper or paperboard | | | | |
| 7 | 21.21.15 | Box files, letter trays, storage boxes and similar articles of a kind used in offices, shops or the like, of paper | | | | |
| 5 | 21.22 | Household and toilet paper and paper products | | | | |

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| 6 | 21.22.1 | Household and toilet paper and paper products | | | | |
| 7 | 21.22.11 | Toilet paper, handkerchiefs, cleansing or facial tissues and towels, tablecloths and serviettes, of paper | | | | |
| 7 | 21.22.12 | Sanitary or hospital articles, articles of apparel and clothing accessories, of paper pulp, paper, cellulose wadding or webs of cellulose fibres | | | | |
| 7 | 21.22.13 | Trays, dishes, plates and cups and the like, of paper or paperboard | | | | |
| 5 | 21.23 | Paper stationery | | | | |
| 6 | 21.23.1 | Paper stationery | | | | |
| 7 | 21.23.11 | Carbon paper, self-copy paper and other copying or transfer papers; duplicator stencil and offset plates of paper; gummed or adhesive paper | | | | |

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| 7 | 21.23.12 | Envelopes, letter cards, plain postcards of paper or paperboard; boxes containing paper stationery | | | | |
| 7 | 21.23.13 | Other paper and paperboard, of a kind used for writing or printing or other graphic purposes, printed, embossed or perforated | | | | |
| 5 | 21.24 | Wallpaper | | | | |
| 6 | 21.24.1 | Wallpaper | | | | |
| 7 | 21.24.11 | Wallpaper and similar wall coverings; window transparencies of paper | | | | |
| 5 | 21.25 | Other articles of paper and paperboard n.e.c. | | | | |
| 6 | 21.25.1 | Other articles of paper and paperboard n.e.c. | | | | |
| 7 | 21.25.11 | Floor coverings on a base of paper or paperboard | | | | |
| 7 | 21.25.12 | Labels of paper or paperboard | | | | |
| 7 | 21.25.13 | Filter blocks, slabs and plates, of paper pulp | | | | |

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| 7 | 21.25.14 | Cigarette paper; bobbins, spools, cops and similar supports; filter paper and paperboard; other articles of paper and paperboard n.e.c. | | | | |
| 3 | 22 | PRINTED MATTER AND RECORDED MEDIA | | | | |
| 4 | 22.1 | Books, newspapers and other printed matter and recorded media | | | | |
| 5 | 22.11 | Books | | | | |
| 6 | 22.11.1 | Printed books, brochures, leaflets and similar printed matter, in single sheets | | | | |
| 7 | 22.11.10 | Printed books, brochures, leaflets and similar printed matter, in single sheets | | | | |
| 6 | 22.11.2 | Books, brochures, leaflets and the like; printed and electronic | | | | |
| 7 | 22.11.21 | Books, brochures, leaflets and the like; printed | | | | |
| 7 | 22.11.22 | Books, brochures, leaflets and the like; electronic | | | | |

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| 6 | 22.11.3 | Dictionaries and encyclopaedia, and serial instalments thereof; printed and electronic | | | | |
| 7 | 22.11.31 | Dictionaries and encyclopaedia, and serial instalments thereof; printed | | | | |
| 6 | 22.11.4 | Atlases and other books of maps or charts; printed and electronic | | | | |
| 7 | 22.11.41 | Atlases and other books of maps or charts; printed | | | | |
| 7 | 22.11.42 | Atlases and other books of maps or charts; electronic | | | | |
| 6 | 22.11.5 | Maps and hydrographic or similar charts, globes, other than in book form; printed and electronic | | | | |
| 7 | 22.11.51 | Maps and hydrographic or similar charts, globes, other than in book form; printed | | | | |
| 5 | 22.12 | Newspapers, journals and periodicals, appearing at least four times a week | | | | |

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| 6 | 22.12.1 | Newspapers, journals and periodicals, appearing at least four times a week; printed and electronic | | | | |
| 7 | 22.12.11 | Newspapers, journals and periodicals, appearing at least four times a week; printed | | | | |
| 5 | 22.13 | Newspapers, journals and periodicals, appearing less than four times a week | | | | |
| 6 | 22.13.1 | Newspapers, journals and periodicals, appearing less than four times a week; printed and electronic | | | | |
| 7 | 22.13.11 | Newspapers, journals and periodicals, appearing less than four times a week; printed | | | | |
| 6 | 22.14.2 | Printed music; printed and electronic | | | | |
| 7 | 22.14.21 | Printed music; printed | | | | |
| 5 | 22.15 | Postcards, greeting cards, pictures and similar matter | | | | |

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| 6 | 22.15.1 | Postcards, greeting cards, pictures and other matter; printed and electronic | | | | |
| 7 | 22.15.11 | Illustrated postcards; cards bearing greetings and the like; printed | | | | |
| 7 | 22.15.12 | Illustrated postcards; cards bearing greetings and the like; electronic | | | | |
| 7 | 22.15.13 | Pictures, designs and photographs; printed | | | | |
| 7 | 22.15.14 | Pictures, designs and photographs; electronic | | | | |
| 7 | 22.15.15 | Transfers (decalcomanias); calendars; printed | | | | |
| 6 | 22.22.1 | Stamps; cheque forms; banknotes, stock certificates; trade advertising material, commercial catalogues and the like; other printed matter n.e.c. | | | | |
| 7 | 22.22.11 | New stamps; stamp-impressed paper; cheque forms; banknotes and the like | | | | |

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| 7 | 22.22.12 | Trade advertising material, commercial catalogues and the like | | | | |
| 7 | 22.22.13 | Other printed matter n.e.c. | | | | |
| 6 | 22.22.2 | Registers, account books, binders, forms and other articles of stationery, of paper or paperboard | | | | |
| 7 | 22.22.20 | Registers, account books, binders, forms and other articles of stationery, of paper or paperboard | | | | |
| 3 | 31 | ELECTRICAL MACHINERY AND APPARATUS N.E.C. | | | | |
| 4 | 36.1 | Furniture | | | | |
| 7 | 36.12.12 | Wooden furniture of a kind used in offices | | | | |
| 7 | 36.12.13 | Wooden furniture for shops | | | | |
| 7 | 36.14.12 | Wooden furniture of a kind used in the bedroom, in the dining room and in the living room | | | | |
| 7 | 36.14.13 | Wooden furniture n.e.c. | | | | |

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| 3 | 40 | ELECTRICAL ENERGY, GAS, STEAM AND HOT WATER | | | | |
| 5 | 51.12 | Sales on a fee or contract basis of fuels, ores, metals and industrial chemicals | | | | |
| 5 | 51.13 | Sales on a fee or contract basis of timber and building materials | | | | |
| 6 | 51.13.1 | Sales on a fee or contract basis of timber and building materials | | | | |
| 7 | 51.13.11 | Sales on a fee or contract basis of timber and products of timber | | | | |
| 5 | 51.22 | Wholesale trade services of flowers and plants | | | | |
| 7 | 51.47.13 | Wholesale trade services of wickerwork, cork goods, cooper's ware and other wooden ware | | This subcategory includes: | | |
| 6 | 51.47.2 | Wholesale trade services of paper and paperboard, books, magazines and stationery | | | | |

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| 5 | 51.53 | Wholesale trade services of wood, construction materials and sanitary equipment | | | | |
| 7 | 51.53.12 | Wholesale trade services of products of primary processing of wood | | | | |
| 7 | 51.56.11 | Wholesale trade services of paper and paperboard | | This subcategory includes: | | |
| 7 | 51.81.11 | Wholesale trade services of machine tools for working wood | | | | This subcategory does not include: |
| 7 | 51.88.12 | Wholesale trade services of agricultural and forestry machinery (excluding tractors) and of accessories and implements | | | | |
| 3 | 52 | RETAIL TRADE SERVICES, EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES; REPAIR SERVICES OF PERSONAL AND HOUSEHOLD GOODS | | | | |
| 3 | 70 | REAL ESTATE SERVICES | | | | |
| 3 | 71 | RENTING SERVICES OF MACHINERY AND | | | | This division does not |

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| 3 | 73 | RESEARCH AND DEVELOPMENT SERVICES | | | | |
| 3 | 74 | OTHER BUSINESS SERVICES | | | | |
| 4 | 74.2 | Architectural, engineering and related technical consultancy services | | | | |
| 6 | 74.20.3 | Engineering services | | | | |
| 4 | 74.3 | Technical testing and analysis services | | | | |
| 4 | 74.5 | Labour recruitment and provision of personnel services | | | | |
| 4 | 74.7 | Industrial cleaning | | | | |
| 5 | 74.82 | Packaging services | | | | |
| 7 | 74.87.13 | Specialty design services | | This subcategory includes: | | This subcategory does not |
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| | | | | – public administrative services related to : | – support and information services for all the above-mentioned affairs | |
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| 4 | 80.2 | Secondary education services | | | | |
| 5 | 80.22 | Technical and vocational secondary education services | | | | |
| 4 | 80.3 | Higher education services | | | | |
| 6 | 90.02.2 | Municipal waste | | | | |
| 5 | 91.12 | Services furnished by professional organizations | | | | |
| 7 | 92.53.12 | Nature reserves services, including wildlife preservation services | | This subcategory includes: | | |

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