


**EFORWOOD**

 Sustainability Impact Assessment  
of the Forestry - Wood Chain


Project no. 518128

EFORWOOD

Tools for Sustainability Impact Assessment

Instrument: IP

Thematic Priority: 6.3 Global Change and Ecosystems

**Deliverable D4.0.3**  
**Annual Management Report (12-24 months) for Module 4**

Due date of deliverable: Month 24  
Actual submission date: Month 28

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Duration: 4 years

Organisation name of lead contractor for this deliverable: KCPK

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Dissemination Level		
<b>PU</b>	Public	X
<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	

**Annual report 24 months Module 4**  
1<sup>st</sup> Period: November 1, 2006 - October 31, 2007

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## **1 Module objectives and major achievements during the reporting period (12-24)**

### **The overall objectives of Module 4 are to:**

- To provide required data in terms of Indicators and supporting information for ToSIA (for assessing selected reference cases and scenarios) and the GTM model.
- To provide methodologies for selection of key indicators, for benchmarking standards, industrial improvement options and to provide partial chain models
- To synthesise results of partial SIAs within the module boundaries, i.e. processing and manufacturing part of the FWC and provide the results in the form of response functions to ToSIA.
- To analyse scenarios of the major developments in forest product industries and markets within the next 10 to 20 years.
- To maintain industrial and Commission participation in research processes to secure acceptance, confidence and future use of the data used and methodologies developed.

### **Key objectives/milestones for this reporting period are:**

- Case studies defined
- Review of existing tools; identification of need for new tools or refinement of existing ones.
- Overview of conditions and consequent timing of technological developments in processes relevant to case studies
- Data and support for EFI-GTM modelling (starting month 1)
- First report on industry's competitiveness and its impact on the industry dynamics
- First report on the interdependence between the agents within the FWC
- Composition of Module specific scenarios

## **2 Summary of Module work in month 12-24:**

In **Work Package 4.1** data collection is the main task. Work of Module 4 in this field included the definition and description of manufacturing processes in the single chains to be studied, followed by the actual data collection of the various processes. Module 4 was also responsible for the energy indicator group, which composed a data collection protocol on energy. Additionally, Module 4 representatives participated in other focus groups, for example, on waste indicators. As data collection protocol coordinator, Module 4 is also represented in the Task Force on Indicators. Module 4 is also represented in the three case studies that are currently under development. Furthermore, Module 4 has developed the accepted method to deal with the data collection in the project. The strategy taken in M4 is to work with Model Processes and to divide Europe into four regions.

In **Work Package 4.2** the work focuses on tools and technologies. In the reporting period, existing tools for assessing the sustainability of FWC have been reviewed and reported. It became clear that there are tools available to assess environmental and economic aspects, but most of them give only niche answers. To have an overall comprehensive answer to questions regarding sustainability of FWC might not be possible to obtain without jeopardising quality of results and any subsequent proposal or suggestions. Assessing social aspects is the most

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problematical area as criteria tend to be subjective and not specifically related to FWC. Furthermore, within this work package, technology trends have been reviewed for pulp and paper, wood products and bio-energy and the findings have been reported. These allow to identify the timings and conditions which will affect their future developments and uptake by the industry. The work on new technologies and the conditions and timing for large scale implementation of these new technologies will be needed to identify future technology levels (both in the reference futures and in the scenarios). Also, within this work package, background of bench marking practice and options have been explored and reported, including tools for analysing multiple factors of manufacturing (based on the paper industry); tools for determining the most economic cutting procedures (based on the sawmilling industry); and a comparison of areas for improvement in environmental impact in three exemplar timber frame manufactures processes has been shown.

In **Work Package 4.3**, specific data and support in refining the EFI-GTM model has been provided, covering issues such as expected economic and societal changes as well as other factors driving the market and demand development of forest products in Europe; as well as, the dependence of the demand for forest products on economic and societal changes, and current forest industry production and capacity by product and country in Europe. Finally, this work package studied and reported on demand and supply projections of forest products by country in Europe taking into consideration of known industrial investment projects. Furthermore, this work package has provided a first report on the industry's competitiveness within Europe by main product and it defined production cost structures of forest industry products by country and region (to be used as input in WP1.3), taking into account the economic indicator data to be provided from WP 4.1, and assessed their impact on the industry dynamics. Moreover, this workpackage has analysed, in its first report, the interdependence between the agents within the FWC by defining the degree of vertical and horizontal integration in the industry, and an assessment on how this integration affects on the industry dynamics. All 'first' reports will be completed later on during the EFORWOOD project to ensure coherence while taking intermediate results into consideration. WP 4.3 has also taken part in the M4 internal work on definition of inter and intra module flows. In addition, WP 4.3 is exploring the possibilities to fit the Module 4 work within the frame of the "EFI-GTM world" and has continued with the development of the value added tool.

Work in Module 4 has had some serious delay, due to staff problems at CEI-Bois (WP leader of WP 4.4.) However, the partners in WP4.4 have reported several times informally the industrial views towards the progress in the project and the approach chosen in the development of the ToSIA. Formal reporting is not to be expected before the end of the year. Module 4 is also represented in the scenario taskforce, where they work on EFORWOOD wide and module specific scenarios.

In this reporting period, Module 4 has also taken care of the organisation of the EFORWOOD week in May 2007 in Zvolen.

### 3 Summary of WP progress and achievement in month 12-24

Work Package	Summary
WP 4.0	- Representation of M4 in the IP Board.
	- Coordinating M4 activities.

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	<ul style="list-style-type: none"> <li>- Coordinating linkages with other Modules (in particular with M1, M3 and M5) and coordinating interaction with other modules per value chain: Pulp and Paper (STFI-Packforsk), Bio-energy (VTT), Wood Products (BRE).</li> <li>- Ensuring that objectives of M4 are reached and activities completed in accordance with time schedule and budget (Cooperation between Module leader and Work Package leaders).</li> <li>- Organisation of the EFORWOOD week in May 2007 in Zvolen.</li> </ul>
WP 4.1	<ul style="list-style-type: none"> <li>- The processes for each Single FWC have been defined and described.</li> <li>- Data collection for all M4 processes in the single FWCs.</li> <li>- The collected data have been reported into the Database client.</li> <li>- A strategy taken in M4 is to work with Model Processes and to divide Europe into 4 regions. Within the regions the technology level is assumed to be the same, so in the case that country specific data can not be found assumptions can be made using data for processes in the same region.</li> </ul>
WP 4.2	<ul style="list-style-type: none"> <li>- Existing tools for assessing the sustainability of FWC have been reviewed and reported.</li> <li>- Technology trends have been reviewed for pulp and paper, wood products and bio-energy. The findings have been reported and form the basis for identifying the timing and conditions which will affect their further development and uptake by the industry.</li> <li>- Benchmarking theory and options have been explored and reported.</li> </ul>
WP 4.3	<ul style="list-style-type: none"> <li>- Specific data and support in refining the EFI-GTM model is provided, covering issues such as expected economic and societal changes as well as other factors driving the market/demand development of forest products in Europe, etc.</li> <li>- First report on the analysis of the industry's competitiveness between the European countries by main product and a definition of production cost structures of forest industry products by country/region (to be used as input in WP1.3) has been provided.</li> <li>- First report on the interdependence between the agents within the FWC, by defining the degree of vertical and horizontal integration in the industry, is provided and it has been assessed how this integration affects on the industry dynamics.</li> <li>- WP 4.3 has also taken part in the M4 internal work on definition of inter and intra module flows. In addition, WP 4.3 tries to fit the Module 4 work to the "EFI-GTM world" and has continued with the development of the value added tool.</li> </ul>

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WP 4.4	<ul style="list-style-type: none"> <li>- Due to a personnel problems Cei-Bois did not performed the tasks as allocated in this WP despite numerous reminders of the Module leader. The coordinator accepted a undefined delay for the deliverables of this WP.</li> <li>- However the partners in WP4.4 have reported several times, so far informally, the industrial views towards the progress in the project and the approach chosen in the development of the ToSIA. Formal reporting is to be expected by the end of the year.</li> <li>- The work as allocated for Cei-Bois and CEPI is in the process of being redistributed amongst other partners in the Module and/or project.</li> </ul>
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### Appendix 1: Periodic Activity Report

WP leader	Arie Hooimeijer	WP number	4.0
Date	01-10-07		
<b>Work package objectives</b> , starting point of work at beginning of reporting period.  1: To ensure that the objectives of M4 are reached and activities completed in accordance with time schedule and budget  2: To coordinate the linkages with the IP management and other Modules  3: Organisation of the EFORWOOD week in May 2007			
<b>Progress towards objectives</b> , tasks worked on, achievements made with reference to planned objectives, contractors involved.  All formal responsibilities have been taken and preformed as agreed.  - Representation of M4 in the IP Board.  - Coordinating M4 activities  - Coordinating linkages with other Modules (in particular with M1, M3 and M5)  - Coordinating interaction with other modules per value chain: Pulp and Paper (STFI-Packforsk), Bio-enery (VTT), Wood Products (BRE).  - Ensuring that objectives of M4 are reached and activities completed in accordance with time schedule and budget (Cooperation between Module leader and Work Package leaders).  - Organisation of the EFORWOOD week in May 2007 in Zvolen.  - Furthermore, we organised Module 4 teleconferences every 1 or 2 months. Representatives of other Modules (1, 3 and 5) where many times invited and represented.			
<b>Deviations from work-programme (if any),</b>			

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- new module 4 leader.

WP leader	Anna von Schenck	WP number	4.1
Date	070925		
<b>Work package objectives</b> , starting point of work at beginning of reporting period.			
<p>The main task of WP4.1 is Data collection. At the end of the last reporting period the test chains were defined and data collected as far as possible. During this reporting period further work with the test chains, now called Single FWC has been going on. The M4 processes for each Single FWC have been described. A strategy taken in M4 is to work with Model Processes and to divide Europe into 4 regions. This is necessary to limit the amount of data that has to be collected for ToSIA. Within the regions the technology level is assumed to be the same, so in the case that country specific data can not be find assumptions can be made using data for processes in the same region.</p> <p>The collected data have been reported into the Database client.</p>			
<b>Progress towards objectives</b> , tasks worked on, achievements made with reference to planned objectives, contractors involved.			
<p>In M4 we are working with 3 value chains; Fibre, Solid wood and Bioenergy. However, Bioenergy might not be a separate value chain in the further work since it is more a question of internal flows, by-products within M4.</p> <p>The products for the Fibre chain has been selected to be (covering 60-80% of the European market):</p> <ul style="list-style-type: none"><li>• Integrated Newsprint</li><li>• Wood-containing Paper</li><li>• Wood Free Paper</li><li>• Containerboard</li><li>• Cartonboard</li><li>• Bleached Chemical Pulp</li></ul> <p>The products for the solid wood chain is (covering 60-80% of the European market):</p> <ul style="list-style-type: none"><li>• Saw Milling</li><li>• Wood-based Panels</li><li>• Building Components</li><li>• Furniture</li></ul> <p>The 4 regions defined are:</p> <p><b>Group 1:</b> Central Europe (Austria, Belgium, Denmark, France, Germany, Ireland, Netherlands, Switzerland, United Kingdom)</p> <p><b>Group 2:</b> Southern Europe (Spain, Italy, Portugal)</p> <p><b>Group 3:</b> East Europe (Czech Republic, Hungary, Poland, Romania, Bulgaria, Slovak</p>			

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Republic)  
**Group 4:** Nordic countries (Finland, Norway, Sweden)

**Deviations from work-programme (if any),** corrective actions taken, nature and reason for problem, contractors involved.

The work with defining the manufacturing processes in the case studies is not fully finalised since more information is needed from the other Modules but it is ongoing in the right direction.

“4.1.7 Report describing Manufacturing Processes in the Case Studies” due to month 24 will be delivered in time but might have to be complimented later when the Case studies are fully defined.

<b>WP leader</b>	<b>BRE</b>	<b>WP number</b>	<b>4.2</b>
<b>Date</b>	<b>14-10-07</b>		
<p><b>Work package objectives,</b></p> <p>Tools for selecting key performance indicators had been identified. The work for the current period is to;</p> <p>Identify developments in technology within the manufacturing processes.</p> <p>Benchmark options in the manufacturing FWC across Europe and within regions</p> <p>Identify the timing and conditions driving technological developments in processes relevant to the case studies.</p>			
<p><b>Progress towards objectives</b></p> <p>Existing tools for assessing the sustainability of FWC have been reviewed and reported; range exist to assess environmental and economic aspects. The plethora of tools may also be confusing the end user’s market as each gives a niche answer. It may be the an overall comprehensive answer to questions regarding sustainability is not possible to obtain without jeopardising unambiguous quality results. Assessing social aspects is more problematical as criteria tend to be more subjective and not specifically related to FWC. This field is developing fast but, at this stage, there are not agreed approaches to questions and issues surrounding qualitative and quantitative data. Multitude of possible options can be obtain and this situation seems to be adequate for many scenarios.</p> <p>Technology trends have been reviewed for pulp and paper, wood products and bio-energy. No consideration of the furniture industry was possible as the CEI-Bois was unable to provide any input. Also, collaboration was sought with AIDIMA, another partner in EFORWOOD in M5, who is known to have a good knowledge of the furniture industry and has been promoting and encouraging all partners to work on furniture issues. However, this has not as yet been successful. The findings have been reported and form the basis for identifying the timing and conditions which will affect their further development and uptake by the industry. This work is currently underway and may be incomplete or delayed.</p> <p>Bench marking theory and options have been explored and reported, including tools for analysis of multiple factors (based on the paper industry) and tools for determining the most economic cutting procedures (based on the sawmilling industry);and a comparison of areas for improvement in environmental impact in 3 exemplar timber frame manufactures</p>			



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processes has been shown.

### Deviations from work programme (if any)

The work programme lacks consideration of the furniture industry, this has resulted from problems with staffing at CEI-Bois. The partners within M4 are considering if they can cover the work area of this organisation in this and other work packages.

The furniture industry will continue to be problematical as data collection and interpretation issues for furniture have been experienced in work package 4.1

WP leader	Pia Nilsson	WP number	4.3
Date	07-10-07		
<b>Work package objectives for months 13-24</b> , starting point of work at beginning of reporting period			
1) Provide specific data and support in refining the EFI-GTM model in WP 1.3 in the manufacturing, processing and market parts of the FWC chain (main partners JPC and VTT (bio-energy))			
2) Carry out complementary, more detailed analysis of certain key aspects of the industry dynamics (e.g. competition and competitiveness) (main partners JPC and KCPK, input from other partners)			
<b>Progress towards objectives months 13-24</b> , tasks worked on, achievements made with reference to planned objectives, contractors involved.			
1) Providing specific data and support in refining the EFI-GTM model covering issues such as expected economic and societal changes as well as other factors driving the market/demand development of forest products in Europe, the dependence of the demand of forest products on economic and societal changes, current forest industry production/capacity by product and country in Europe, and demand and supply projections of forest products by country in Europe taking into consideration of known industrial investment projects			
=> Data and support for EFI-GTM modelling: done by Poyry and VTT(bioenergy), continues as planned -> Summary report of the first EFI-GTM task, PD 4.3.1			
2) Analyze the industry's competitiveness between the European countries by main product and define production cost structures of forest industry products by country/region (to be used as input in WP1.3), taking into account the economic indicator data to be provided from WP 4.1, and assess their impact on the industry dynamics			
Analyze the interdependence between the agents within the FWC by defining the degree of vertical and horizontal integration in the industry, and assess how this integration affects on the industry dynamics			
=> First reports on “The industry’s competitiveness and its impact on the industry dynamics” and on “The interdependence between the agents within the FWC” (Main contribution from Poyry and KCPK) and “Trade projections forest products by country and			

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product” . The first reports will be completed later on during the EFORWOOD project.

3) WP 4.3 has also taken part in the M4 internal work on definition of inter and intra module flows (Poyry together with the STFI, KCL, VTT). In addition, WP 4.3 tries to fit the Module 4 work to the “EFI-GTM world” and has continued with the development of the value added tool (Poyry).

**Deviations from work-programme (if any),** corrective actions taken, nature and reason for problem, contractors involved.

None.

<b>WP leader</b>	<b>Andreas Kleinschmidt Von Lengefeldt</b>	<b>WP number</b>	<b>4.4</b>
<b>Date</b>			
<b>Work package objectives for months 13-24</b> , starting point of work at beginning of reporting period			
<b>Progress towards objectives months 13-24</b> , tasks worked on, achievements made with reference to planned objectives, contractors involved.  Due to a total lack of staff Cei-Bois hasn't performed the tasks as foreseen in this WP despite various reminders of the Module leader. The coordinator accepted a undefined delay for the deliverables of this WP.  However the partners in WP4.4 have reported several times informally the industrial views towards the progress in the project and the approach chosen in the development of the ToSIA. Formal reporting is not to be expected before the end of the year.			
<b>Deviations from work-programme (if any)</b> , corrective actions taken, nature and reason for problem, contractors involved.  Actually the work as foreseen for Cei-Bois and CEPI is tried to be redistributed over other partners in the Module / project.			

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### Appendix 2: List of deliverables

List all deliverables, giving date of submission and any proposed revision to plans.

Del No.	Deliverable name	WP No.	Due date	Actual/Forecast delivery date	Estimated indicative person-months *)	Used indicative person-months *)	Lead contractor
D4.0.1	Annual management report	WP 4.0	01-11-06	06-12-06			KCPK
PD4.0.2	Intermediate management report.	WP 4.0	01-05-07	01-0-07			KCPK
D 4.0.3	Annual management report	WP 4.0	01-11-07	01-11-07			KCPK
PD4.0.4	Physical organisation of the EFORWOOD week in May 7-11 2007	WP 4.0	7 t/m11-05-07	7 t/m11-05-07			TUZVO

Del No.	Deliverable name	WP No.	Due date	Actual/Forecast delivery date	Estimated indicative person-months *)	Used indicative person-months *)	Lead contractor
PD 4.1.7	Report describing the Manufacturing Processes in the Case Studies	WP4.1	071031	071031			STFI-PF

Del No.	Deliverable name	WP No.	Due date	Actual/Forecast delivery date	Estimated indicative person-months *)	Used indicative person-months *)	Lead contractor
D.4.2.2	Report on review of existing tools	4.2	Month 15	Month 16			BRE

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PD 4.2.3	Report on review of technology development trends within various processes	4.2	Month 15	Month 16			KCL
PD 4.2.4	Benchmarking options for companies/regions/national/European level across the manufacturing FWC and throughout Europe	4.2	Month 18	Month 22			Poyry
PD 4.2.5	Report on conditions and consequent timing of technological developments in processes relevant to case studies	4.2	Month 24	Not yet complete (Delayed due to the CEI Bois contribution on behalf of the manufacturing industry)			BRE

List all deliverables, giving date of submission and any proposed revision to plans.

Del No.	Deliverable name	WP No.	Due date	Actual/Forecast delivery date	Estimated indicative person-months *)	Used indicative person-months *)	Lead contractor
PD 4.3.1	Data and support for EFI-GTM modelling	4.3	18	18 Note: report PD 4.3.5			Poyry
PD 4.3.2	First report on the industry's competitiveness and its impact on the industry dynamics	4.3	18	18			Poyry

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PD 4.3.3	First report on the interdependence between the agents within the FWC	4.3	18	18			Poyry
PD 4.3.4	Trade projections forest products by country and product	4.3	18	18			Poyry
PD 4.3.5	Summary report of the first EFI-GTM task	4.3	22	22			Poyry
PD 4.3.6	Support for EFI-GTM modelling	4.3	19 - 30 ->	-			Poyry

Del No.	Deliverable name	WP No.	Due date	Actual/Forecast delivery date	Estimated indicative person-months *)	Used indicative person-months *)	Lead contractor
D 4.4.2	Report on M4 modelling approach evaluation		15	>26			CEI-Bois
PD 4.4.3	Report on module specific scenarios		20	>26			CEI-Bois
PD 4.4.4	Feedback/confirmation of case studies based on input via PD 4.1.7		24	>26			CEI-Bois

\*) if available

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**Appendix 3: List of milestones**

<b>Milestone No.</b>	<b>Milestone name</b>	<b>Work package No.</b>	<b>Date due</b>	<b>Actual/ Forecast delivery date</b>	<b>Lead contractor</b>
M4.0.1	Provide a common framework and methodological approach for the module activities	WP 4.0	Continued	Continued	KCPK
M4.0.2	Ensure that the module objectives are fulfilled and deliverables provided within time schedule,	WP 4.0	Continued	Continued	KCPK
M4.0.3	Manage the interfaces and information flow with the other modules including IP Management (M0)	WP 4.0	Continued	Continued	KCPK
M4.0.4	Synthesize results from individual Work Packages, transfer the results and deliverables of the Module to the IP Management (M0), dissemination (M6) and other Modules as needed.	WP 4.0	Continued	Continued	KCPK
M4.0.5	Liaise with stakeholders and end-users in relation with the activities of M0 and M6.	WP 4.0	Continued	Continued	KCPK

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M4.0.6	Ensure the quality of the results by taking advise from the Expert Advisory Panel (EAP) (see section 7) and IP “quality control manager”	WP 4.0	Continued	Continued	KCPK
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<b>Milestone No.</b>	<b>Milestone name</b>	<b>Workpackage No.</b>	<b>Date due</b>	<b>Actual/Forecast delivery date</b>	<b>Lead contractor</b>
M4.1.1	Case studies defined and related data for indicators collected	WP 4.1	071031	071031	STFI-PF
M4.1.2	EU cases defined	WP 4.1	080430	080430	STFI-PF

<b>Milestone No.</b>	<b>Milestone name</b>	<b>Workpackage No.</b>	<b>Date due</b>	<b>Actual/Forecast delivery date</b>	<b>Lead contractor</b>
M4.2.2	Review of existing tools; identification of need for new tools or refinement of existing ones	4.2	No due date in DoW	Month 16	BRE
M4.2.3	Overview of technology development trends	4.2	Month 15	Month 16	KCL
M4.2.4	Overview of conditions and consequent timing of technological developments in processes relevant to case studies	4.2	Month 24	See above for PD 4.2.5	BRE

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<b>Milestone No.</b>	<b>Milestone name</b>	<b>Workpackage No.</b>	<b>Date due</b>	<b>Actual/Forecast delivery date</b>	<b>Lead contractor</b>
M4.3.1	Data and support for EFI-GTM modelling	4.3	18, 30, continues	18, continues	Poyry
M4.3.2	Industry's competitiveness and its impact on the industry dynamics	4.3	18	18, continues	Poyry
M4.3.3	Interdependence between the agents within the FWC	4.3	18	18, continues	Poyry
M4.3.4	Conceptual framework for the value added model	4.3	30	30	Poyry

<b>Milestone No.</b>	<b>Milestone name</b>	<b>Workpackage No.</b>	<b>Date due</b>	<b>Actual/Forecast delivery date</b>	<b>Lead contractor</b>
M4.4.1	Composition of module specific scenarios	WP 4.4	M 20	M28	CEI-Bois



## **Appendix 4: Justification of major cost items and resources**

The amount of person months indicated are the amount of person months for the total 13-30 months as described in the DoW. The actual amount of person months worked in this reporting period (13-25 months) is not indicated here.

### **WP 4.0**

**KCPK :** Person month (13-30): 2

KCPK has been the Module leader of Module 4 and Work Package leader of WP 4.0.

Work done in this work package includes all coordinating activities:

- Representation of M4 in the IP Board, see the report of the IP-Board for more details.
- All necessary management activities on behalf of M4 towards other parts of the project.
- Coordinating activities within Module 4.
- Coordinating linkages with other Modules (in particular with M1, M3 and M5)
- Ensuring that objectives of M4 are reached and activities completed in accordance with time schedule and budget (Cooperation between Module leader and Work Package leaders).
- Organization/coordination of Module 4 teleconferences, minutes and reporting

**STFI-PF:** Person month (13-30): 0.5

STFI-PF has been the work package leader of 4.1 and the responsible partner for the coordination on fibres/pulps and paper. The reporting from WP 4.1 to the Annual report has been done. STFI-PF organized a M4 meeting in June for the partners in M4 working with the Fibre value chain.

**VTT:** Person month (13-30): 0.5

Preparing and coordinating cross module work within bio energy

Preparing a poster to EFORWOOD Conference, 1-2 October 2007, Brussels, Belgium  
“Integrated optimisation model for wood conversion chain”

Taking part in preparing and defining Baden Württemberg and Iberia case studies (bio energy).

Taking part in Bio energy 2007, 3rd International Bio energy Conference and Exhibition 3-6.9.2007 in Jyväskylä, Finland

Taking part in Eforwood week, May 2007 in Brussels, Belgium  
Taking part in Eforwood week October 2007 in Zvolen, Slovakia

15.1.2007 Meeting at KCL, Espoo  
22.3.2007 Efi HKI?

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15.8.2007 Meeting at KCL, Espoo  
28.8.2007 Meeting at Pöyry, Vantaa  
10.9.2007 Meeting at VTT, Espoo

**BRE:** Person month (13-30): 1

Preparing and coordinating cross module work within wood based product. Supporting M4 leader organisation in the wood based products stream. General management tasks & reporting.

Taking part in preparing and defining Baden Württemberg and Iberia case studies (wood based products).

Collaborating with M5 on the work for a poster to be presented at EFORWOOD Conference, 1-2 October 2007, Brussels, Belgium

Taking part in EFORWOOD week, May 2007 in Brussels, Belgium

**PÖYRY:** Person month (13-30): 0,3

Pöyry is the leader of WP 4.3.: the work done in WP 4.0 is associated with the Module 4's reporting of WP 4.3.

**TUZVO:** Person month (13-30): 0 man months + 2 permanent staff (For AC addition\* 2 man months Permanent staff\*)

Organising the EFORWOOD week held in May 2007, in Zvolen, Slovakia

**CEI-Bois:** Person month (13-30): 0,5



## WP 4.1

**KCPK:** Person month (13-30): 4

KCPK has been responsible for the data collection of social data of the pulp and paper products. Furthermore it has been responsible for model mill descriptions of the recovered based paper mills. KCPK is also coordinator of the energy group which has been responsible for the data collection protocol on the energy indicator. In its role as coordinator of the energy data collection protocol KCPK is also active in the Task Force on Indicators. KCPK is also active in the European FWC Taskforce.

**STFI-PF:** Person month (13-30): 7

STFI-PF has been project leader of this work package and a lot of efforts have been done to organize the work since the WP includes 9 partners and three different value chains, The Fibre value chain, the Solid wood value chain and the Bioenergy value chain. A report is going to be delivered according to the timetable in Month 24, "PD 4.1.7 Report describing the

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Manufacturing Processes in the Case studies”. A big part of the work has been to define the manufacturing processes for the 3 case studies; The Scandinavian case study, the Baden-Wuerttemberg case study and the Iberian case study. Especially to coordinate the inputs from the other modules. STFI-PF has also been the contact person from M4 towards the different task forces for the case studies. STFI-PF has been responsible for the organization of the data to be reported into the database client for ToSIA.

**KCL:** Person month (13-30): 7

Data collection to Single test chain “Iberian chain” (Helena Wessman, Tiina Pajula, Katri Behm) and Case studies of Baden-Wuerttemberg (KB, TP) and Scandinavian (TP). Indicator evaluation in Transport group (HW), Environmental group (KB) and Energy group (TP). Pulp mill technology description for PD 4.1.7 (HW).

**VTT:** Person month (13-30): 4

Preparation and writing a model mill solutions for solid wood and bioenergy chains in deliverable PD 4.1.7 Report describing the Manufacturing processes in the case studies. Taking part in preparation and writing a Process and manufacturing –solid wood in Deliverable PD 2.0.3 Report describing the Forest-based Case Study “Scandinavian regional case”.

Taking part in preparation of section “solid wood and wood-based products and bioenergy chains” in Deliverable D3.1.2 Key products of the forest-based industries and their demands on wood raw material properties.

Updating and submitting data for Test Chain (pellet process, Data Client).

**BRE:** Person month (13-30): 3

Research, collection, update of data submitted for M4 module for TOSIA (Data Client).

Contributing to feedback testing of the client’s tool. Preparation and collaboration on PD 4.1.7 Report describing the Manufacturing processes in the case studies.

Provision and coordination of wood based products stream input to describe manufacturing processes and develop model mills in consultation with partners in M3 and M5 (PD 4.1.7). Support and M4 contribution to M3 case studies regarding Baden chain in the context of material flow for wood based products.

Statistical information on Baden chain as well as flow of material based on manufacturing practices in Baden.

Commenting on reports and presentations in M4 & M3 as well as participating in work objectives and success rate in this WP.

**PÖYRY:** Person month (13-30): 3,4

- Work associated with the development of criteria and indicators for ToSIA, with a special emphasis on economic indicators and pulp and paper industry but commenting also in other sectors (solid wood and bioenergy) and areas (social and environmental).
- Paper industry related data collection for economic indicators for single chains and for all three regional cases and input to wood product related data collection for economic indicators.
- M4 internal work on e.g. developing type mills and definition of inter and intra module flows
- Participation in the work of “Social and Economic Indicators” work group

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- Participation in the work of the “Energy Indicators” work group

**TUZVO:** Person month (13-30): 2 man months +1 permanent staff (For AC addition\* 2 man months Permanent staff\*)

→ Development of criteria and indicators for sustainability impact assessment. Definition of the most relevant FWC chains. Collection of data.

**CEPI:** Person month (13-30): 1

28 February “Environmental Data Management Issue Group”

Full day discussion on industrial focus towards Environmental data, tools applying these data and the availability / quality of the data with 12 participants from industry and some additional participants representing other European industrial associations.

**CEI-Bois:** Person month (13-30): 2

## **WP 4.2**

**KCPK:** Person month (13-30): 3

KCPK has been responsible for the description of new technologies in the recovered paper based sector. It also contributed to PD 4.2.5 where it reflects on these new technologies in the recovered paper based industries; on their level of implementation, prerequisites for implementation and consequences of implementation. KCPK further delivered feedback to WP 4.2. reports.

**STFI-PF:** Person month (13-30): 1

STFI-PF has been commenting the reports and been involved in the discussions about the work content in this WP.

**KCL:** Person month (13-30): 5

PD4.2.3 coordination and editing (KB, HW, TP), contribution to D4.2.2 (HW, TP) and PD4.2.5 (KB). Participation and work in Eforwood weeks, module or group specific teleconferences, and module small group meetings.

**VTT:** Person month (13-30): 5

Taking part in preparation and writing of following deliverables (solid wood and bioenergy sections):

1. Deliverable D4.2.2 Report on Review of Existing Tools (WoodCIM and Bioenergy production evaluation model)
2. Deliverable PD4.2.3 Report on review of technology development trends within the various processes (sawmilling, plywood and bioenergy).

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3. Deliverable PD4.2.4 Benchmarking options for companies / regions / national / European level across the manufacturing FWC and throughout Europe.

4. Deliverable PD 4.2.5 Report on conditions and consequent timing of technological developments in processes relevant to case studies.

### **BRE:** Person month (13-30): 7

Overall co-ordination of this WP. Reports and other documents review, organisation and submission. Preparation and writing of following deliverables (wood based products sections):

Deliverable D4.2.2 Report on Review of Existing Tools

Collection and interpretation of the efficacy of the range of tools currently in use to assess sustainability in terms of environmental, economic and social aspects. Tools for assessing social aspects were found to be less quantitative than were those for environmental and economic aspects.

Deliverable PD4.2.3 Report on review of technology development trends within the various processes.

Contribution to review of new and developing technologies in wood manufacturing processes

Deliverable PD4.2.4 Benchmarking options for companies / regions / national / European level across the manufacturing FWC and throughout Europe.

Consideration of manufacturing processes in timber frame construction and options for improvement in processing to contribute to

Deliverable PD 4.2.5 Report on conditions and consequent timing of technological developments in processes relevant to case studies.

Contribution to and co-ordination of assessment of time scales and factors driving introduction/uptake of new technologies in different sized manufacturing firms

### **PÖYRY:** Person month (13-30): 1,3

- Commenting and working with the frame works and compilation of the “panel board” sections of
  - o *PD 4.2.3 Report on review of technology development trends within various processes (Month 15) and*
  - o *PD 4.2.5 Report on conditions and consequent timing of technological developments in processes relevant to case studies (Month 24)*
- Compilation of *PD4.2.4 Benchmarking options for companies / regions / national / European level across the manufacturing FWC and throughout Europe* together with BRE and VTT
- Following the other work in WP 4.2 and linking it to the work of WP 4.3.

### **TUZVO:** Person month (13-30): 0,5

Report on conditions and consequent timing of technological developments in processes relevant to case studies – other industries  
description of activities in this WP

### **CEPI:** Person month (13-30): 0,5

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**CEI-Bois:** Person month (13-30): 0,5

### WP 4.3

As planned, KCPK, VTT and Poyry have carried out the biggest part of the work in WP 4.3 in months 13-24. Other partners have (according to plan) reviewed the relative long PD reports and commented them.

**KCPK:** Person month (13-30): 2,7

KCPK has contributed to PD 4.3.2 (First report on the industry's competitiveness and its impact on industry dynamics) with a analyses of trends and drivers of change, in the recovered paper industry, focusing on packaging. In this report, it describes the main trends in the consumer demand for packaging products, trends in the availability and quality of recovered paper and trends in the production process of recovered paper and board industry. KCPK further delivered feedback to the other WP 4.3 reports and was the M4- internal reviewer of one of them.

**STFI-PF:** Person month (13-30): 1

STFI-PF has followed the work in this WP by getting oral information from the WP leader (JPC). STFI-PF has been commenting the reports

**KCL:** Person month (13-30): 0,9

Commenting of deliverables (KB).

**VTT:** Person month (13-30): 2,1

Providing material regarding bioenergy upgrading (pellets).

**BRE:** Person month (13-30): 2

Contributing to review and support for deliverables.

**PÖYRY:** Person month (13-30): 10,1

- Data and support for EFI-GTM modelling (global model covering most of the product groups). The intensive work is reported in more detail in *PD4.3.5 Summary report of the first EFI-GTM task, PD 4.3.1*
- Data and other material collection and compilation of the first reports on the industry's competitiveness and its impact on the industry dynamics and interdependence between the agents within the FWC (PD 4.3.2 and PD 4.3.3)
- Data collection and compilation of the *PD4.3.4 Trade projections forest products by country and product*
- Further development of the initial data and function structures for the extensions of the existing value added model to cover the full FWC and to include the Eforwood-type interaction dynamics in it.

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- M4 internal work on e.g. developing type mills and definition of inter and intra module flows
- Link between M4 / “EFI-GTM world”

**CEPI:** Person month (13-30): 0,8

**CEI-Bois:** Person month (13-30): 0,8

## **WP 4.4**

**KCPK:** Person month (13-30): 3

KCPK, by various action and on various occasions, contributed to one of the main task of this WP: to ensure the involvement of industry. The EFORWOOD project has been introduced to, and discussed with, many industrial contacts of KCPK. Intensive discussion with and within various groups of CEPI have taken place in order to contribute to an increase in industrial involvement in the project. Furthermore, KCPK has become the Module 4 representative in EFORWOOD’s scenario group. In this group it represents M4 and thus the forest based industries in the development of reference futures and scenario storylines.

**STFI-PF:** Person month (13-30): 1

Not much work has been performed in this WP, due to problems for the WP leader to keep up the work. STFI-PF had planned to comment reports that were due to month 15 and 18 but no reports have been written.

**KCL:** Person month (13-30): 0.4

**PÖYRY:** Person month (13-30): 0,7

Input to scenario work (co-ordinated by Module 1)

**CEPI:** Person month (13-30): 2

Industrial feed-back, in general terms, on choices made within EFORWOOD towards the European Task Force. For the various meetings and conference calls each time CEPI has provided written input. The meetings were:

- 22 November 2006 European Taskforce meeting in Lahti (during FTP conference)
- 15 March 2007 Task Force conference call
- 17 April half a day internal meeting at CEPI getting feedback from all CEPI Directors / Committee’s on EFORWOOD headlines (6 persons)
- 27 April 2007 Providing Industries position towards ToSIA approach
- 2 May 2007 Task Force conference call

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1<sup>st</sup> Period: November 1, 2006 - October 31, 2007

- 7 and 9 May presentation week and discussion during the EFORWOOD week in Slovakia (via Arie Hooimeijer) of the industrial / associations concerns concerning EFORWOOD under the title “Science meets Politics”.

**CEI-Bois:** Person month (13-30): 3



## **Appendix 5: Overview of Module 4 meeting during the reporting period**

**Title: Review on reports, draft Implementation Plan for months 13-30**

Date: 13 November 2006

Place: Carcevallos

No. of participants: 14

Type of meeting: physical

**Title: Case studies in M4**

Date: 14 November 2006

Place: Carcevallos

No. of participants: 14

Type of meeting: physical

**Title: M4 meeting on Implementation Plan for months 13-30 and detailed operational plan**

Date: 15 November 2006

Place: Carcevallos

No. of participants: 14

Type of meeting: physical

**Title: M4 teleconference**

Date: 12 January 2007

Place: NR

No. of participants: 10

Type of meeting: telephone

**Title: M4 teleconference**

Date: 9 February 2007

Place: NR

No. of participants: 9

Type of meeting: telephone

**Title: M4 teleconference**

Date: 30 March 2007

Place: NR

No. of participants: 13

Type of meeting: telephone

**Title: M4 teleconference**

Date: 20 April 2007

Place: NR

No. of participants: 10

Type of meeting: telephone

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1<sup>st</sup> Period: November 1, 2006 - October 31, 2007

Title: **M4 meeting on Data (4.1)**

Date: 7 May 2007

Place: Zvolen

No. of participants: 13

Type of meeting: physical

Title: **M4 meeting on Dynamics and response functions**

Date: 8 May 2007

Place: Zvolen

No. of participants: 19

Type of meeting: physical

Title: **M4 meeting on Industry Scenario's (WP 4.4.) and planning 18-30 months**

Date: 9 May 2007

Place: Zvolen

No. of participants: 17

Type of meeting: physical

Title: **M4 fibre chain meeting**

Date: 14 June 2007

Place: Stockholm

No. of participants: 5

Type of meeting: physical

Title: **M4 fibre flow meeting**

Date: 15 August 2007

Place: Helsinki

No. of participants: 5

Type of meeting: physical

Title: **M4 meeting**

Date: 28 August 2007

Place: Helsinki

No. of participants: 14

Type of meeting: physical

Title: **M4 teleconference**

Date: 14 September 2007

Place: NR

No. of participants: 11

Type of meeting: telephone

Title: **M4 meeting**

Date: 3 October 2007

Place: Brussels

No. of participants: 12

Type of meeting: physical

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1<sup>st</sup> Period: November 1, 2006 - October 31, 2007

Title: **M4 meeting**

Date: 3 October 2007

Place: Brussels

No. of participants: 12

Type of meeting: physical