



EFORWOOD

Sustainability Impact Assessment
of the Forestry - Wood Chain



Project no. 518128

EFORWOOD

Tools for Sustainability Impact Assessment

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Thematic Priority: 6.3 Global Change and Ecosystems

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Annual management report

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PP	Restricted to other programme participants (including the Commission Services)	X
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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1 Introduction

1.1 Background

The processes in the latter part of the FWC and the interaction between forest-based industries and consumers/ end-users are the main targets for research within Module 5 of Eforwood. The Module is primarily motivated by the observation that further development of the FWC towards sustainability, needs to be well-founded in a market perspective with outlook also beyond the FWC. This perspective includes aspects for both professional intermediaries and consumers, other end-users in the FWC as well as suppliers, customers, partners and stakeholders in interacting value chains.

1.2 Objectives

The overall objective is to evaluate FWC products functional performance and impact on sustainability in interacting value chains, including also the consumer perspective (being the crucial, final link in the value chain). The overall purpose is to contribute to make it possible to increase pro-activity for the FWC. Both quantitative and qualitative research approaches are to be used in parallel to complement each other.

The development and application of ToSIA is to be supported in several ways. Firstly M5 should be actively involved in the development process, mapping and defining chains and case studies, defining indicators, and deliver M5 process data. Secondly, qualitative research results from M5 should be used as a base for ToSIA development, guidance for selecting ToSIA applications and a complement to sustainability impact assessment based on ToSIA results.

A final objective will be to develop and suggest strategies for increased sustainability for significant FWC-products and market sectors. To realise this, a partial objective of M5 is to develop and apply a partial M5 qualitative SIA process tool.

Key objectives/milestones for the project period Month 37-51 are:

In WP5.0:

- Co-ordinate the module work and ensure that the objectives of M5 are reached and activities completed in accordance with time schedule and budget
- Co-ordinate the linkages with the IP management, other modules and external bodies

In WP5.2:

- To lead and contribute to adequate definition of a market driven regional case as basis for further EU FWC
- To contribute in development of Scandinavian and Baden Württemberg case studies and collect data

- To contribute in development of EU FWC and collect corresponding data
- To support ToSIA with data collection on consumption processes
- To develop methodology to be used in consumption scenario building

In WP5.3:

- Develop market driven scenarios to be used as context for further WP5.3 work as well as in ToSIA applications
- Develop response functions (outside ToSIA) to support evaluation of scenario implications and estimation of indicator values
- Decide on methodology and structure of the partial M5 qualitative SIA process tool
- Development of qualitative partial SIA process tool as well as application of it
- SWOT-analysis including identification of significant aspects
- Establishing of Visions for the FWC and interacting value chains
- Creation of Pro-active strategies, in the context of different external scenarios
- Analysis and presentation of implications of WP results for upstream modules and actors

2 Work package progress of the period

A new module partner structure, where FCBA took over many tasks from AIDIMA, was implemented during the third year of the project. This new structure has in the last year of the project become fully operational and the work in M5 has made good progress against targets and objectives for the period. A key task in the module has been the Iberia market driven case coordination. Considerable difficulties were experienced in the Iberian case study during the period, mostly originating outside M5. Unforeseen and underestimated difficulties have been experienced in the ToSIA development and application work. The “back-run” of ToSIA with initialisation from the market was difficult to implement. The Iberian case study was already before reduced and limited to wood fibre products, as it was not feasible to disaggregate and trace backwards M5 wood product consumption into different fractions and origins in M4, M3 and M2 respectively. It was now experienced that also wood fibre products data collection was difficult to manage, especially in upstream modules (e.g. M2) close to the the forest.

A number of cross-module (interface) problems have been addressed together with other modules. Considerable work has been put into addressing Cross-module problems. This work has been realised largely through coordination of and active participation in working groups, cross-module events and e-mail discussions. The “bucket” approach to solve trade flows of products and materials between countries in ToSIA is one example. Interface issues, particularly with M4, have been discussed and largely solved, although there are still some problems that could not be fully solved, mainly as regards wood products. Some key tasks and related progress during the reporting period:

- Maintaining and developing a strong M5 team. Module partners have communicated frequently in telephone conferences and by e-mail. Staff

changes at partners have made it necessary to introduce and integrate new researchers at various stages. This period, several new Innventia researchers have been involved in the project and at FCBA key researchers have only worked part time.

- ToSIA related tasks such as; Case study and EU FWC chain definitions, topology and data collection, working groups' coordination and participation (energy, waste, transport, import-export "buckets" etc.)
- A Module internal partial SIA tool, including a SWOT analysis with a sustainability perspective for selected FWC-based products such as furniture, packaging, books and pellets products have been developed.

In WP5.0, module management, co-ordination and interfacing with other modules have been executed. The annual report for year three was prepared together with intermediate and full year Management reports. A new implementation plan for month 37-51 was prepared. Activities also include organisation and documentation of module meetings and cross-module meetings as well as participation in IPB and evaluation meetings. The preparation work for the Eforwood week in Months 43 and 47 was also significant.

The major activities and related progress in WP5.2:

- Co-ordination of the market driven regional Iberian case study for ToSIA. Further major difficulties were experienced with disaggregated products upstream in the chain towards the forest. This has already before lead to a boundary restriction of the case study, to only encompass fibre based paper products. Several problems experienced with implementation of "back-runs" in ToSIA, including recycling loops and "market-pull" initialisation of the model from the market/ consumption side.
- Contribution in development of Scandinavian and Baden Württemberg case studies as well as in many working groups.
- Major effort in the transport working group including development of a tool to calculate/ estimate transport related indicators in a uniform way in the project
- Topology and flows (including split factors, shares and conversion factors), and data collection for 2005, 2015 and 2025 in all three case studies have been completed.
- Contribution in development of EU FWC
- Topology and flows (including split factors, shares and conversion factors), and data collection for 2005, 2015 and 2025 in EU FWC have been completed.
- Data validation and checking in case studies and EU FWC
- Supporting and participating in the process to implement "buckets" as a solution to handle trade flows of products in the EU FWC
- Data collection on consumption processes has been executed to support ToSIA and EFI-GTM
- In close cooperation with WP5.3 have Market scenarios for the Iberia case study been developed. Also evaluation of implications for M5 of technology

and bio-energy scenarios in the other ToSIA case studies have been performed

The major activities and related progress in WP5.3:

- Market driven consumption scenarios have been developed successfully. They have been used as context for WP5.3 strategy work as well as in ToSIA applications. Scenario development has been performed in close collaboration with M1 and other modules Special focus on Newsprint, packaging, furniture and bio-energy previously dealt with in internal case studies.
- Development of high level response functions (outside ToSIA) for scenario implications assessment and indicator value estimation. One examples is the transport tool
- Creation and documentation of a qualitative M5 SIA process tool
- SWOT-analysis on significant aspects for sustainability performance. The opportunities and threats part relate to scenario work and the strength and weaknesses part relate to M5 internal case studies earlier carried out and documented in WP5.2
- Development and documentation of the partial M5 qualitative SIA process tool
- Drafting of vision and pro-active strategies and evaluation of their implications for upstream parts and actors in the value chain

2.1 Deliverables summary

Del No.	Deliverable name	WP No.	Due date	Actual/ Forecast delivery date	Lead contractor
D5.0.5	Annual Management report	5.0	Mth 37	Mth 39	Innventia
PD5.0.6	Intermediate management report	5.0	Mth 42	Mth 48	Innventia
D5.0.7	Annual Management report including input to final report	5.0	Mth 51	Mth 52	Innventia
D5.2.9	Final Report on Iberian Case study	5.2	Mth 42	Mth 52	FCBA
PD5.2.10	Experiences from ToSIA data collection	5.2	Mth 42	Mth 50	FCBA
D.5.3.1	Intermediate progress report – M5 Partial SIA process tool. Report containing scenarios, response functions, methodology and plans for further work in WP5.3 as well as summarised data related to attitudes on sustainability in the context of FWC-based products in interacting final product value chains.	5.3	Mth 39	Mth 52	Innventia
PD 5.3.2	Draft of Vision and Pro-active sustainability Strategies	5.3	Mth 43	Mth 52	Innventia
PD 5.3.3	Report on M5 Sustainability Process Tool	5.3	Mth 42	Mth 52	Innventia
PD 5.3.4	Report on analysis of the draft Pro-active sustainability strategies and their implications for upstream actors	5.3	Mth 47	Mth 52	Innventia
D5.3.5	M5 Pro-active sustainability strategies and their implications upstream	5.3	Mth 47	Mth 52	Innventia

2.2 Milestones progress

Major milestones for the final completion of the project

Major milestones	Status
Final topology and product definition for ToSIA case studies and EU FWC	<i>Completed</i>
Selection and definition of indicators for ToSIA EU FWC for 2015 and 2025	<i>Completed</i>
ToSIA data collection for case studies and for EU FWC for 2005	<i>Completed</i>
Development of response functions and data generation for ToSIA case studies and EU FWC for 2015 and 2025	<i>Completed</i>
Market driven scenario development and policy & technology scenario implications for ToSIA and M5 partial SIA process tool	<i>Completed</i>
Synthesis of data and SWOT analysis for partial M5 partial SIA tool	<i>Completed</i>
Established draft of Vision and Pro-active strategies for FWC	<i>Completed</i>
Define Methodology and structure for M5 partial SIA tool	<i>Completed</i>
Input to final report	<i>Largely done. Final completion expected Month 52-53</i>

All major milestones have been accomplished. More effort than anticipated has gone into accomplishment of ToSIA related tasks. This has led to lack of time and resources for the development and application of the M5 partial SIA process tool. Hence, the planned final part of the work, i.e. to discuss and finalise the draft strategies in a dialogue with industry and stakeholders, have not been accomplished within the project.

WP milestones for the reporting period

Milestone No.	Milestone name	WP No.	Date due	Actual/Forecast delivery date	Lead contractor
M5.0.1	Delivery in time and budget of activities planned for month 37 to 51	5.0	Mth 37-51	Mth 37-51	Innventia
M5.2.5	Baden Württemberg case data collection 2005	5.2	Mth 38	Mth 44	FCBA
M5.2.6	Scandinavian case data collection 2005	5.2	Mth 39	Mth 44	FCBA
M5.2.7	Baden Württemberg case data collection 2015, 2025	5.2	Mth 40	Mth 44	FCBA
M5.2.8	Iberian case data collection 2005	5.2	Mth 37	Mth 44	FCBA
M5.2.9	Scandinavian case data collection 2015, 2025	5.2	Mth 41	Mth 44	FCBA
M5.2.10	Iberian case data collection 2015, 2025	5.2	Mth 40	Mth 44	FCBA
M5.2.11	EU FWC data collection 2005, 2015, 2025	5.2	Mth 42	Mth 47	FCBA
M5.2.12	Regional cases scenario analysis, response functions (month 42)	5.2	Mth 42	Mth 51	FCBA
M5.3.4	Result of SWOT analysis	5.3	Mth 40	Mth 48	Innventia
M5.3.5	Established draft of Vision and Pro-active strategies	5.3	Mth 43	Mth 51	Innventia

3 Tasks and contributions by partners in the Module work

3.1 Innventia

In WP 5.0 Innventia has worked with the following tasks:

- Module management and coordination
- Organisation and documentation of module and cross-module meetings
- IP Board and Evaluator meetings participation
- Preparation and participation in Eforwood weeks
- Preparation of annual, intermediate and final reports
- Preparation of the implementation plan for Mth 36-51
- Commenting the work of other Module 5 partners

In WP 5.2 Innventia has worked with the following tasks:

In general, all tasks in the WP related to fibre/ paper based products.

- Mapping, aggregation, topology, flows and definitions of all ToSIA case studies and EU FWC case
- Supported ToSIA application development and EFI-GTM with data collection on consumption processes
- Data collection in all ToSIA case studies and EU FWC case
- Data checking and validation
- Working group participation, e.g. import-export bucket implementation
- Commenting the work of other Module 5 partners
- Contribution to reports and deliverables
- Participation in the preparation of Eforwood final conference presentations
- Participation in project and training meetings

In WP 5.3 Innventia has worked with the following tasks:

- WP leadership
- WP methodology development
- Evaluation of scenario implications in M5 for scenarios originating in other modules to support ToSIA runs
- Consumption scenario development (printing and publishing products)
- Development and decisions on methodology and structure of the partial M5 qualitative SIA process tool
- SWOT-analysis on significant aspects for sustainability performance (printing and publishing products)
- Strategy development in different positive and negative scenarios (printing and publishing products)
- Stakeholder collaboration and input to strategy process (printing and publishing products)
- Evaluation of upstream implications of proposed sustainability strategies (printing and publishing products)
- Preparation of deliverables
- Organisation of project and training meetings

3.2 FCBA

In WP 5.0 FCBA has worked with the following tasks:

- Co-Module management and coordination
- Participation in module and cross-module meetings
- Preparation and participation in Eforwood weeks
- Input to annual, intermediate and final reports
- Input to the implementation plan for Mth 36-51
- Commenting the work of other Module 5 partners

In WP 5.2 FCBA has worked with the following tasks:

In general, all tasks in the WP related to wood based products in all parts of Europe, including France but excluding Spain and other Mediterranean countries.

- WP leadership
- Iberia case study coordination
- Mapping, aggregation, topology, flows and definitions of all ToSIA case studies and EU FWC case
- Supported ToSIA application development and EFI-GTM with data collection on consumption processes
- Data collection in all ToSIA case studies and EU FWC case
- Data checking and validation
- Working group participation, e.g. import-export bucket implementation
- Transport tool development
- Commenting the work of other Module 5 partners
- Preparation of reports and deliverables
- Participation in the preparation of Eforwood final conference presentations
- Participation in project and training meetings

In WP 5.3 FCBA has worked with the following tasks:

- Evaluation of scenario implications in M5 for scenarios originating in other modules to support ToSIA runs
- Consumption scenario development (wood products)
- SWOT-analysis on significant aspects for sustainability performance (wood products)
- Strategy development in different positive and negative scenarios (wood products)
- Stakeholder collaboration and input to strategy process (wood products)
- Evaluation of upstream implications of proposed sustainability strategies (wood products)
- Commenting the work of other Module 5 partners
- Input to deliverables
- Participation in project and training meetings

3.3 AIDIMA

In WP 5.0 AIDIMA has worked with the following tasks:

- Participation in module and cross-module meetings
- Preparation and participation in Eforwood weeks
- Input to annual, intermediate and final reports
- Input to the implementation plan for Mth 36-51
- Commenting the work of other Module 5 partners

In WP 5.2 AIDIMA has worked with the following tasks:

In general, all tasks in the WP related to wood based products in Spain and other Mediterranean countries (excluding France).

- Mapping, aggregation, topology, flows and definitions of Scandinavia case study and EU FWC case
- Supported ToSIA application development and EFI-GTM with data collection on consumption processes
- Data collection in Scandinavia case study and EU FWC case
- Data checking and validation
- Working group participation, e.g. import-export bucket implementation
- Commenting the work of other Module 5 partners
- Input to reports and deliverables
- Coordination and preparation of Eforwood final conference presentation
- Participation in project and training meetings

In WP 5.3 AIDIMA has worked with the following tasks:

- WP Morphol scenario methodology development including preparation of manual and training held for module members
- Evaluation of scenario implications in M5 for scenarios originating in other modules to support ToSIA runs
- Consumption scenario development (furniture)
- SWOT-analysis on significant aspects for sustainability performance (furniture)
- Strategy development in different positive and negative scenarios (furniture)
- Stakeholder collaboration and input to strategy process (furniture)
- Evaluation of upstream implications of proposed sustainability strategies (furniture)
- Commenting the work of other Module 5 partners
- Input to deliverables
- Participation in project and training meetings

3.4 Pöyry

In WP 5.0 Pöyry has worked with the following tasks:

- Participation in module and cross-module meetings
- Preparation and participation in Eforwood weeks
- Input to annual, intermediate and final reports
- Input to the implementation plan for Mth 36-51
- Commenting the work of other Module 5 partners

In WP 5.2 Pöyry has worked with the following tasks:

In general, all tasks in the WP related to bio-energy products.

- Mapping, aggregation, topology, flows and definitions of all ToSIA case studies and EU FWC case
- Supported ToSIA application development and EFI-GTM with data collection on consumption processes
- Data collection in Scandinavian case, Baden-Württemberg case and EU FWC case
- Data checking and validation
- Working group participation, e.g. import-export bucket implementation
- Co-ordination of the “Waste group”
- Commenting the work of other Module 5 partners
- Contribution to reports and deliverables
- Participation in the preparation of Eforwood final conference presentations
- Participation in project and training meetings

In WP 5.3 Pöyry has worked with the following tasks:

- Evaluation of scenario implications in M5 for scenarios originating in other modules to support ToSIA runs
- Consumption scenario development (bio-energy)
- SWOT-analysis on significant aspects for sustainability performance (bio-energy)
- Strategy development in different positive and negative scenarios (bio-energy)
- Stakeholder collaboration and input to strategy process (bio-energy)
- Evaluation of upstream implications of proposed sustainability strategies (bio-energy)
- Commenting the work of other Module 5 partners
- Input to deliverables
- Participation in project and training meetings

3.5 CEPI

CEPI have not been active in M5 during the reporting period, but has been contacted in order to comment SWOT key questions.

3.6 CEI-Bois

CEI-Bois have not been active in M5 during the reporting period

4 Conclusions and further work

Despite considerable difficulties in ToSIA related tasks, the work in M5 has made good progress against targets and objectives in the final year. To manage the unforeseen difficulties and high resource input needed to support ToSIA related activities in WP5.2, some resources had to be internally re-allocated in M5 from WP5.3 to WP5.2 tasks. This led to that the ambition level in WP5.3 had to be somewhat reduced. The planned frequent stakeholder interaction in WP5.3, to discuss results and implications, was not possible to accomplish within the time and resource frame of the Eforwood project.

FCBA have in the final year become fully operational in its new role taking on responsibilities from AIDIMA related to some key tasks, e.g. WP5.2 and Iberia case coordination. Some module internal delays have been experienced in the Iberia case study, but most of the delays experienced during the period originate outside M5. There has been considerable problems to implement back-run of ToSIA in M1, including flow initialisation at the market/ consumption level and balancing of feed-back loops. Considerable difficulties have also been experienced in M2/ M3 in tracing the wood and fibres used in M4/M5 product applications. This was also the reason why wood products were already before removed from the Iberia case study. In general wood products seem to be more difficult to handle in the project, and one reason is that the wood-working sector is more SME-based and less consolidated than pulp and paper. The difficulties have partly been overcome by development of some tools to support indirect estimates of indicators.

M5 delays in the period largely relate to unforeseen and underestimated difficulties in defining and implementing ToSIA case studies and the EU FWC case. In most parts M5 have managed to catch up delays and complete the project tasks within the final three months extension of the project. M5 project goals have in most parts been accomplished.

The complexity and integrated structure of Eforwood has been clearly recognised during the period. A number of module interface problems have been addressed together with M4, M3 (and M2), and there has been very close collaboration with M1 related to ToSIA. Cross-module work has been realised largely through coordination of and active participation in task forces and cross-module events. Interface issues, particularly with M4, have been discussed and largely solved.

M5 Input to final report has in most parts been completed in draft version and will be finalised in Month 52 and 53.

Further work is recommended in two main areas:

1. Research work involving the running and operation of ToSIA with different external scenarios to further validate the model itself, data input values and results
2. Stakeholder communication and dialogue to discuss:
 - a. ToSIA results and their applicability and usefulness, as well as their potential implications for the FWC.
 - b. The drafted Pro-active strategies and their potential upstream implications.

Appendix 1: Periodic Activity Report, WP5.0
Annual report 15 months
Period: November 1, 2008 - January 31, 2010

WP leader	Innventia	WP number	5.0
Date	2010-01-22		
<p>Work package objectives, starting point of work at beginning of reporting period.</p> <p>To coordinate the module work and ensure that the objectives of M5 are reached and activities completed in accordance with time schedule and budget and to co-ordinate the linkages with the IP management and with other modules</p>			
<p>Progress towards objectives, tasks worked on, achievements made with reference to planned objectives, contractors involved.</p> <p>Module management, co-ordination and interfacing with other modules have been executed in this WP. Activities include organisation and documentation of module meetings and cross-module meetings as well as participation in IPB, GA, EAP and Eforwood week meetings. The planning and division of work between the work packages in M5 has been coordinated. An annual management report (D5.0.5) for M5 was finalised, and an intermediate 42 month management report (PD5.0.6) for M5 has been produced. The fourth year annual management report (D5.0.7) was drafted. Development of the final report structure and content as well as co-ordination of M5 input to final report has been a major task.</p> <p>Contractors involved: Innventia, FCBA, AIDIMA, and Pöyry</p>			
<p>Deviations from workprogramme (if any), corrective actions taken, nature and reason for problem, contractors involved.</p> <p>Delay in submission of PD5.0.6. This did not delay general project or M5 progress.</p> <p>The management capacity and resources allocated to dealing with issues related to ToSIA topology, data collection, data validation and runs have been larger than expected. This has meant that other areas have received less attention which has caused some delays. It has also meant that other work areas in e.g. WP5.3 have had some resource reduction, which in turn has meant that ambitions here have had to be somewhat reduced.</p> <p>Delays in result availability from ToSIA runs of case studies and the EU case, have caused delays in input to and work with the final report. The work with WP5.0 related parts in the final report will be completed Month 52-53.</p>			

Appendix 2: Periodic Activity Report, WP5.2
Annual report 15 months
Period: November 1, 2008 - January 31, 2010

WP leader	FCBA	WP number	5.2
Date	2010-02-10		
<p>Work package objectives, starting point of work at beginning of reporting period.</p> <p>The overall objective of this WP is to analyse the main attitudes and demographic aspects as well as reasons, driving factors, trends and future expectations for the value chain for final products, i.e. furniture and other wood products, paper products and bio-energy.</p> <p>To complete this task, this WP has following operative objectives for month 37-51:</p> <ul style="list-style-type: none"> • To lead and contribute to adequate definition of a market driven regional Iberian case as basis for further EU FWC. • To contribute in development of Scandinavian and Baden Wurtemberg case studies and collect data • To contribute in development of EU FWC and collect corresponding data • To support ToSIA with data collection on consumption processes. • To define and develop scenarios method on consumption 			
<p>Progress towards objectives, tasks worked on, achievements made with reference to planned objectives, contractors involved.</p> <p>Main tasks performed within the WP work have been:</p> <p>1. Events participations: FCBA, Innventia, Poyry and AIDIMA participated to the Freiburg (May 09) and the Uppsala (September 09) EFORWOOD week and to Helsinki meeting on EU data collection (January 09). FCBA, Innventia and Poyry took also part at the Helsinki meeting on EU import and export processes (June 09).</p> <p>2. Iberian case study</p> <ul style="list-style-type: none"> • Topology design : The topology of the chain has required changes and creation of links to match the flow of material, but also adapt to the difficulties of obtaining certain data. The topology is now finalized. • Main decision : <ul style="list-style-type: none"> • Use of Scandinavian case data for the Iberian case (M2/M3 only): The Scandinavian species entering the manufacturing processes of paper products were not informed. The perfect match with the flow M2 and M3 in the Scandinavian chain led to the decision to copy the structure and data of this part of the Scandinavian chain into the Iberian chain. The process, input and output not affected by the Iberian chain were not copied. • Data on the Iberian species consisted originally of Portuguese essences and scents Spanish. However, lack of partners able to provide data eucalyptus Spanish, led to only take into account the data 			

representative of the Portuguese forestry.

This shortcoming may be subsequently amended by subsequent users. This decision allowed the chain to operate coherently if not fair. However, the data supplied to the Portuguese origin of the project, three years ago, have a number of deficiencies that time does not correct.

- Check of conversion factors, indicators, shares and split ratios :
 Considerable time was needed to verify the data to allow the operation of the tool. Indeed, the absence of a number of data, some inconsistencies, rendered ineffective tool.
 It was therefore necessary to check each data consistency, accuracy and completion data.
 This step is being finalized.
- Problem faced by the non reversibility of ToSIA: the Iberian case can't be finished in time. The principle of the Iberian case is to model the flow from the market products based on wood to the forest. However, the first versions of the tool does not allow for this feature. This fundamental shortcoming prevents obtaining results in time from the Iberian case led by consumption.
- Data collection:
 - Paper and cartonboard (Innventia)

Share of data collected (estimation based on indicators shortlisted for demonstration):

Table 1 Share of indicators collected

:	Economic			Social			Environmental		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
Iberian Case			92%			92%			92%

Table 2 Share of conversion factors collected:

	From tonne to Euro			From tonne to m3			From tonne to t of C		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
Iberian Case			0%			0%			100%

Table 3 Shares/split ratios collected

Share of	Shares			Split ratios		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
Iberian Case			100%			100%

3. Baden Wurttemberg case study

- Data collection :
 - Bioenergy (Poyry)
 - Solid wood products (FCBA)
 - Paper and cartonboard (Innventia)

Share of data collected (estimation based on indicators shortlisted for demonstration):

Table 4 Share of indicators collected :

	Economic			Social			Environmental		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
BW case	100%	100%	81%	100%	63%	81%	100%	63%	81%

Table 5 Share of conversion factors collected:

	From tonne to Euro			From tonne to m3			From tonne to t of C		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
BW case	100%	0%	0%	100%	100%	0%	100%	100%	100%

Table 6 Share of shares/split ratios collected

	Shares			Split ratios		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
BW case	100%	100%	100%	100%	100%	100%

4. Scandinavian case study

- Data collection:
 - Bioenergy (Poyry)
 - Solid wood products (FCBA/AIDIMA)
 - Paper and cartonboard (Innventia)

Share of data collected (estimation based on indicators shortlisted for demonstration):

Table 7 Share of indicators collected :

	Economic			Social			Environmental		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
Scandinavian case	100%	65%	81%	100%	65%	81%	100%	65%	81%

Table 8 Share of conversion factors collected:

	From tonne to Euro			From tonne to m3			From tonne to t of C		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
Scandinavian case	100%	0%	0%	100%	100%	0%	100%	100%	100%

Table 9 Share of shares/split ratios collected

	Shares			Split ratios		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
Scandinavian case study	100%	100%	100%	100%	100%	100%

5. EU-FWC case study

- Topology design and identification of products:
 - Bioenergy (Poyry)
 - Solid wood products (FCBA/ AIDIMA)
 - Paper and cartonboard (Innventia)
- Data collection :
 - Bioenergy (Poyry)
 - Solid wood products (FCBA/ AIDIMA)
 - Paper and cartonboard (Innventia)

Share of data collected (estimation based on indicators shortlisted for demonstration):

Table 10 Share of indicators collected

	Economic			Social			Environmental		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
EU case	100%	65%	98%	100%	65%	98%	100%	65%	98%

Table 11 Share of conversion factors collected:

	From tonne to Euro			From tonne to m3			From tonne to t of C		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
EU case	100%	0%	0%	100%	100%	0%	100%	100%	100%

Table 12 Share of shares/split ratios collected

	Shares			Split ratios		
	Bioenergy	Solid Wood	Paper & Cb	Bioenergy	Solid Wood	Paper & Cb
EU case	100%	100%	100%	100%	100%	100%

- Identification of import and export processes in the chain and inclusion of these processes in the “Client” (Topology finalisation)
 - Bioenergy (Poyry)
 - Solid wood products (FCBA/AIDIMA)
 - Paper and cartonboard (Innventia)
- Estimation of all import and export processes in M5 (and also M3 & M4) by FCBA

6. Set up of transport tool for intra and international transport processes

This tool has been set up by FCBA in a cross module perspective (jointly with the WP 3.3) and presented through a poster at the Uppsala EFORWOOD week.

Deviations from workprogramme (if any), corrective actions taken, nature and reason for problem, contractors involved.

Delays in data collection: Most of data were provided in time, however some checks in order to allow the run of ToSIA have involved some corrections and reestimations. However all data is now collected.

Final report (Iberian case study): Problems with ToSIA to realise back run has caused significant delays in the consumption driven Iberian case.

Deliverable: PD 5.2.10 was delayed following delays in data collection process. It has now been delivered

Appendix 3: Periodic Activity Report, WP5.3
Annual report 15 months
Period: November 1, 2008 - January 31, 2010

WP leader	Innventia	WP number	5.3
Date	2010-02-12		
<p>Work package objectives, starting point of work at beginning of reporting period.</p> <p>The overall purpose of this WP is to contribute to make it possible to increase pro-activity for the FWC. To accomplish this, a final objective will be to develop and suggest strategies for increased sustainability for significant FWC-products and market sectors. A partial objective of this WP is to develop and apply a partial M5 qualitative SIA process tool. For the period up to month 51, the specific objectives are to:</p> <ul style="list-style-type: none"> • Develop market driven scenarios to be used as context for further WP5.3 work as well as in ToSIA applications. Response functions will be a part of the scenarios • Decide on methodology and structure of the partial M5 qualitative SIA process tool • Develop a plan for the further work in the WP • Development of qualitative partial SIA process tool as well as application of it. • SWOT-analysis including identification of significant aspects. • Establishing of Visions for the FWC and interacting value chains. • Creation of Pro-active strategies, in the context of different external scenarios. • Analysis and presentation of implications of WP results for upstream modules and actors. 			
<p>Progress towards objectives, tasks worked on, achievements made with reference to planned objectives, contractors involved.</p> <p>The main focus in the first part of the reporting period was to establish scenario contexts and a platform for further work in WP5.3. This was done in close collaboration with M1 to also satisfy the market driven scenario and response function needs in ToSIA. In the latter part of the reporting period, the focus were on development of M5 internal partial SIA tool, drafting of strategies and their implications upstream. The key tasks were in the reporting period were:</p> <ul style="list-style-type: none"> ⇒ Scenario development in close collaboration with M1 and other modules ⇒ Development of high level response functions, evaluating impact of external changes and upstream internal FWC changes on M5 processes ⇒ Development of a qualitative M5 SIA process tool ⇒ SWOT-analysis, incl. significant aspects ⇒ Drafting of vision and pro-active strategies. ⇒ Evaluation of results implications for upstream actors <p>Contractors involved: Innventia, FCBA, AIDIMA, and Pöyry</p>			

Deviations from workprogramme (if any), corrective actions taken, nature and reason for problem, contractors involved.

Following deviations have appeared due to lack of time and resources. Resources have been internally re-allocated to the data collection and validation process for ToSIA in WP 5.2:

- 1) No harmonised method has been used while creating drafts of pro-active strategies. Pro-active strategies have been created using different methods for different product groups and applications.
- 2) Pro-active strategies have not been communicated to and discussed internally with other Modules or externally with FWC Stakeholders
- 3) Pro-active strategies have only been developed as general outlines
- 4) No result compilation based on communication with other Modules and Stakeholders.
- 5) No dialogue with other Modules regarding upstream value chain implications from pro-active strategies.