Grant agreement no. SI2.645920

Project acronym: Biomass Policies

Full title of the action: Strategic Initiative for Resource Efficient Biomass Policies

Intelligent Energy – Europe (IEE)

Key action: Altener

Final Technical Implementation Report (FR)

Period covered: from 01.04.2013 to 31.03.2016 Due date: 31.05.2016

Start date of the action: 01.04.2013 Duration: 36 months

End date of the action: 31.03.2016

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Project website www.biomasspolicies.eu
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1 Summary

1.1 Objectives of the action

The Biomass Policies project has been financed by Intelligent Energy Europe and aimed to develop integrated policies for the mobilisation of “resource efficient” indigenous biomass value chains in order to contribute towards the 2020 bioenergy targets set within NREAPs & 2030, and other European and national policies. It did so by capitalising on the knowledge of three recent studies (Biobench; Biomass Futures and a study for the European Environment Agency) and through collaboration with selected Energy Agencies in the participating countries, i.e. AT, BE, DE, EL, ES, FI, HR, NL, PL, SK and the UK as well as key stakeholders from the policy and market sectors.

It aimed to impact the Member State (MS) policy for the mobilization of indigenous resource efficient biomass value chains, with the focus on highly relevant value chains and recommendations for improved financial support mechanisms. The active involvement of national agencies in the project highly increases the expected impact at national policy level.

The specific objectives of the project during the action were:

- Define sustainable indigenous bioenergy value chains (energy & fuel) with high relevance at EU 28, and the participating MS level and quantify resource efficiency, sustainability aspects and competition with other sectors. This gives the participating Member States guidance on which value chains they can focus their efforts on with high potential impact on the market, and provides concrete SWOT analyses for these value chains for the respective MS.
- Develop country profiles for the participating Member States of their policy landscapes for the selected high relevant bioenergy value chains (over the different relevant policy fields, i.e. energy, economy, agriculture, environment), as a basis for an overall policy framework towards a sustainable bio-based economy.
- Benchmarking of existing policy approaches for their current and expected market impact (in relation to NREAP targets), efficient use of resources, abatement of sustainability risks and dealing with competition with non-energy sectors relying on the same type of biomass.
- Creating (future) concepts for integrated biomass policy frameworks, tailored to meet EU28 and national requirements, supporting the mobilization of indigenous resource efficient bioenergy value chains (towards heat, electricity, CHP and advanced biofuels), but in the same time creating synergies and keeping a level playing field with other biomass applications to open opportunities for a sustainable bio-based economy (e.g. through cascading and biorefineries). The impacts of these policy frameworks towards NREAP targets with be quantified through modelling.
- Creating an interactive policy platform and work closely with national administrations (through the participating energy agencies) to provide input with regards to biomass value chains and national policies, to validate project findings, and to work towards policy implementation. In addition to the policy platform a structured interaction with industry and market stakeholders will be organized to build sectoral support for the integrated policy frameworks and proposals.
- Translation of policy frameworks into concrete proposals for national policy legislation in the participating countries, developed in a participative approach with national administrations and industry and market stakeholders.
## 1.2 Main activities, results and lessons learned

The main activities and the results in line with the objectives and work programme are presented in the Table below:

<table>
<thead>
<tr>
<th>Objective</th>
<th>Main activities</th>
<th>Main results (key deliverable)</th>
</tr>
</thead>
</table>

### WP2: Define sustainable indigenous bioenergy value chains (energy & fuel) with high relevance at EU 28, and the participating MS level and quantify resource efficiency, sustainability aspects and competition with other sectors. This provided the participating Member States guidance on which value chains they can focus their efforts on with high potential impact on the market, and provides concrete SWOT analyses for these value chains for the respective MS.

<table>
<thead>
<tr>
<th>Objective</th>
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<th>Main results (key deliverable)</th>
</tr>
</thead>
</table>
| WP2       | Assess feedstocks with sustainable resource efficient potential and their concentration in European regions. Assess cost supply for sustainable biomass imports. | • Report with guidelines – D2.2- on how to assess the biomass potentials (which can be used in the future from national administrations, institutions, researchers, industry, etc.)  
• Report- D2.3- with disaggregated (NUTS3) resource assessments that cover all indigenous biomass feedstocks- oil, starch, sugar, lignocellulosic from forestry, agriculture and waste sectors and account for resource efficiency in biomass provision and conversion. Country specific Annexes for the eleven participating MS are included.  
• A report on updated cost supply for imported biomass (D2.5).  
• A database with all the potentials in excel. |

<table>
<thead>
<tr>
<th>Objective</th>
<th>Main activities</th>
<th>Main results (key deliverable)</th>
</tr>
</thead>
</table>
| WP3: Develop country profiles for the participating Member States of their policy landscapes for the selected high relevant bioenergy value chains (over the different relevant policy fields, i.e. energy, economy, agriculture, environment), as a basis for an overall policy framework towards a sustainable bio-based economy. | Work with the eleven participating MS to perform SWOT analysis for selected value chains | • Detailed information in the D2.3 report about the impact of the implementation of sustainability criteria to all bioenergy carriers to future biomass supply options.  
• Presentation and short report in the event organised by the project in the European Parliament (16th March 2016).  
• Contribution to the public consultation from the European Commission on this topic. |

### WP3: Benchmarking of existing policy approaches for their current and expected market impact (in relation to NREAP targets), efficient use of resources, abatement of sustainability risks and dealing with competition with non-energy sectors relying on the same type of biomass.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Main activities</th>
<th>Main results (key deliverable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WP3</td>
<td>Work with the eleven participating MS to map their current policy landscape across sectors (energy, economy, agriculture, etc.) with a uniform template</td>
<td>• Report (D2.4) and excel template (which can be used in the future from national administrations, institutions, researchers, industry, etc.) with guidelines and indicators for SWOT analysis of the biomass value chains selected by the national partners for the participating Member States.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Objective</th>
<th>Main activities</th>
<th>Main results (key deliverable)</th>
</tr>
</thead>
</table>
| WP3       | Work with the eleven participating MS to understand the policy formation in their countries and benchmark current policy regimes with a uniform methodology | • Twelve reports (D3.1): one for EU and eleven for the participating MS  
• Excel template (D3.2) (which can be used in the future from national administrations, institutions, researchers, industry, etc.) with guidelines and indicators for the evaluation of sustainable resource efficient biomass value chains |

<table>
<thead>
<tr>
<th>Objective</th>
<th>Main activities</th>
<th>Main results (key deliverable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WP3</td>
<td>Work with the eleven participating MS to understand the policy formation in their countries and benchmark current policy regimes with a uniform methodology</td>
<td>• Twelve reports (D3.3) comprising of eleven for the participating MS and one for the overall comparative analysis</td>
</tr>
<tr>
<td>Objective</td>
<td>Main activities</td>
<td>Main results (key deliverable)</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>WP4: Creating (future) concepts for integrated biomass policy frameworks, tailored to meet EU27 and national requirements, supporting the mobilization of indigenous resource efficient bioenergy value chains (towards heat, electricity, CHP and advanced biofuels), but in the same time creating synergies and keeping a level playing field with other biomass applications to open opportunities for a sustainable bio-based economy (e.g. through cascading and biorefineries). The impacts of these policy frameworks towards NREAP targets with be quantified through modelling.</td>
<td>Work with the eleven participating MS to understand why a future framework for biomass is required, which should be the key principles and how various elements, including sustainability and resource efficiency should be uptaken.</td>
<td>• Thirteen reports (D4.1) comprising of eleven for the participating MS, one for the overall comparative analysis and one for EU28</td>
</tr>
<tr>
<td>WP4: Creating an interactive policy platform and work closely with national administrations (through the participating energy agencies) to provide input with regards to biomass value chains and national policies, to validate project findings, and to work towards policy implementation. In addition to the policy platform a structured interaction with industry and market stakeholders will be organized to build sectoral support for the integrated policy frameworks and proposals.</td>
<td>Work with national agencies (detailed analysis at value chain level in AT, BE, DE, ES, FIN, GR, HR, NL, PL, SK, UK) to support their work with data and suggestions for policy interventions that can facilitate the uptake of indigenous biomass with high potential.</td>
<td>• Fifteen teleconferences and 21 workshops in the eleven participating MS</td>
</tr>
<tr>
<td>WP5: Translation of policy frameworks into concrete proposals for national policy legislation in the participating countries, developed in a participative approach with national administrations and industry and market stakeholders.</td>
<td>Work with the eleven participating MS to understand the expected added value from the implementation of the suggested frameworks, the national legislative measures which have been considered most suitable to include the policy recommendations, and perform a SWOT analysis for the recommended future policy interventions.</td>
<td>• Report with separate sections for each of the eleven participating MS and eleven country presentations with the overall project findings.</td>
</tr>
</tbody>
</table>
Lessons learned

- Despite the delay in national validations of the top down data on biomass cost supply from the modelling within Alterra, the project team managed to get a very good understanding on national specificities for all selected feedstocks and participating Member States and further use the information for modelling the impact of the suggested policy interventions with RESolve.

- Communication with national stakeholders especially in agreeing the most important value chains has been proven challenging especially in Member States with advanced knowledge (there are already methodologies and assumptions developed at national level which do not always match with the one the project follows). Time and continuity in communication and information exchanges improves understanding and results in interesting input.

- Working with national agencies which are primarily focused at energy and fuels made the collection of policy related information from other non-energy sectors relevant to biomass lengthy and added considerably more time and effort to data collection.

- The project has suggested integrated frameworks across the selected biomass value chains in the participating Member States and EU. These comprise of a mix of regulatory, financing and information provision (soft) measures. However, the impact analysis with the energy model RESolve could only evaluate the financing ones and primarily those related to the downstream of biomass conversion with the exception of feedstock premiums that were also calculated as reduction on the cost of supply. To be able to analyse fully the impact of the integrated policy an economic/ market based model is also required.

- The reporting at national level in WP4 and WP5 was eventually performed in a much more analytical form than the one anticipated in the Description of Work (with dedicated country reports and ppts rather than an overall short report across all countries) since it was considered necessary to provide detailed information and evidence to the national administrations for their future policy discussions at national level. This, together with the essential rounds for validations resulted in considerably more efforts but the output is of higher quality and relevance to prevailing national conditions, with strong evidence and reflects the national situation and the national stakeholders’ opinion.

- Despite the fact that Biomass Policies team managed to perform top down modelling analysis and in the same time work bottom up with national agencies and stakeholders, the project team acknowledges that this has been a strong challenge at times, especially for the less experienced countries with low level of policy development and information. This project structure worked rather well with countries like AT, BE, DE, FI, NL, UK but faced delays and several rounds of communications in the other countries with less experience.
1.3 Success stories

- The project has delivered, for the first time up to our knowledge, detailed disaggregated (NUTS3) cost supply data that cover all indigenous EU biomass feedstocks - oil, starch, sugar, lignocellulosic from forestry, agriculture and waste sectors and account for resource efficiency and competition in biomass provision. This information has been further used in RESolve and in the studies commissioned for the TIMES model. It will also be used by JRC and DG ENER as evidence to inform the future policy on biomass for 2030 (a relevant commitment letter has been provided by JRC- IET).

- The project has delivered detailed biomass related resource efficiency criteria & indicators which can be used as metrics to inform policy and industry and has further applied it to 53 value chains within the eleven participating Member States.

- The project has delivered a robust methodology for building and integrated policy framework and has further applied it at EU and the eleven participating Member States.

- Except of the policy impact assessment performed by RESolve in detail for EU and 53 value chains within the eleven participating Member States, the project has delivered a case study that provides useful insights on how policy can impact the development of future biorefineries in Europe. This study focuses on a specific integrated biorefinery concept, namely the integration of bioethanol/polylactic acid (PLA) production and the co-firing of biomass in a coal-fired power plant at the Port of Rotterdam (Biomass Policies partner), with the ambition to contribute to the discussions around resource efficient use of biomass and to the development of integrated policies that promote resource efficient use of biomass in Europe. The specific objectives of the case study are to:
  
  o Discuss the resource efficiency concept and some of its proposed indicators in a concrete case and provide recommendations on this;
  
  o Analyse the possible role of existing bioenergy policy support instruments on the profitability of an integrated biorefinery concept;
  
  o Discuss the possible future role of biomass co-firing in an integrated biorefinery concept.

- Finally, the project team considers a success story of the full project implementation at national level, the case of Finland, and would like to express its gratitude to the team in VTT, who joined very late in month 23 and not only managed to complete successfully all tasks but delivered seven letters of commitment for uptaking the project results and also managed to include the Biomass Policies project results to the Finnish Bioeconomy Strategy for 2030.
1.4 Involvement of target groups and key actors in the action

The target groups the project aimed to reach comprised of European, national & regional policy administrators, biomass associations, industry and market actors with the aim to provide a concrete roadmap of sustainable and resource efficient pathways (developed in a participate process) and a well-documented set of policy and support schemes tailored to meet EU28 and national requirements and support the resource efficient mobilization of indigenous biomass value chains.

The key actors involved during the project duration included:

- National energy agencies responsible for defining and evaluating the impacts of national bioenergy value chains in the respective energy futures of their countries.
- Administrators at ministries responsible for policy, strategy and support measures along the different aspects of the value chains and feedstock types.
- Bioenergy/ Biofuels Technology Platforms responsible for defining efficient value chains and the respective technical indicators for their appropriate assessment.
- Industry and market actors that are related to biofuels deployment and can comment on the relevancy and attractiveness of future policy and support frameworks from the market & industrial perspective.

The involvement of the target groups and key actors in the project has been performed with the following mechanisms:

- National workshops where the most promising indigenous feedstocks, value chains, gaps in relevant policies and the future integrated frameworks have been presented and discussed.
- Five tailored project workshops addressing primarily audience at EU level and discussing, resource efficiency, sustainability, mobilisation, energy efficiency and future policy for biomass.
- One workshop in the European Parliament discussing the project findings and seeking comments from EU stakeholders.
- Eleven online national consultations and one at EU level.
- A set of 13 interviews with EU stakeholders for the project findings at EU level.
## 1.5 Performance indicators

**Project performance indicators:**

<table>
<thead>
<tr>
<th>Performance indicator</th>
<th>WP</th>
<th>Planned Target</th>
<th>Actual achievement</th>
<th>Comment on performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Indication of highly relevant sustainable bioenergy value chains</td>
<td>2</td>
<td></td>
<td>The information has been successfully provided to the national administrations in the participating countries.</td>
<td>Due to longer time in terms of validation with national stakeholders it was not included in the NREAPs for 2013 and 2015.</td>
</tr>
<tr>
<td>2. Map of the feedstock-related policy landscapes</td>
<td>3</td>
<td></td>
<td>The template has been provided to the participating MS on time, consultations took place and is available online.</td>
<td>Till the end of the project the project team had not detected that the template was used in the NREAPs progress reports for 2013 and 2015.</td>
</tr>
<tr>
<td>3. Benchmarking of existing policy approaches &amp; their impact towards NREAP targets</td>
<td>3</td>
<td></td>
<td>Detailed report with the approach and benchmarking and eleven country reports with high level of detail that support the overall analysis.</td>
<td></td>
</tr>
<tr>
<td>4. Integrated resource efficient policy frameworks</td>
<td>4</td>
<td></td>
<td>Detailed framework concepts developed jointly with national agencies, validated by national stakeholders and presented in eleven countries and one overall report. The toolkit has been used by the national administrations in the participating MS</td>
<td>The Flemish (Belgium), Finnish and Dutch concept and data are integrated in the strategic MS documents for biobased economy</td>
</tr>
<tr>
<td>5. Active involvement of national administrations and market &amp; industry stakeholders</td>
<td>5</td>
<td></td>
<td>287 stakeholders participated in the first national workshops and 255 in the second ones. 220 stakeholders participated in the five project workshops</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Commitment letter of 32 different biomass actors in the under study countries.</td>
<td></td>
</tr>
<tr>
<td>6. Concrete proposals for national policy legislation</td>
<td>6</td>
<td></td>
<td>The proposals are developed and presented in a report and eleven presentations.</td>
<td>Proposals are detected and are under development in Finland, Flanders (Belgium) and the Netherlands</td>
</tr>
<tr>
<td></td>
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<td></td>
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</tbody>
</table>
- **Strategic Objectives and Long-term impacts** beyond the duration of the action until 2020:

<table>
<thead>
<tr>
<th>Performance indicator</th>
<th>Planned Target</th>
<th>Actual achievement</th>
<th>Comment on performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MS guidelines for biomass assessment &amp; monitoring</td>
<td>▪ Use of guidelines for biomass assessment &amp; monitoring, and assessment of value chains for progress reports, also by non-participating MS ▪ MS start to develop a vision on bio-based economy, and use Biomass Policies integrated policy frameworks as a basis</td>
<td>All reports related to guidelines are produced</td>
<td>Since the policy development for biomass remains intense in the MS, it is expected that the produced guidelines will be widely used at national level.</td>
</tr>
<tr>
<td>2. Integrated resource efficiency policies</td>
<td>▪ Integrated policy proposals implemented in policy the participating MS (with effect on the market) and also on the agenda in other MS (on the basis of the toolkit and exchange through the policy platform)</td>
<td>Eleven country reports with the rationale, aim and detailed indications tailored to inform future policy for the selected value chains have been produced</td>
<td>Within the duration of the project, the Flemish (Belgium), Finnish and Dutch concept and data have been integrated in the strategic MS documents for biobased economy. Since the policy development for biomass remains intense in the MS, it is expected that the project findings will be widely used at national level.</td>
</tr>
<tr>
<td>3. Interactive policy platform</td>
<td>▪ Platform managed by national agencies and extended to the whole EU. Will serve as a platform (also after the project) where administrations can exchange experiences and learn from each other towards efficient policies to support the biobased economy</td>
<td>We are in discussions with EnR for the maintenance of the toolkit and the platform</td>
<td>The platform has not been effectively used within the duration of the project</td>
</tr>
</tbody>
</table>
**IEE Common performance indicators:**

<table>
<thead>
<tr>
<th>Common Performance indicator</th>
<th>Planned target</th>
<th>Actual achievement</th>
<th>Comment on performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative investment (Euro)</td>
<td>184 million€/ year</td>
<td>184 million€/ year</td>
<td>The Biomass Policies project helps policy and industry to understand which indigenous value chains are most efficient in terms of resource and energy so that they better focus future investments for low carbon. There is no direct way of measuring the implications of the project findings towards the performance indicators.</td>
</tr>
<tr>
<td>Renewable Energy (toe/year)</td>
<td>540,000 toe/year</td>
<td>540,000 toe/year</td>
<td></td>
</tr>
<tr>
<td>Primary energy savings (toe/year)</td>
<td>1-2% Primary energy savings compared to projections</td>
<td>1-2% Primary energy savings compared to projections</td>
<td></td>
</tr>
<tr>
<td>Reduction GHG emissions (t CO2e/year)</td>
<td>214,000 t</td>
<td>214,000 t</td>
<td></td>
</tr>
</tbody>
</table>

**By 2020**

<table>
<thead>
<tr>
<th>Common Performance indicator</th>
<th>Planned target</th>
<th>Actual achievement</th>
<th>Comment on performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative investment (Euro)</td>
<td>682 million€/ year</td>
<td>682 million€/ year</td>
<td>The Biomass Policies project helps policy and industry to understand which indigenous value chains are most efficient in terms of resource and energy so that they better focus future investments for low carbon. There is no direct way of measuring the implications of the project findings towards the performance indicators.</td>
</tr>
<tr>
<td>Renewable Energy (toe/year)</td>
<td>2,000,000 toe/year</td>
<td>2,000,000 toe/year</td>
<td></td>
</tr>
<tr>
<td>Primary energy savings (toe/year)</td>
<td>5-7 % Primary energy savings compared to projections</td>
<td>5-7 % Primary energy savings compared to projections</td>
<td></td>
</tr>
<tr>
<td>Reduction GHG emissions (t CO2e/year)</td>
<td>791,000 t CO2e/year</td>
<td>791,000 t CO2e/year</td>
<td></td>
</tr>
</tbody>
</table>
1.6 Important problems and deviations from Annex I

WP1, tasks 1.1 Project management/coordination & 1.2 Project Partners Meetings

There has been long lack of communication from Partner 12 SEAI. Following several discussions and email exchanges, the partner has resigned—without any cost claimed. The consortium suggested to include VTT in Finland as partner replacement. This added a country from Scandinavia to the partnership and enriched the mix of policies and implementation patterns for biomass. Additionally, as the work was already beyond the middle of the project the suggested partner should have the ability and readiness to take on the tasks already performed by the other national agencies. Due to name change (from 1st January 2015) the official documentation to support the inclusion of VTT to the consortium has been provided early January 2015. All documentation was sent to EASME early February 2015 and following the required procedures, VTT became a project partner in February 2015. VTT is a strong organisation with long term background in the field and its performance across all project tasks was excellent.

WP2. Task 2.2 Key biomass availability

The delay in Task 2.2 in terms of delivering the final datasets for the biomass potentials was due to delays at national level in validating the top down data on biomass cost supply from the modelling within Alterra. However, despite the challenge of getting update and validated data to RESolve and in the same time ensuring that there would be enough time for validation at national level, the project team managed to get a very good understanding on national specificities for all selected feedstocks and participating Member States and further use the information for modelling the impact of the suggested policy interventions with RESolve.

WP3. Task 3.2 Benchmarking

The delays within WP2 (both potential assessment and the identification of the value chains) have caused delays to task 3.2 as the benchmarking study would build upon WP2. In the meantime the methodology to conduct the benchmarking study has been shared with the project partners and the first country reports were drafted. Once the potential assessment and the identifications of the value chains were finalised the reference scenario modelling has been conducted and the results were shared with the partners.

WP4. Integrated frameworks

To ensure the delays in delivering the national integrated framework reports were minimised, Imperial prepared in May 2015 (M26) ten sets of documentation (a briefing, a power point presentation and a questionnaire) together with the national partners and these have been used as baselines for consultations at EU and MS level. Each consultation aimed to gather evidence to identify and prioritise i) indigenous biomass sources, ii) efficient value chains for conversion to energy & fuels and iii) key principles for integrated cross-sector national biomass policy. Stakeholders have been requested to: i) select their three top priority feedstocks, ii) select their three top priority value chains and iii) prioritise key principles and provide your views for future biomass policy. The respective information for Finland was delivered in October 2015.

The respective consultation at EU level was coordinated by AEBIOM and except from the email, interview based opinions, a dedicated workshop has been organised on 5th May 2015.
2 Performance review by work package

2.1 Work package 1: Management

2.1.1 Objectives

- **Task 1.1 Project management and coordination; Task 1.2 Project Partners Meetings**: Organise the kick off, second and third project meetings; arrange communication among the consortium; provide minutes and update work plan for each period, work package and task.
- **Task 1.4 Deliverable tracking, quality assurance and review**: Establish the Steering Group; ensure tracking and quality assurance of deliverables.
- **Task 1.5 Synergies with other initiatives**: Develop synergies with other projects having similar aims e.g. BIOTEAM, BASIS and S2BIOM (FP7) upon discussion with the project officer.

2.1.2 Major activities and achievements

**WP1, tasks 1.1 Project management/ coordination & 1.2 Project Partners Meetings**

- Day to day communication among partners has taken place with email, phone, skype and dedicated teleconferences.
- Seven project meetings have been organised.
- Communication with the BIOTEAM and S2Biom coordinators has been established and discussions have taken place about the main assumptions for biomass potentials scenarios as well as sustainability indicators, including resource efficiency ones.
- A short note has also been prepared for potential collaboration with the CA- RES II project. The project team also plans to organise the final meeting (February-March 2016) together with EnR.

**WP1 (Task 1.4 Deliverable tracking, quality assurance and review).**

- The Steering Group members were: Mr Giulio Volpi (DG ENER); Mr Marc Fleureck (DG Agriculture); Mr Jean Francois Dallemand (JRC); Mrs Joanna Dupont (Europabio); Mr Yves Ryckmans (Laborelec); Mr Marco Mensink (CEPI) and Prof Peter Pearson (long term knowledge on energy and environmental policy transitions as well as policy framework design). They have been informed during the interim period by teleconferences and email exchanges. Most of them have also joined more than two meetings (information is provided in the minutes).
- The main deliverables have been forwarded to the Steering Group and their comments are also integrated in the foreseen updates.
- Tracking and quality assurance of deliverables through skype and teleconferences with respective WP leaders, alongside the project meetings.

2.1.3 Assessment of the performed work

The work was performed with good collaboration and communications. In times where important decisions should be made the consortium always decided quickly, with good will and always accounting for the common goal of achieving high quality project outputs.
2.2 Work package 2: Sustainable and resource efficient value chains

2.2.1 Objectives

- **Task 2.1 Scenarios:** Develop scenarios that will set the base assumptions for estimating the future biomass value chains and their contribution towards the RED 2020 targets and beyond.

- **Task 2.2 Key biomass availability:** Refine the biomass cost supply information from the Biomass Futures project both on the availability and on the cost, including logistics.

- **Task 2.3 Value chains and competing pathways:** The work in this task focusses on matching the indigenous biomass resources for EU28 and the eleven participating countries (results from Task 2.2) with the most efficient conversion technologies in order to identify optimal value chains that will facilitate efficient biomass deployment by 2020 and 2030.

- **Task 2.4: Sustainable Imports:** Determine cost-supply curves for medium- to longer-term potentials for biomass and bioenergy imports to the EU-28.

- **Task 2.5: Profiles of selected biomass value chains:** Guidelines and set of technical, economic, environmental and social related indicators and methodological choices on how to approach the assessment of biomass value chains.

2.2.2 Major activities and achievements

Task 2.1 Scenarios:

- Scenarios have been defined, described and validated with stakeholders and other initiatives. The scenario development in Biomass Policies ensured the appropriate linkages to the scenarios assessed in the Energy Roadmap 2050 and the further scenario specifications in parallel contracts for DG-ENER ‘Carbon impacts of biomass consumed in the EU’. The deliverable has been further up-dated towards the end of the project (M34) taking account of all internal comments and up-dates required in relation to RESolve modelling work in WP4.

Achievements: a set of three scenarios which are consistent with PRIMES and the EU 2050 Energy roadmap while at the same time they provide concrete and science based assumptions for the effect that sustainability criteria (across liquid, solid and gaseous bioenergy carriers) will have in terms of availability and mobilisation patterns of indigenous biomass streams. (D2.1) Report, 27 pages

Task 2.2 Key biomass availability:

This task has defined the key domestic biomass types per Member State for the 2010, 2015, 2020 & 2030 timeframe on the basis of the Biomass Futures Atlas and other recent studies (EEA, 2012)¹. This resulted in a quantitative and (regional specific) overview by EU Member State of the amount of biomass supply and a characterisation per feedstock in terms of costs (costs-supply), logistical aspects of their deployment and sustainability risks related to soil, water and air quality and their use for non-food applications. The quantified overview of the available biomass is accompanied by a more qualitative

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characterisation according to the aspects mentioned above. More refined estimates including costs and logistics have been applied to a number (53) of selected national case studies in the eleven participating countries. These cases will provide a good reflection of EU28 in terms of diversity in current and future market deployment status, competing use, technological options (e.g. time-to-market), types of biomass and sustainability risks.

Achievements:

**Guidelines for data collection to estimate and monitor sustainable biomass supply at national level** (feedstock-specific availability ratios and guidelines on most efficient conversion pathways). (D2.2) Report, 116 pages

The guidelines were developed by building on the assessments done as part of Tasks 2.2 (Key biomass availability), 2.3 (Value chains and competing pathways) and 2.4 (Sustainable biomass imports). The approach of the assessments and the information derived on data sources, availability, biomass prioritisation to pre-treatment and conversion technologies has been consistently formalised in guidelines that can be repeated by others in other regions.

**Outlook of spatial biomass value chains at EU28, per MS, with updated cost-supply curves and a selection of the most promising feedstocks for bioenergy by region and country.** (D2.3) Report, 312 pages

In detail, the following achievements have been accomplished in this Task:

- **Extensive report with guidelines on how to collect data, estimate and monitor biomass supply at national level.** The report includes specific sections dedicated to all types of biomass potentials that can be found in EU (from the agriculture, forest and waste sectors) and provides detailed indicators for sustainability and resource efficiency.

- **Disaggregated (NUTS3) resource assessments that cover all indigenous biomass feedstocks- oil, starch, sugar, lignocellulosic from forestry, agriculture and waste sectors and account for resource efficiency in biomass provision and conversion. Updated cost supply for imported biomass** has also been developed.

- **Database (in excel format) with NUTS3 data for biomass supply potentials under the three scenarios identified in Task 2.1-D2.1.**

- **Potential impacts to future biomass supply with the implementation of stricter sustainability criteria.**

- **Spatial disaggregation from EU to European regions.**

- **Scientific evidence on which feedstocks and regions the MS and regional governments should focus their future policy and support measures.**

- **Guidelines on how to assess the potentials, account for non-energy markets, monitor and update data on potentials.**
Task 2.3 Value chains and competing pathways:

The work in this task focussed on the downstream part of the biomass value chains. The result of this EU wide assessment has been then matched with the biomass availability information from task 2.2 to identify the relevant biomass feedstock-technological conversion pathways per EU-28 country and at the level of the participating country cases.

- The inventory was finalised on the possible technological pathways expected to be technically and economically viable by 2020 and 2030. For these technologies data were collected from literature review and competing uses were also identified per biomass type and also taken into consideration in Task 2.2 to further quantify the cost-supply information.
- A SWOT analysis was developed for the different value chains, on the basis of the resource efficiency assessment framework developed in Task 2.5. In agreement with the energy agencies, focus value chains per country were selected and further used in tasks 3.2; 4.1 and 4.2.

Achievements:

**SWOT analysis of biomass value chains in terms of resource efficiency, potential market distortions and sustainability risks. Tailored country outlook for the selected value chains within the project.**

(D2.4) Report, 87 pages and excel.

The document has been validated in the first national workshops (Task 5.2) and at a dedicated teleconference (Task 6.1).

The report is structured in four chapters:

- The first chapter deals with general issues in terms of feedstock sourcing, and summarizes the main biomass feedstocks per country (as described in Deliverable 2.3\(^2\)).
- The second chapter describes various deployment pathways for different biomass feedstocks in terms of pre-treatment options, conversion processes, final products and open questions/options for the technological pathways.
- The third chapter provides a qualitative SWOT analysis for the different feedstocks and conversion pathways. This will be done according to the criteria and indicators described in Deliverable D2.6\(^3\).
- The fourth and last chapter contains the selection of relevant feedstock-value chain combinations per country, on the basis of the SWOT analysis. The selection is made in agreement with country representatives/ national agencies and stakeholders that participated in the communication activities across all countries. These value chains have been in focus for the policy frameworks developed in the Biomass Policies project.

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\(^3\) Pelkmans et al (2014): Guidelines and indicators for the evaluation of sustainable resource efficient biomass value chains.
• Excel with the SWOT analysis functionalities that are presented in the report. This excel can be used in the future by agencies and policy makers to provide an initial assessment for biomass value chain selection.

**Task 2.4:**

The work performed in this task focused in:

• determining realistic cost-supply curves for medium- to longer-term potentials for biomass and bioenergy (pellets, biomethane, liquid biofuels) imports to the EU-27 especially from:
  - Russia with former USSR countries like Ukraine, Belarus
  - North America (Canada and USA)
  - Latin America
  - East and West Africa
  - South East and Central Asia
  - Australia
  And

• calculating the share of imports needed (if any) per Member State in order to reach the targets set in the NREAP.

CB17, the Port of Rotterdam, provided information and comments regarding these data.

The determination of cost-supply curves was done based on the results from BioBench, Netherlands Sustainable Biomass Programs (http://www.agentschapnl.nl/en/biomass) and the most recent progress made in IEA Bioenergy Task 40. Best practice results on biomass production from pilots and practical experience on certification and auditing have also been used.

The outcomes from this task have been used to determine which EU-28 biomass feedstocks (as identified in Task 2.2) are competing for their use with imported feedstocks. This has been determined per EU MS.

The output of this task has been used for tasks 3.2 and 4.2 as input in the modelling of the effect of national biomass policies on markets.

**Achievements:**

<table>
<thead>
<tr>
<th>Extensive report with cost supply curves for medium- to longer-term potentials for sustainable biomass and bioenergy (pellets, biomethane, liquid biofuels) imports to the EU-28. (D2.5) Report, 59 pages</th>
</tr>
</thead>
</table>

**Task 2.5 Profiles of the selected biomass value chains in terms of resource efficiency and risk of market distortion per country case:**
The work in this Task focused in providing detailed profile documents of the selected biomass value chains by each of the participating countries in the Biomass Policies project, containing an analysis of the biomass value chains in relation to the resource efficiency indicator framework, as described in Deliverable 2.6.

Achievements:

Guidelines for selecting the most resource efficient value chains (with a thorough set of technical indicators) integrating resource efficiency (including sustainability aspects) and potential market distortions in relation to their competing uses. (D2.6)

Report, 39 pages and excel

These guidelines and indicators have been fully developed and identified by building on the work to be done in Tasks 2.2, 2.3 and 2.4 in the project.

The guidelines are provided with an extensive report and an analytical excel including all respective indicators and functionalities allowing future users to evaluate biomass value chains.

The guidelines presented in the first report (D2.6) serve two purposes:

1) to evaluate sustainable resource efficient biomass value chains in a SWOT analysis in the Biomass Policies project for the participating countries, i.e. Austria, Belgium, Germany, Greece, Spain, Croatia, Ireland, Netherlands, Poland, Slovakia and the UK.

2) to provide guidelines and a set of indicators to EU, national and regional stakeholders to conduct their own assessment of promising value chains in their countries and regions and further facilitate the process of forming or reformulating policy and prioritise policy targets

Analytical information in table, easy to use format, about the selected value chains in each of the participating Member States (D2.7)

The information presented in the report has been validated in the national workshops of WP5, containing a quantitative analysis of the biomass value chains in terms of competitiveness, sustainability risks, resource efficiency and potential market distortions. These profiles were developed by building on the cost-supply information produced in task 2.2 of the project and complimented with data collected in the country cases with the help of the Agencies involved.

The information in both D2.6 and D2.7 has both quantitative and qualitative elements and it includes:

- Energy and mass balances
- Resource efficiency indicators
- Cumulative energy demand
- Output service quality

4 www.biomasspolicies.eu
• Life cycle greenhouse gas emissions
• Life cycle costs
• Employment

2.2.3 Assessment of the performed work
The task faced delays due to difficulties in validation and cross checking data at national level. However, the final outputs are of extremely high added value for policy, industry and future work in the field of biomass assessments, resource efficiency and understanding how to quantify competition from non-energy sectors.

A first proof for that is that they have already been used during the last months of the project duration from JRC, DG Ener, ERRMA and EASAC to inform their policy and industry related work for biomass, biofuels and biobased materials.

Further to the biomass potentials and their disaggregation at NUTS3 level for the first time (up to the consortium’s knowledge), the resource efficiency criteria and their application to resource and energy efficient value chains with validated quantified indicators formulate the second part of high added value information developed within this work package.
2.3 **Work package 3: Current policy & implications to NREAP implementation**

### 2.3.1 Objectives

- **Task 3.1:** Mapping the relevant policy landscapes for the selected feedstocks & value chains: To provide an overview of policy landscapes (energy and non-energy) in EU28 and the participating Member States for the selected feedstocks and value chains.

- **Task 3.2:** Benchmarking of the different approaches: The different national policy regimes (as identified in task 3.1) will be analysed qualitatively and to the extent possible through energy modelling in terms of their impact on bioenergy deployment (towards reaching the NREAP targets) and potential market distortion of other energetic and non-energetic uses.

### 2.3.2 Major activities and achievements

**WP3, task 3.1: Mapping the relevant policy landscapes.**

The aim of this task was to develop overview documents of relevant policies (‘policy landscapes’) for the selected biomass feedstocks and value chains (WP2) on EU level and in the respective Member States.

- Background document with a listing of relevant policies at EU level was prepared for discussions. In M10.
- Template for national collection of relevant policies was distributed to the Energy Agencies in M10 (December 2013). Some final updates of the template were agreed with the S2Biom project consortium in M14 (May 2014). Deliverable (D3.2) finalized in M15 (June 2014).
- The energy policies were initially collected by VITO for the participating Member States and were further revised by the participating national agencies. The non-energy policies were collected by the energy agencies in the uniform template, prepared by VITO.
- Statistics for relevant indicators collected for the EU28 and all MS. Draft policy landscapes distributed to energy agencies in M16 (July 2014).
- Final Policy landscapes (D3.1) for 10 participating MS and the EU were delivered in M18 (September 2014).
- Final updates for all 11 participating MS and EU were delivered in M34.

**Achievements**

| Map of the feedstock-related policy landscapes (broader than energy policy) in EU28 across sectors and Member States in the overall framework of sustainable bioeconomy. (D3.1) 11 country reports and one report for EU, in total 250 pages |

Originally, in the Description of the Action, one 20-page report was foreseen. During the work it has been decided with the project partners and the national agencies to develop individual country reports with uniform structure as these would be more informative for the countries and also contain a good number of relevant indicators which could support policy discussions in them. The final deliverable comprises of 11 country reports (Policy landscapes) ranging from 14-24 pages each and a separate report for EU (45 pages)
Because of the work load that has proven a lot more than anticipated for the analysis at country level
(for the participating MS) the project team decided to have more detailed information for the
participating countries where we could have reasonable validation and did not perform the review
across the non-participating ones. Further to the time consuming work within the participating MS,
reviewing non-participating ones would lack the depth and insights of the partner countries and in the
end the analysis would be very high level and without much added value.

**A template in excel format for monitoring the biomass policy landscapes. (D3.2) excel template**

**WP3, task 3.2: Benchmarking of the different approaches**

The different national policy approaches (defined in task 3.1) have been analyzed qualitatively and to
the extent possible through energy modeling in terms of their impact on bioenergy deployment
(towards reaching the NREAP targets) and potential market distortion of other energetic and non-
energetic uses. This will produce baseline scenarios in line with the scenarios set in task 2.1- for the
integrated frameworks that were developed in WP4.

The different policy approaches were then benchmarked for their current and expected market impact,
as well as efficient use of resources, abatement of sustainability risks and dealing with competition. The
background data gathered in task 2.4 have been used as input. The benchmarking analysis focused on:

- Comparison of different MS approaches for a specific type of biomass resource,
- Mobilizing effect of the current policies,
- Interference with other energetic and non-energetic uses of the same feedstock (e.g. through
  subsidies to one sector),
- Is resource efficiency supported, and what impact does it have?
- Impact in terms of abatement of sustainability risks

The task resulted in benchmarking documents of policy approaches in relation to the specific resource
domains.

**Achievements**

Benchmarking existing policy approaches for their current and expected market impact (in relation to
NREAP targets), efficient use of resources, abatement of sustainability risks and competition. D3.3,
eleven country reports and one overall with comparative evaluation.

Originally, in the Description of the Action, one 20-page report was foreseen. During the work it has
been decided with the project partners and the national agencies to develop individual country reports
with uniform structure as these would be more informative for the countries and also contain a good
number of relevant indicators which could support policy discussions in them. The final deliverable
comprises of:
• 11 country reports ranging from 20-40 pages each
• An overview report providing comparative cross country information (76 pages)

2.3.3 Assessment of the performed work

The development of country reports with national tailored information caused delays for the delivery of the final versions since the reports had at least two rounds of validation and iterations for each of the 11 countries.

Despite the challenges in data collection and delays with validation the work performed in the work package delivers very strong evidence for policy mapping across sectors, countries and value chains and a robust methodology for benchmarking with detailed country reports with an overall comparative assessment.
2.4 Work package 4: Future policy formation towards resource efficiency

2.4.1 Objectives

- **Task 4.1 Policy frameworks**: Build a framework for ‘integrated’ policy setting based upon principles of best-practice policy formation and past success factors (as identified in WP3) and discuss/ validate it with the national agencies.

- **Task 4.2 Effect of policy frameworks in the market**: To analyze the different policy frameworks introduced in task 4.1 qualitatively and quantitatively. Financial support solutions defined in task 4.1 have been modeled to analyze their impacts on demand - in terms of reaching the NREAPs. As a first step, policies related to co-firing, advanced biofuel technologies and the resource efficient technologies were analysed. Results are presented in comparison to the baselines presented in task 3.2.

2.4.2 Major activities and achievements

**Task 4.1 Policy frameworks**

The aim of this Task was to build a framework for ‘integrated’ policy setting based upon principles of best-practice policy formation and past success factors (WP3). This was done by identifying potential solutions (policies & support schemes) for the cases analysed in WP2.

- All country policy frameworks and the one for EU were ready in M28 and validation with national stakeholders took place between M27- M32.
- The first versions were online in M33 and the final updates were delivered on M36.

The policy frameworks have also been discussed with market stakeholders in national workshops, interviews and consultations that took place through teleconferences and within the workshops organised by AEBIOM in year 3 (one in Brussels on May 2015 and two (Amsterdam & Brussels, March 2016).

**Achievements**

**Future integrated policy frameworks (for heat, electricity/ CHP and advanced biofuels) with balanced approach towards resource efficiency and competition and qualitative and quantitative assessment of their impacts towards meeting the NREAP targets (EU28 and participating MS).**

(D4.1), Thirteen reports, eleven national, one EU and one overall overview with the eleven participating countries.

Originally, in the Description of the Action, one 30- page report was foreseen. During the work it has been decided with the project partners and the national agencies to develop individual country reports with uniform structure as these would be more informative for the countries and also contain a good number of relevant quantitative indicators per selected value chain which could support policy discussions in them. The final deliverable comprises of:
• 11 country reports ranging from 20-25 pages each and one for EU (21 pages)
• An overview report providing comparative cross country information (40 pages)

**Task 4.2 Effect of policy frameworks in the market**

This task has **analyzed the different policy frameworks** introduced in task 4.1. Financial support solutions defined in task 4.1 will be modeled to analyze their impacts on demand - in terms of reaching the NREAPs.

**Achievements**

<table>
<thead>
<tr>
<th>Quantification of impacts towards meeting the NREAP targets from applying the balanced policy frameworks (EU28 and participating MS).</th>
</tr>
</thead>
</table>

The quantification of impacts towards meeting the NREAP targets for 2020 and beyond to 2030 has been made with the ECN RESolve model and for reasons of clarity, geographic coverage and appropriate depth of analysis, three detailed reports have been prepared:

- **D4.2a Effects of policy measures on selected priority value chains in eleven Member States**: This report has very detailed impact analysis for the selected feedstocks (Task 2.2), value chains (Task 2.3) and the financial part of policy frameworks as suggested in Task 4.1. In this report the financial support solutions suggested in task 4.1 for each of the eleven under study countries are qualitatively and quantitatively analysed. Quantitative analysis is done using the ECN RESolve models. The assessments are tailored to the country specific priorities that have been agreed upon with the national agencies of each Member State.

- **D4.2b Effects of policy framework in the bioenergy market**. This report contributes to the Biomass Policies project analysis at EU level by providing insights and recommendations on some of the key and cross cutting issues related to biomass and bioenergy. They have been addressed by model-based assessments and supporting study. The key issues addressed are:
  - The policy framework uncertainty beyond 2020 and the State Aid Guidelines.
  - The possible role of advanced biofuels in transport sector and how to support them.
  - The role of biomass co-firing, the recent trends on coal plants converting to 100% biomass.
  - The competition concerns between bioenergy sector and the bio-based products.

- **D4.2c Case Study Biobased Cluster at the Port of Rotterdam**. This case study focuses on a specific integrated biorefinery concept, namely the integration of bioethanol/polylactic acid (PLA) production and the co-firing of biomass in a coal-fired power plant at the Port of Rotterdam, with the ambition to contribute to the discussions around resource efficient use of biomass and to the development of integrated policies that promote resource efficient use of biomass in Europe. The specific objectives of the case study are to:
o Discuss the resource efficiency concept and some of its proposed indicators in a concrete case and provide recommendations on this;

o Analyse the possible role of existing bioenergy policy support instruments on the profitability of an integrated biorefinery concept;

o Discuss the possible future role of biomass co-firing in an integrated biorefinery concept.

2.4.3 Assessment of the performed work

The work has been rather challenging and intense within this work package as from the beginning the interactions with the participating countries and the respective national stakeholders had to be consistent and at a continuous pace. Difficulties have occurred when part of the generic data developed in the project (e.g. the biomass potentials) were being updated and this caused in a few cases lack of continuous flow of information.

However, all national partners were very committed to the project, acted responsibly and on time and organised the foreseen workshops (in a few occasions these were organised jointly with other initiatives to avoid stakeholder fatigue since countries like DE, AT, UK have extremely busy and well informed biomass agendas and many initiatives ongoing at the same time).

In addition to the foreseen workshops the national partners organised an open consultation (during May-September 2015) with dedicated country presentations, briefings and focus questions that have been prepared by the coordinator (Imperial) and checked by the responsible partner in each country.

Further to the work for the integrated policy frameworks (Task 4.1) this work package has exceeded the work plan and delivered extensive impact analysis modelling (using RESolve) within the participating countries and for 53 value chains, for critical policy developments in specific sectors (co-firing, advanced biofuels, etc.) at EU level and for a specific biorefinery case exploring how policy can impact the coexistence of energy (co-firing) and biobased materials.
2.5 **Work package 5: National Policy packages**

### 2.5.1 Objectives

- **WP5: (Task 5.1 Interactive platform with national agencies):** Create an interactive platform of national agencies and work closely with local administrations to map policy landscapes and identify gaps and trends at national level.
- **WP5: (Task 5.2 Iterative dialogue and communication with stakeholders at the national level):** Organise national workshops in all countries; the first one between months 6 to month 12 with the aim to: i) investigate regional barriers and ii) gaps in national legislation/ regulatory measures.

### 2.5.2 Major activities and achievements

**WP5**, task 5.1 Interactive platform with national agencies. It is operational within the website/ password protected.

To support the interactive dialogue of national agencies fifteen teleconferences were organised with all national agencies. The platform has been operational but has not been a very effective means during the project. One reason can be the fact that all the information was under development and individual workshops and consultations have taken place within the period, so stakeholders at national level had direct access to the information anyway.

The following Table provides an outline of the fifteen teleconferences that took place with the national agencies in terms of date and participating partners. The individual minutes are submitted as separate word files.

<table>
<thead>
<tr>
<th>Date</th>
<th>Participating partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>O4.07.2013 All except AEA, ECN, SIEA</td>
</tr>
<tr>
<td>2</td>
<td>30.09.2013 All except AEA, ECN, IINAS, FNR, AEBIOM, DLO SIEA</td>
</tr>
<tr>
<td>3</td>
<td>03.04.2014 All except AEA, DLO</td>
</tr>
<tr>
<td>4</td>
<td>30.06.2014 All except CRES, SIEA, IDAE</td>
</tr>
<tr>
<td>5</td>
<td>08.09.2014 All except CRES, SIEA, EIHP</td>
</tr>
<tr>
<td>6</td>
<td>27.10.2014 All except IINAS</td>
</tr>
<tr>
<td>7</td>
<td>03.02.2015 All</td>
</tr>
<tr>
<td>8</td>
<td>10.03.2015 All except SIEA</td>
</tr>
<tr>
<td>9</td>
<td>13.04.2015 All except DLO, SIEA</td>
</tr>
<tr>
<td>10</td>
<td>22.06.2015 All except EIHP</td>
</tr>
<tr>
<td>11</td>
<td>31.08.2015 All except IINAS, SIEA, IDEA, AEBIOM</td>
</tr>
<tr>
<td>12</td>
<td>28.09.2015 All except CRES, DLO, EIHP</td>
</tr>
<tr>
<td>13</td>
<td>02.11.2015 All except CRES, DLO</td>
</tr>
<tr>
<td>14</td>
<td>25.01.2016 All except KAPE</td>
</tr>
<tr>
<td>15</td>
<td>07.03.2016 All except DLO, AEBIOM</td>
</tr>
</tbody>
</table>

PoR participated only in one of the teleconferences since it was not in the scope of their work.
**WP5, task 5.2 Iterative dialogue and communication with stakeholders at the national level.**

The following Table provides a description of the 21 national workshops (UK had only one workshop) that took place with the national agencies in terms of date, topic of discussion and number of participating partners. The minutes are submitted as separate word files.

<table>
<thead>
<tr>
<th>Country</th>
<th>First workshop</th>
<th>No of participants</th>
<th>Second Workshop</th>
<th>No of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td>17.01.2014</td>
<td>28</td>
<td>02.06.2015</td>
<td>21</td>
</tr>
<tr>
<td>BE</td>
<td>18.03.2014</td>
<td>43</td>
<td>03.02.2016</td>
<td>34</td>
</tr>
<tr>
<td>DE</td>
<td>09.12.13</td>
<td>73</td>
<td>09.12.2015</td>
<td>14</td>
</tr>
<tr>
<td>ES</td>
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<td>15</td>
<td>30.10.2014</td>
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</tr>
<tr>
<td>FI</td>
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<td>23.03.2016</td>
<td>34</td>
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<td>GR</td>
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<td>12</td>
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<td>HR</td>
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<td>PL</td>
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<td>22.10.2015</td>
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<td>24.11.2015</td>
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<tr>
<td>UK</td>
<td></td>
<td></td>
<td>04.02.2016</td>
<td>40</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>287</strong></td>
<td></td>
<td><strong>255</strong></td>
</tr>
</tbody>
</table>

In addition to the events shown in Table above, all participating countries had online consultations to identify the aim of the policy framework and the key principles that should be taken into account for it.

**Task 5.3**

This report provides a set of ‘value chain’ specific recommendations for the under study value chains in the participating Member States for:

- the rationale for their selection,
- the expected added value from their implementation,
- national legislative measures which have been considered most suitable to include the policy recommendations, and
- a SWOT analysis for the recommended future policy interventions

Originally, the techno-economic justification for each value chain would also be included in this report but during the work this information has been included already from the stage of the integrated framework policy framework, so it is already included in Tasks 4.1, 4.2 and the dedicated country presentations that have been developed additionally for Deliverable D5.3.

**D5.4 Evidence of the active participation of national administrations in the policy platforms**

Lists with stakeholders are provided for all countries.

**D5.5 Commitment of 33 different biomass related sectors/associations/platforms to the suggested policy frameworks**
2.5.3 Assessment of the performed work

- The communication flow and discussions with the national partners has been enriched beyond the foreseen project meetings with a consistent set of 15 teleconferences (from 1-2 hours each, with specific agendas that were matching the ongoing work requirements). The teleconferences were an additional and very effective means of engaging the national partners, keeping track with work progress in the individual Member States and also ensuring a high responsiveness rate from their side.

- Communication with national stakeholders especially in agreeing the most important value chains has been proven challenging especially in Member States with advanced knowledge (there are already methodologies and assumptions developed at national level which do not always match with the one the project follows).

- Working with national agencies which are focused at energy and fuels made the understanding of policy related information from other non-energy sectors relevant to biomass difficult. The project recommendations for the non-energy sectors while they do reflect the key issues, they still require a good level of more quantitative analysis at national level.
2.6 Work package 6: Communication and dissemination

2.6.1 Objectives

- WP6: (Task 6.2 Workshops): Organise two EU-level workshops during the first year, on key issues covered in policy formation work (WP4).
- WP6: (Task 6.3 Communication material; leaflets, newsletters): To create a leaflet and the first (out of minimum six) newsletters.
- WP6. (Task 6.4 Website)

2.6.2 Major activities and achievements


Fourteen interviews that took place with the EU stakeholders. The interviews were performed with a uniform questionnaire which was part of the EU consultation for the selection of feedstocks, value chains and their individual responses are included in 6.1.

WP6, task 6.2: Workshops

The first workshop on Resource Efficiency has been organised in Brussels by AEBIOM on 27th November 2013. The second and third workshops on Mobilisation and Sustainability have been organised in Brussels by AEBIOM on 14 May 2014. The fourth workshop on energy efficiency took place on 5 May 2015 in Brussels, organised by AEBIOM, in parallel of AEBIOM annual bioenergy conference (4-5 May 2015). The fifth workshop was organised by AEBIOM, Imperial and ECN in Amsterdam, within the World Biofuels Markets (15th March 2016). In addition, AEBIOM and Imperial organised a workshop in the European Parliament to present the overall project findings at EU level (Brussels, 16th March 2016).

WP6, task 6.3 Communication material (leaflets, newsletters, briefings)

Six newsletters and 25 briefings have been produced. The first three briefings were based on general project findings while the other 22 comprise of two briefings per participating country and present i) the biomass cost supply and the selected value chains and ii) the integrated policy framework and the modelling results, respectively.

WP6, task 6.4 Website

The website development has been undertaken by Imperial (Partner 1) and has been active since Month 4 (end July 2013).

2.6.3 Assessment of the performed work

The work has been performed as planned. The only modification was the increased number of country related briefings which were produced in order to provide more material with national focus to the participating Member States.
2.7 Work package 7: IEE Common Dissemination activities

2.7.1 Objectives
WP7. Participation and/or contribution, upon request by the EACI, to events related to IEE or other relevant EU programmes.

2.7.2 Major activities and achievements

WP7
The coordinator participated on the workshop organised by EACI on 18th & 19th April 2013 in Brussels.

2.7.3 Assessment of the performed work
The work was performed as planned.