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European Forestry Commission

Joint FAO/UNECE Working Party
on Forest Economics and Statistics

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JOINT WOOD ENERGY ENQUIRY 2008

Report by the secretariat

Summary

This report aims to inform the participants of the thirty-first session Joint Food and Agriculture Organization (FAO)/United Nations Economic Commission for Europe (UNECE) Working Party on Forest Economics and Statistics about work achieved in the field of wood energy since the last session in March 2008, notably the second edition of the Joint Wood Energy Enquiry (JWEE). The document was written between late December 2008 and mid-January 2009. The limited information on quantitative results of the enquiry will be supplemented by an in-depth report before the Working Party meets.

To progress on data collection and to improve information on wood energy, the work of the UNECE/FAO Timber Section focused on the second edition of the Joint Wood Energy Enquiry. This process comprised the following main actions:

- (a) Revision of the structure with improved supplementary tables on definitions, conversion factors, data quality indicators and useful energy specialists contacts in member states;
- (b) Active data collection on wood energy with the revised Joint Wood Energy Enquiry;
- (c) Dissemination of information on the JWEE at wood energy workshops;
- (d) Improved cross-sectoral networking with the energy sector.

The work undertaken leads the discussion to the point where the Working Party is requested to consider how to continue the work to further improve the quality and availability of information on wood energy.

The delegates of the Working Party are invited to:

- (a) express their opinion on the JWEE process so far (structure / communication / time-line / improvements, etc.);
- (b) inform the Working Party about efforts to improve knowledge on wood energy at national level and whether the JWEE had contributed to this process;
- (c) provide guidance on future of the JWEE (repeat exercise in two years).

1. This document is produced in accordance with the programme of work as approved by the Timber Committee in ECE/TIM/2008/9 (paragraph 24) and “the needs at the international level for statistics and other information relating to the forestry, wood-processing and forest products sector” as stated in the terms of reference of the Working Party as approved by the Timber Committee in ECE/TIM/2008/7 (annex III, paragraph 2(a)).

I. PAST ACHIEVEMENTS ON WOOD ENERGY DATA BY THE UNECE/FAO TIMBER SECTION

2. Improved wood energy data has been a major focus of the UNECE/FAO Timber Section’s work in recent years. Considerable progress has been made since the 2003 Policy Forum. A comprehensive overview of the secretariats’ activities for the period 2003-2006 may be found in the report to the Working Party 2007¹.

3. Based on its experiences, the secretariats developed and conducted under the guidance of international experts the first Joint Wood Energy Enquiry. The data and results as well as a report were presented to the Working Party 2007 and may be found on the website of the UNECE/FAO Timber Section².

4. There was a need for a specialized dataset on wood energy, as wood energy is clearly the most important source of renewable energy in the UNECE region. However, international energy statistics do not account for energy from woody biomass and merge woody biomass with “solid biomass”. The first JWEE helped to better understand the importance of woody biomass for energy generation for both the energy and the forestry sector.

5. The submitted data were given in “forestry units”, such as m³, m³ bulk volume, metric tonnes, etc. Hence it enabled a direct comparison between use of woody biomass for material purposes by the forest based sector and the use of woody biomass for energy purposes.

6. The JWEE collected important information on wood flows that are not considered by the Joint Forest Sector Questionnaire (JFSQ) or other international forest and timber market assessments. It also collected data on agricultural residues and renewable municipal solid waste. Some countries, using e.g. national household surveys, were able to provide valuable information on so-called unrecorded wood removals and flows. Unrecorded removals should not be associated with illegal logging. It simply means that woody biomass can be traded on informal markets and is hence not accounted for by the statistical system. Countries’ experiences (Austria, Germany, France) indicate that these volumes may be significant.

7. Unrecorded removals are of very high interest when discussing current and future potentials of woody to satisfy the needs of both the energy and the forest sector. The issue of unrecorded wood flows, notably for energy generation by private households may significantly decrease domestic wood potentials.

8. The results of the JWEE helped to communicate this important information and its consequence of reduced potentials to the energy sector. Energy policies consider woody biomass as a main pillar to achieve future renewable energy targets (e.g. European Union (EU) Directive on Energy and Climate Change³).

9. Wood energy is likely to remain the most important renewable energy source for the next

¹ <http://www.unece.org/timber/docs/stats-sessions/stats-29/english/TIM-EFC-WP2-2007-06-WoodEnergy.pdf>

² <http://www.unece.org/timber/mis/energy/JWEE.htm>

³ <http://www.europarl.europa.eu/oeil/file.jsp?id=5589632>

decades despite technological and economic progress of other renewable energies, such as wind and solar. Yet it is unclear what impact second generation liquid biofuels from woody biomass will have on the sector.

10. The Eurostat working group “Renewable Energy Statistics” acknowledged in its background paper in November 2008⁴:

“Discrepancies between statistics on wood supply and consumption in countries where surveys of final consumption have taken place suggest that final consumption of wood is underestimated, mainly due to the non-commercialised share of wood used as fuel.”

The enquiry raised the visibility of the work done by the JWPFES over the last years and also helped to significantly improve the cross-sectoral communication with the energy sector.

II. CURRENT ACTIVITIES AND ACHIEVEMENTS 2008 – SO FAR

11. The successful results mentioned above in collecting wood energy data from UNECE member states is limited to the extent that these data only refer to a single year (2005). Hence data from the initial JWEE provide only a snapshot.

12. Since then energy prices reached record heights of over 140 \$US/bbl (spot Brent & West Texas Intermediate (WTI)⁵) crude oil in July 2008 and new energy policies resulted in important decisions on the future role of renewable energy sources, notably in the European Union and the United States⁶. By early 2009 however they had fallen below \$US 40.

A. Mandate and Revised Structure

13. In order to assess the development of wood energy since the first JWEE, the delegates of the Working Party 2008 decided that the secretariat should conduct a second edition of the JWEE.

14. Delegates of the Working Party 2007 decided that the structure of the enquiry should be modified according to the proposal made by the secretariat:

“Countries favoured the repeat of the JWEE on a 2-year cycle, so that the next exercise would take place in 2008, to record 2007 data. Countries reacted favourably to the revised structure for the JWEE and offered many helpful detailed comments.”⁷

15. The revised structure (see box 1 below) still asks the same questions and collects the same data as the first enquiry. The structures are comparable. The revision of the enquiry structure was necessary as the first version of the JWEE could not entirely exclude the possibility of double counting for some wood flows and use of wood fibres e.g. for pellets and briquettes.

⁴ http://circa.europa.eu/Public/irc/dsis/chpwg/library?l=/statistics_29102008/background_documentdoc/ EN_1.0_&a=d

⁵ Energy Information Administration - http://tonto.eia.doe.gov/dnav/pet/xls/pet_pri_spt_s1_d.xls

⁶ Energy Independence and Security Act of 2007 & National Biofuels Action Plan (<http://www.brdisolutions.com/default.aspx>)

⁷ <http://www.unece.org/timber/docs/stats-sessions/stats-29/english/TIM-EFC-WP2-2007-08-Report.pdf>

Box 1

Table I (T I) fibre sources: Domestically available woody biomass.

T II processed wood-based fuels: Transformation of woody biomass to wood based fuels such as pellets, briquettes, charcoal, etc.

T III fibre origin wood fuels: Detailed information on which wood fibres are used to produce processed wood fuels.

T IV energy use: Final wood energy transformation and consumption by ISIC classification.

T V conversion factors energy: Proposed conversion factors for converting various units to single unit of tonnes dry matter.

Definitions: Over 70 precise definitions, mostly based on international standards.

Quality indicators: Offer correspondents the possibility to indicate the data quality

Energy experts network: List of helpful contacts in many UNECE member countries.

T VII energy statistics: Specialized table exclusively for energy statisticians.

16. The revised structure precisely separates removals and trade data (“T I fibre sources”) from transformation data, such as pellets, briquettes and charcoal production and trade (“T II processed wood-based fuels”). Table I and II collect data in different units (m.t., m³, etc.). Conversion factors are used to convert the different units to the single unit of metric tonnes dry matter in the central Table IV.

17. Further, the revised structure focused strictly on woody biomass exclusively used for energy generation. Thus it no longer asked for woody biomass consumption for material purposes by the forest based industries. Only the production of processed wood based fuels is still included. This is necessary in order to assess the domestic production as well as the role of international trade (Import/Export) of these highly compressed and densified wood fuels.

18. To exclude double counting of wood fibres in the revised JWEE structure, it was necessary to ask in a first step for the exact type of woody biomass entering the processed wood fuel production (T III fibre origin wood fuels). This information was then used in a second step to calculate the net domestic supply. This was done by subtracting these volumes from the corresponding wood fibre source of the gross domestic supply (T IV energy use). See example in box 2.

Box 2

Country “A” reports production of 10 metric tonnes dry matter (t.d.m.) of sawdust. It imports 3 t.d.m. and exports 1 t.d.m. (Table I). Hence the gross domestic supply is 12 t.d.m. Two third of this volume is used to produce 8 t.d.m. of wood pellets (Table II & III). Consequently the domestic supply of sawdust decreases to 4 t.d.m. and the gross domestic supply of pellets is reported as 8 t.d.m. (assumed no international trade in Table II). Table IV takes these conversion paths into account and presents the cleansed figures as “net domestic supply”.

19. Table IV collects data on wood energy transformation and final consumption of wood energy. This table kept most of the structure from the first JWEE version. Its major improvement was that it uses metric tonnes dry matter as unified unit. This unit was chosen as the energy content of woody biomass heavily depends on the water content of the commodity. Another improvement is that the revised JWEE now clearly refers to the International Standard Industrial Classification

(ISIC) of economic sectors. Thus the JWEE refers to the same standard as the International Energy Agency (IEA) questionnaires.

20. The first version of the JWEE was already highly compatible with the energy questionnaires from the IEA. The revised version is now 100% compatible with the IEA structure and could hence easily supplement the dataset of the energy sector.

21. The secretariat, with the support of Wolfgang Bittermann of Statistics Austria, developed a specialized table (T VII energy statistics) exclusively conceived for national energy correspondents in order to facilitate better the cross-sectoral cooperation and communication with the energy sector. The colleagues from the IEA kindly offered to circulate this energy table among within their networks. The secretariat needed to take this approach as due to confidentiality reasons the contact details of the national correspondents remain with the IEA secretariat.

B. Conversion Factors

22. The energy content per unit – which is the focus of the JWEE – depends directly on the water content of the wood raw material. When raw materials are reported in volumes (e.g. m³), additional information on the specific gravity, measurement over or under bark as well as shrinkage need to be considered.

23. To improve compatibility with energy statistics and to ease comparability between the different wood fuels it was absolutely necessary to use metric tonnes dry matter as reliable and stable single unit.

24. However, the JWEE wants to allow the easiest data gathering possible in a first step. It therefore collects data on woody biomass supply, trade and transformation by their different “commonly” used units, often clearly defined by the Harmonized System (e.g. metric tonnes, m³ under/over bark, etc.). At a later step the data supplied feed into the central table “T IV energy use”, where any data show is given in metric tonnes dry matter (t.d.m.) as unique unit.

25. The secretariat collected a set of conversion factors from different specialized sources. The dataset represents the best set of conversion factors available, for the time being. However, there is a big scope for improvement. Therefore correspondents and specialists have been encouraged to modify the set according to their national conditions.

Question for delegates

26. The secretariat would welcome any comments and suggestions by delegates of the Working Party on the issue of conversion factors.

C. Definitions

27. During the first JWEE in 2006 national correspondents expressed their wish for very precise definitions and reference to international production, trade and economic activities’ classifications (e.g. Harmonized System, ISIC, etc.).

28. Therefore the secretariat developed and added an extensive table “Definitions” to the Excel version of the revised enquiry structure. Most of the over 70 precise definitions derive from international standards and definitions from various international or intergovernmental organizations.

Table 1 – Source of Definitions	
Wood fibres and forest resources:	Energy:
FAO: - Global forest resources assessment ECE/FAI/Eurostat/ITTO: - Joint Forest Sector Questionnaire ECE/FAO/MCPFE : - State of European Forests 2007 IUFRO: - Silva term database UNECE: - Basel Convention	IEA: - Balance builder FAO: - Unified Bioenergy Terminology - Forestry Paper No. 154 IPCC : - Good Practice Guidance for LULUCF

29. However, in a small number of cases it was necessary to refer to national, regional or informal definitions:

- (a) Austrian Energy Agency: Upper and lower heating values and mean oven dry density;
- (b) UK Biomass energy Centre: Synthesis gas and pyrolysis oil;
- (c) Wikipedia: Tall oil.

30. The secretariat welcomes any guidance from delegates of the Working Party on whether internationally agreed definitions of these items were available.

31. Based on the experience of the UNECE/FAO Timber Section study on Wood Resource Balances, the secretariat created only one new definition in order to cover any woody biomass flows that could occur: “Woody biomass outside forest” is defined as: *Any woody biomass arising from outside areas defined as "Forest". It includes woody biomass from "Other wooded land" and "Trees outside forests."*

Question for delegates

32. Again the secretariat would like to invite delegates to the Working Party to provide guidance and to give their opinion on this or other definitions used in the JWEE.

D. Quality Indicators

33. Delegates of the Working Party 2007 expressed the need to have a possibility to indicate the quality of the data submitted. This would help national correspondents to accept to include data from other sources than from official national statistics. Hence data from empiric studies, even though from previous years, and experts estimates could be more easily included in the revised JWEE.

34. The secretariat included an additional cell for every data field, where correspondents and specialists may include a quality indicator for the data provided.

Table 2 – Quality Indicators	
O	Official national statistics
A	Excellent data quality (e.g. empirical, robust data from recent study (2006-2008))
B	Good data quality (e.g. older studies with widely recognized precision or good expert estimate -based on more than one source)
C	Rough estimate (about right order of magnitude)
D	No information on data quality available

Question for delegates

35. The secretariat would like to invite delegates to the Working Party to state whether these data quality indicators were helpful and precise enough or whether further distinctions would be helpful.

E. Energy Experts Network

36. There may be International, regional and national projects in the area of renewable energy sources. Some of the projects cover to varying extents the issue of wood energy. The secretariat mentioned in previous discussions, publications and reports that information on wood energy is usually available at national level to a certain extent. However this information is often scattered and different sources and specialists are required to create a comprehensive dataset at national level. The secretariat added the table on “energy experts’ networks” in order to further facilitate the cooperation with different experts (often from research institutes) at national level.

Question for delegates

37. The secretariat would appreciate any comments by delegates to the Working Party on whether this information was useful and whether further improvement in this list would be desirable.

III. TIMELINE AND COMMUNICATIONS

38. All participants involved in the second edition of the JWEE were well aware since the beginning that the timeline of the exercise was quite ambitious. The secretariat aimed at presenting first results during the European Forest Week 2008 in Rome.

“Delegations drew attention to the short time between the provision of the pre-filled questionnaire and the initial response deadline and recommended various steps to take to alleviate this.”⁸

39. In order to ease the procedure for country correspondents, the secretariat offered two different deadlines for submitting their data. The first one on 12 September 2008 to submit preliminary data that would enable the secretariat to present (preliminary) results during the European Forest Week in Rome. The second deadline for submitting final data was set for 14 November 2008.

40. The secretariat decided further to take a stepwise approach and to inform member states as soon as possible about the revised structure, the expected reporting burden and the role of national

⁸ JWPFS 2008 <http://www.unece.org/timber/docs/stats-sessions/stats-30/english/report.pdf>

correspondents as national focal point. Hence, correspondents received the revised JWEE in Excel format and a “draft manual” explaining how to use the enquiry on 8 July 2008, right after the above described revision process. This first version did not contain any pre-filled data.

41. Delegations to the Working Party 2008 decided that the revised JWEE should be pre-filled to the maximum extent with forestry and energy data for 2007. Consequently the secretariat had to wait until these data were available after their revision processes. The preliminary dataset from the JFSQ with forestry data for 2007 became available mid July 2008. The secretariat waited for the energy dataset for 2007 from the IEA at the end of July 2008. To avoid any further delay in sending out the pre-filled enquiry, the secretariat decided to send out a version of the JWEE pre-filled with JFSQ data only on 29 July 2008.

42. The same version was also distributed to CEI-Bois. The industry association kindly offered to distribute the enquiry among their member organizations with the request to actively contacting national experts on wood energy. The associations were informed that the delegates to the Working Party 2008 decided that UNECE/FAO Timber Section may decide to accept only data submitted by the national focal point.

43. The IEA provided the set of global energy data on 30 July 2008 and the UNECE/FAO Timber Section provide national correspondents with a separate table on 31 July 2008.

44. The secretariat prepared a special version of the enquiry for energy correspondents with the objective of raising the awareness of energy statisticians and to facilitate cross-sectoral communication at national level. This special version included Table “T VII energy statistics” (in Terajoules), “T V conversion factors energy”, “definitions” and “quality indicators”. The colleagues of the IEA kindly offered to send this special version to 24 national energy correspondents on 3 September 2008. Energy experts from Austria, Canada and Finland confirmed that they are already cooperating with the forest sector on the JWEE and a correspondent from the Netherlands offered possible cooperation. Iceland, Slovakia and the US could not offer data or cooperation.

45. On 15 September 2008, just before the European Forest Week 2008, the secretariat sent out a message about where to find the documents and presentations of the event. This message also included a reminder on the second deadline.

IV. RESULTS SHOWN AT EUROPEAN FOREST WEEK WITH DECEMBER REVISIONS

46. This section is a short update on the first results of the enquiry that have been presented at the European Forest Week in Rome in October 2008⁹. The secretariat will submit a more detailed report with quantified, in-depth analysis prior to the Working Party 2009 meeting (in English language only).

47. The UNECE/FAO Timber Section successfully contacted 50 member countries by e-mail. As of 15 January, the secretariat received responses from 25 countries. Evidently, not every country mentioned above was able to provide an approximately complete dataset. Therefore the secretariat split the responses into four categories:

Full suppliers: Eleven countries were able to provide fairly complete set of data for the reference year: Austria, Switzerland, Finland, France, Ireland, Netherlands, Sweden, Slovakia, Slovenia, Serbia, United Kingdom.

⁹ www.unece.org/timber/docs/tc-sessions/tc-66/pd-docs/presentations/pde-steierer.pdf

Partial suppliers: Five responding countries provided a preliminary data-set that might be further completed in the future: Canada, Cyprus, Liechtenstein, Russian Federation, Turkey.

Work in progress: Six countries announced that they were not able to provide updated figures at present. Nevertheless, these responders confirmed that national studies are currently ongoing. These countries' responses have been categorized as "work under progress" – implying that they will probably be able to submit data in the review process in mid 2009: Albania, Cyprus, Estonia, Latvia, Lithuania, Norway.

Lack of data: Only three countries responded that they did not have the structure and capacity at national level to collect and supply the data requested: Armenia, Azerbaijan, Kazakhstan.

Non respondents: Feed-back and data responses from some important wood products' countries are still missing. The secretariat will therefore contact notably correspondents again, from: Belarus, Germany, Italy, Romania, Spain, Ukraine and United States (see activities before the Working Party).

V. DISSEMINATION

48. The secretariat presented the results of the JWEE process at different occasions and mentioned the relevance of the data collection in relation to other ongoing projects (such as the Task Force on conversions factors, the Task Group on wood availability, etc.).

49. The JWEE was presented on the following occasions:

- (a) UNECE/FAO Timber Section in cooperation with the Romanian National Forest Administration organized a workshop on "Modern Wood Energy Systems and Markets – an opportunity for south east Europe" on 16-17 September 2008 in Timisoara, Romania.¹⁰
- (b) The second wood energy workshop "Woody Biomass— the fuel of choice for Serbia" was jointly organized with the Faculty of Forestry, University of Belgrade in 2-3 December 2008 in Belgrade, Serbia.¹¹
- (c) At the European Forest Week the secretariat organized a Policy Dialogue on "Wood energy in the region: latest information and trends". The secretariat presented preliminary results of the revised JWEE in the keynote presentation "The UNECE/FAO/IEA/EU Joint Wood Energy Enquiry 2008 - Sources, users and development".¹²

50. The Eurostat energy section remains highly interested in learning more about the structure, methodology and preliminary results of the JWEE and invited the secretariat to give a presentation to the Working Group on "Renewable Energy Statistics" on 29 October 2008 in Luxembourg. The secretariat managed to communicate important messages via e-mail to the energy data specialists as none of the secretariat members was able to attend the meeting. The Eurostat working group concluded amongst others¹³:

- (a) "Information on biomass is currently reported in an aggregated form. Different components of biomass have different physical composition, origin and use, and

¹⁰ www.unece.org/timber/workshops/2008/timisoara/timisoara.html

¹¹ www.unece.org/timber/workshops/2008/belgrade/belgrade.html

¹² www.unece.org/timber/docs/tc-sessions/tc-66/pde.htm#top

¹³ http://circa.europa.eu/Public/irc/dsis/chpwwg/library?l=/statistics_29102008&vm=detailed&sb=Title

given the important contribution of biomass to the share of renewable energy, a further breakdown (e.g. wood energy comment by the secretariat) of these aggregated data is needed”;

- (b) “Although statistics on consumption of biomass in electricity and heating plants are of good quality, many Member States do not have reliable statistics on wood use in other sectors, such as households and services.”
- (c) “Discrepancies between statistics on wood supply and consumption in countries where surveys of final consumption have taken place suggest that final consumption of wood is underestimated, mainly due to the non-commercialized share of wood used as fuel.”

VI. ACTIVITIES TO BE FINISHED BEFORE THE WORKING PARTY

51. It has been clear since the beginning that the timeline of the revised JWEE was quite ambitious. As described above and thanks to the great support and efforts by national correspondents the secretariat holds quite a number of good replies. However, due to time constraints the secretariat was not able to provide more than a short qualitative assessment in this report. The UNECE/FAO Timber Section is therefore aiming at a more profound analysis of the responses. The objective is to prepare an in depth assessment and report shortly before the Working Party 2009. This report will be delivered in English only.

52. The secretariat will in addition send a last reminder to some important countries which did not yet respond to the data request. The secretariat is also aiming at updating the wood energy website of the UNECE/FAO Timber Section before the meeting.

VII. DISCUSSION OF RESULTS/ACHIVEMENTS/COMMENTS/FEEDBACK

53. Even though there is scope for further improvements in its structure and conversion factors, the revised version of the JWEE successfully proved that it is now fully operational. It is a unique tool that provides data on wood energy that are requested by the energy, climate and forestry sector. It is compatible with international questionnaires from energy and forestry statistics. Thus it is best placed to collect data on how current and future global economic conditions as well as decisions in energy policies will find their repercussion in the use of woody biomass for energy generation. It will be a unique source of information and will facilitate assessment of the development of wood energy in the future.

54. Consequently, this information will be very valuable to assess the actual wood potentials in member states and might also be of interest for the national Renewable Energy Action Plans that will be compulsory for any EU member state by 2013.

55. Even though quite a few member states encountered difficulties to supply all data requested, the main tenor was that the structure provided helpful guidance pulling together scattered information on wood energy at national level. Most of the UNECE member countries seem to be working on improved wood energy information and assure being able to supply a more complete dataset for a future enquiry.

56. The timeline and the deadlines of the JWEE 2008 proved to be quite ambitious – the latest responses were sent in late December. Based on this experience, the secretariat therefore would like to suggest that, in case delegates are in favour of a repetition on a biannual cycle, the deadline for submitting wood energy data should be set for the end of November and aim at presenting the results

to the Working Party of the subsequent year.

57. The following future actions are planned:

- (a) The UNECE/FAO Timber Section will follow-up important missing states and might consider directly contacting experts on wood energy data (Belarus, Germany, Italy, Romania, Spain, Ukraine and United States). The secretariat will circulate a draft report for data revision – with the final aim of a Discussion Paper and an on-line database on wood energy statistics.
- (b) In cooperation with the Latvian Ministry of Agriculture and Riga University, the secretariat will prepare a workshop on improved wood energy data collection on 3-4 June 2009 in Riga. The organizers are considering inviting specialists and experts from neighbouring countries.
- (c) Wood energy is one of the sub-criteria of the Ministerial Conference on the Protection of Forests in Europe (MCPFE) report on the “State of Europe’s Forests”. Results from the JWEE will be best placed to provide data on the criterion C 6.9 “Energy from wood resources” (share of wood energy in total energy consumption, classified by origin of wood). By request of the MCPFE process, the secretariat will provide the related data.
- (d) The data of the JWEE will provide very useful information to a future Forest Sector Outlook Study and other studies on current and future wood markets.
- (e) The secretariat will promote the knowledge and use of JWEE data, results and methodology to all relevant groups - researchers, official representatives (energy, forestry, waste etc.).
- (f) The secretariat will further improve and intensify cooperation and communication with the energy sector.

Question for delegates

58. The delegates of the Working Party are invited to:

- (a) express their opinion on the JWEE process so far (structure / communication / timeline / improvements, etc.).
- (b) inform the Working Party about efforts to improve knowledge on wood energy at national level and whether JWEE had contributed to this process.
- (c) provide guidance on future of the JWEE (repeat exercise in two years).
