



The Forests Dialogue

ENGAGE! EXPLORE! CHANGE!

Scoping Dialogue on Sustainable Woody Biomass for Energy

June 20-22, 2016 | Montpellier, France

Co-Chairs' Summary Report

By Cécile Ndjebet, Matthew Rivers, Klas Sander and Rod Taylor

INTRODUCTION

In partnership with the Sustainable Biomass Partnership (SBP), the Program on Forests (PROFOR), and the World Business Council for Sustainable Development (WBCSD), The Forests Dialogue (TFD) organized a scoping dialogue on the use of sustainable woody biomass for energy production. The venue and logistics for the dialogue were co-organized with the National Autonomous University of Mexico (IIES-UNAM) and the Stockholm Environment Institute (SEI).

Bringing together stakeholders and experts from business, civil society, government, research and development institutions – all with a common focus on the challenges and opportunities associated with expanding wood energy¹ use – the scoping dialogue had four key objectives:

- ➔ Confirm key areas of agreement and disagreement or “fracture lines”;
- ➔ Identify any additional issues areas and information gaps;
- ➔ Explore possible sustainable and climate smart wood energy solutions across stakeholder groups and end use contexts; and
- ➔ Determine if there is a dialogue-based path forward for stakeholders to make meaningful progress towards a common and compelling vision for a sustainable wood energy future.

¹ During the scoping dialogue the term “wood energy” was used more frequently than the longer “sustainable woody biomass for energy” and has therefore been adopted throughout the co-chairs’ summary.

TFD STEERING COMMITTEE 2016

Lennart Ackzell
Federation of Swedish Family Forest Owners - Sweden

Jennifer Baarn
SAGCOT - Tanzania

Chris Brown
OLAM – United Kingdom

Chris Buss, TFD Co-Leader
International Union for Conservation of Nature (IUCN) – Switzerland

Joji Cariño
Forest Peoples Programme (FPP) – United Kingdom

Amity Doolittle
Yale University – United States

Gary Dunning
The Forests Dialogue (TFD) – United States

Chris Knight
PricewaterhouseCoopers – United Kingdom

Werner Kornel
Profor - World Bank – United States

Skip Krasny, TFD Co-Leader
Kimberly-Clark – United States

Victor Lopez
Ut'z Che' - Guatemala

Antti Marjokorpi
Stora Enso – Finland

Chris Meyer
Environmental Defense Fund – United States

Eva Muller
Food and Agriculture Organization (FAO) - Italy

Ivone Namikawa
Klabin - Brazil

Cécile Ndjebet
African Women's Network for Community Management of Forests (REFACOF) - Cameroon

Isilda Nhantumbo
International Institute for Environment and Development (IIED) – United Kingdom

Milagre Nuvunga
MICAIA Foundation - Mozambique

Miriam Prochnow
Apremavi – Brazil

Matthew Reddy
World Business Council for Sustainable Development (WBCSD) – Switzerland

Augusto Robert
CMPC - Chile

Tint Lwin Thuang
The Center for People and Forests (RECOFTC) – Thailand



Co-Chair Klas Sander

A total of 37 participants² from more than a dozen countries took part in the scoping dialogue in Montpellier, France, starting on the evening June 20th concluding on the afternoon of June 22nd, 2016.³

This report summarizes key observations and discussions from the dialogue, including some proposed pathways forward for consideration by the TFD Advisory Group set up to prepare this scoping dialogue⁴ and by the TFD Steering Committee, its overarching governance body.

GETTING STARTED – WOOD ENERGY WITHIN THE INTERNATIONAL AGENDA

Terms of Engagement

Participants were briefed on TFD’s expectations including use of the Chatham House rule of non-attribution, active listening and respectful contributions.

Scope of this Dialogue

The primary focus was on solid woody biomass derived from a range of forest-based systems⁵ in a variety of forms – including fuel wood, charcoal, forest and processing residues and wood pellets – directly used for energy production. Forest-derived ‘secondary’ fuels (e.g. lignin, black liquor) and agricultural biomass are out of scope, but it was noted any future scope could change based on guidance generated by dialogue participants.

Background Paper

A TFD Background Paper⁶ pre-circulated to participants provided a brief baseline overview and understanding of key wood energy concepts and contexts. This paper remained in draft form throughout the dialogue and all participants were invited to submit any written



Co-Chair Cécile Ndjebet



Co-Chair Rod Taylor



Co-Chair Matthew Rivers

² Full participants list is provided as Appendix 1.

³ Dialogue program is provided in Appendix 2.

⁴ The Advisory Group involved some 15 stakeholders and was established by TFD in March to develop and steer this scoping dialogue and provide guidance on next steps.

⁵ Primarily sourced from production or “working” forests, intensively managed planted forests, agroforestry systems and Trees Outside Forests.

⁶ Prepared by James Griffiths, an independent sustainability adviser based in Geneva, Switzerland. Resources surveyed for the Background Paper were largely provided by the Advisory Group which reviewed and commented on any initial draft.

edits or comments for consideration in the final paper.⁷ The completed Background Paper can be found on TFD's website via [this link](#).

The draft Background Paper was presented in plenary. It included the following key points:

- The international development, climate change and energy security agenda is changing rapidly with renewable energy priorities emerging to meet growing energy demand.
- In many countries, meeting the significantly increasing demand for energy as a priority is coupled with the objective to increase the deployment of renewable energy options.
- This dynamic is strengthening the case for expanding deployment of renewable wood energy across Developing Country “traditional-household” and Developed Country “modern-industrial” contexts – essentially a continuum of growing use across many geographies, including:
 - Household cooking and heating and commercial use e.g. dry cleaning, restaurants, food production, bakeries, small-medium scale manufacturing,
 - Industrial - district heating and cooling, industrial and electricity utility use, manufacturing e.g. steelworks, textile, petro-chemical processes, agro-industry, large factories.
- Some stakeholders view the commonly made traditional v. modern distinction as historical and becoming less relevant as both contexts share sustainable production and consumption challenges associated with current use levels and, more significantly, future projected growth.
- Some stakeholders view the increased deployment of wood energy to meet expanding demand as carrying significant sustainability risks, especially in terms of carbon emissions and forest impacts.
- Traditional use is highly variable with challenges and opportunities ranging across forest management, land use, health, and gender aspects. Modernization of wood energy value chains (including production, processing, distribution and consumption) could generate substantial economic, financial, and social benefits as well as serve as a trigger for reforestation and restoration and associated emissions reductions. However, this will require significant mobilization of additional capacity building and development resources.
- Modern use is also widespread, with public policy processes in the US and Europe increasingly shaping renewable energy markets, in particular increased use in Europe, with wood chips and pellets now established as internationally traded commodities.
- The rapid expansion of the North American to European wood pellet sector and supply chain has become a trigger point of non-government organization (NGO) concerns relating to claimed versus actual carbon benefits of substitution, on-the-ground impacts on forests and management practices and the level of public subsidy for large scale wood energy use relative to other renewables.

⁷ Post the dialogue 8 participant submissions were made on the draft Background Paper spanning business, civil society, development and researcher stakeholders.



Background Paper author, James Griffiths

Based on the literature reviewed for the Background Paper, two wood energy facts across both contexts and many geographies were proposed:

1. Wood energy is already a primary source of renewable energy.
2. Wood energy will be an expanding primary source of renewable energy in future.

In relation to these two facts, it categorized a number of fracture lines that exist between stakeholder groups associated with the expanding use of wood energy:

- Forests and land use impacts,
- Greenhouse Gas (GHG) emissions and carbon balance, especially claimed carbon neutrality,
- Resource efficiency and the cascading use⁸ of wood materials into perceived higher value applications ahead of energy,
- Regulatory frameworks, governance capacity building and the role of independent verification of forest management and supply chains,
- Technology associated with intensification and scaling up wood energy use.



TFD Executive Director Gary Dunning

The paper concluded by making clear the interaction between public opinion and public policy on wood energy use. It noted that the willingness and ability of stakeholders to resolve these key differences will either prevent and delay or enable and accelerate the deployment of wood energy solutions to meet expanding demand for renewable energy.

Comments from Participants

A number of points were made by individual stakeholders during plenary discussions about the draft Background Paper:

- The discussion on the use of wood for energy should be embedded in the broader discussion of global forest priorities – such as the Bonn Challenge on restoration, the New York Declaration on Forests, and the UN Forum on Forests – which are important when considering the international development agenda.
- Some stakeholders also view the increase in demand for wood energy as a potential opportunity to meet reforestation and forest restoration targets (e.g. Bonn Challenge) as the forest value can provide an opportunity cost advantage in face of increase demand for land for agriculture as the main driver of global deforestation.



Breakout group work



Plenary discussion

⁸ There is no official or commonly agreed upon definition for cascading use. M. Carus, a researcher, has proposed “Cascading use of biomass takes place when biomass is processed into a bio-based final product and this final product is utilized at least once more either for material use or energy” (2014).

- Similarly, the wood energy discussion should also be linked to development objectives beyond the forest sector, such as the UN SDGs, although the relevance may be stronger for developing country contexts due to, for example, economic, employment, and gender effects.
- It was queried why the scoping dialogue was attempting to span both traditional and modern uses given local situations seem very different and circumstances are so site specific. Others felt it was appropriate and essential to bring these two “end use” communities together to evaluate and overcome future wood energy challenges.
- It can be important to consider all sources of biomass (e.g. palm oil residues, coconut husks, rubber wood) for use in energy generation as well as to understand the relative acceptability of different types of wood used for fuel (residues versus trees) in different contexts.
- Biofuels should be included in the scope as well as the projected expanding and alternative uses of wood (e.g. bio-chemicals) within a global “bio-economy”.
- While growth in traditional use is largely based on population growth, urbanization, and availability of local resources, industrial scale use in Europe is substantially based on climate policy and public subsidy which is a major concern because wood energy is perceived as not necessarily low carbon.
- Availability and affordability of local wood energy resources are important considerations – often in traditional use contexts there is no other affordable energy option which is different in Developed Countries where incomes are higher and alternative energy options usually exist.
- Technology at this stage does not seem to be a major fracture line – rather it could be a solution to help resolve some of the other fracture lines.
- Cascading use is a matter of perspective – while some may call for regulated use, others, such as resource managers, see sustainable production of wood as the underlying principle and its use as bioenergy as valid given renewable energy demand priorities and broader climate objectives. The use of wood for whatever end use is usually a function of local manufacturing capabilities and overall market demand.
- One challenge is indicators for sustainable forest management are often poorly integrated into sustainable wood energy standards, in particular relating to biomass production.
- When we consider that demand for biomass based energy could be three times current levels by 2050, two additional fracture lines are apparent:
 - We lack the data to make more robust inferences on future demand and supply scenarios – how to improve predictability of wood energy futures?
 - Speed of mobilization of wood energy resources to meet this projected demand – what strategies are optimal and acceptable?
- Critical concerns and campaigns about wood energy in one context (e.g. causing deforestation in Developing Countries, or wood energy carbon intensity relative to other renewables when used at industrial scale in Developed Countries) is undermining confidence in wood energy solutions globally as well as having potential knock-on effects about the overall sustainability of the forest products industry.



Martin Junginger

Sharing Stakeholder Perspectives

To further catalyze discussion, participants from six different stakeholder groups were invited to present brief perspectives about sustainable wood energy. Key points included:

- ➔ **Development NGO.** Wood fuel is often the only viable option for many poor communities with charcoal emerging as a preferred energy source for rapidly expanding urban populations. There is concern that the communication campaigns being waged against wood pellet use in large scale power generation in Europe are negatively impacting attitudes about broader bioenergy access and use across the traditional use contexts. Wood energy is often debated along a narrow climate and carbon dimension, when in fact it is a much broader, multi-dimensional, sustainable development issue.
- ➔ **Environmental NGO.** Clear distinction is needed between traditional and industrial use contexts. Biomass use is usually the only option in many Developing Countries, however NGOs anticipate per capita use over time would decrease due to greater efficiency. Wood fuel use in Europe drawing on suppliers in the US southeast, on the other hand, is subsidized specifically to address climate change via GHG reduction commitments. There is concern about the actual versus claimed carbon benefits of large scale wood for coal substitution – other forms of renewable energy have less carbon risk. There is a need to cascade the use of wood with energy being the final use. The sustainability of scaled-up current use in Europe or future industrial development in other geographies is unknown and could have many consequences for forests, biodiversity and food production.
- ➔ **Forest manager/regulator.** In countries where private owners are a significant feature, usually involving many small-scale operators, the existence and development of viable forest product markets, including wood energy, is a major factor in keeping forests as forests, improving management practices and maintaining ecological service delivery. It is important to find the “sweet-spot” between scientific rigor, operational flexibility and respect for private property rights. Strengthening inventory management and greater consensus about carbon accounting (e.g. time scale) is needed to build stakeholder trust and support for future wood energy use.
- ➔ **Development Institution.** It is important to change attitudes about wood fuel from being an old fashioned, high carbon form of energy to a more positive one based on an understanding and acceptance of its renewability, availability and low-carbon aspects for both domestic and industrial use. In development country



Tuyeni Mwampamba



Robert Nasi



Matthew Reddy

contexts, effective resource governance was critical as was control and management through integrated value chains (“from seed to ash”) to transform what is predominately an informal sector to a formal and well-regulated sector. Mobilizing the needed large scale finances to achieve this transformation is essential, e.g. while in parts of Africa wood fuel accounts for 80% energy demand, wood energy investments are only about 3%.

- ➔ **Researcher.** It is necessary to take a future perspective based on the reality that across many contexts and sectors biomass, including wood fuel, is one of the few options to significantly reduce carbon emissions and replace fossil fuel (and as a reducing agent), e.g. heat and power generation, shipping, cement, chemicals, plastics. Trying to quantify upper limits of biomass use is challenging, but we are clearly not approaching optimal mobilization. Public policy is also important to change behavior such as effective and widespread pricing of carbon emissions. Stakeholder concerns on sustainability in some geographies is based on rapid mobilization and supply chain development, disagreements on carbon accounting, time frames, counterfactual scenarios and, when it comes to international trade, the issue of displacement and indirect impacts.
- ➔ **Energy producer.** Maintaining network stability and energy supply security are important business considerations for power companies (and other industrial users of biomass) that are not well understood by other stakeholders. Based on government decisions to reduce GHG emissions, biomass, including wood energy, is the most viable and scalable option to replace coal. This can be done through converting existing plants – which have a 10/15-year time horizon – rather than building new facilities which represents a much longer investment horizon. This type of approach is transitional in nature and does not necessarily lock in biomass long term. Logistics associated with industrial scale biomass supply chains is important for economic viability. Companies monitor use of biomass by type (saw dust, forest thinnings), location and are aware of alternative resource use when they exist (timber and paper production). Differentiating between “good” versus “bad” biomass is important and business looks to others, like researchers, for guidance.

A letter signed by a number of European and US based activist NGOs was sent to most participants just ahead of the meeting. This unilateral input to the dialogue can be found on the TFD website.

Moving into Dialogue

Following these perspectives, plenary level discussion on key issues was continued. The following additional points were made:

- ➔ **Mobilization data.** Important to better understand future projections for renewable energy needs and the role of wood energy within this mix to then consider how to measure, manage and mitigate forest risks.



Sini Eräjää

➔ **International trade and markets.** Plays an important role in mobilizing wood fuel resources across geographies and matching supply and demand. While a big focus for wood pellets development, this could also be an important driver in modernization of the traditional charcoal supply chain, enabling market access and supporting local economic development.

➔ **Local context.** Is highly variable with many site specific factors – such as ownership patterns, formal and informal tenure rights, regulatory frameworks and markets, available energy options or wood use alternatives – which need to be considered when developing wood energy solutions across traditional and industrial contexts.



Group Discussion

➔ **Regulatory frameworks.** Many policies driving wood energy developments are climate related to reduce emissions. These need to factor in broader sustainability issues to avoid unintended impacts such as on forests and livelihoods. Independent certification frameworks (FSC/PEFC/SFI) are one existing option that can assist in managing these risks because they can verify on-the-ground management performance and chain-of-custody regardless of end product or use. Other policy tools are needed including carbon accounting and social impact indicators, regional risk assessments, use of supply side or demand side caps.



Cecile Ndjebet and Dorothy Otremba

➔ **Wood energy derived from what wood type.** While many stakeholders view processing and forest residues as acceptable for industrial wood pellet production, there is significant concern from some when roundwood with perceived higher value use is converted into pellets and a divergence of views in some geographic locations on what is actually happening on-the-ground.

At the conclusion of this session it was agreed that four of the key fracture lines around expanding wood energy use identified in the Background Paper would shape subsequent dialogue by participants – namely:

- i. Forests and land use.
- ii. GHG neutrality and carbon balance.
- iii. Resource efficiency and cascading use.
- iv. Regulatory frameworks.



Rob Bailis

FROM RENEWABLE TO A SUSTAINABLE WOOD ENERGY FUTURE – SCOPING SPECIFIC CHALLENGES AND OPPORTUNITES

Participants were randomly assigned across 4 groups with each group asked to address one of these fracture lines. Within the context of moving wood energy from a renewable to a widely accepted sustainable energy source, each group was asked to discuss and report back on three points – confirm areas of existing agreement, identify key challenges and pinpoint the contested assumptions underpinning these challenges.

Following discussion, each group reported and there was extensive plenary debate. The following key points on each fracture line were made.

GHG Neutrality and Carbon Balance

Agreements

- GHG impacts and carbon balance can be positive or negative and making this assessment will depend on, amongst other variables, the measurement methodology, approach and scope.
- On scope, this should be at the landscape level, taking into account a range of factors including volume extracted, soil dynamics, supply chain and consumption factors (e.g. efficient stoves) – which is challenging.

Challenges

- LCA methodologies – different approaches give different results depending on the scale, timeframe and other assumptions.
- Reference scenarios and counterfactuals – key issues including what is driving the consideration to use wood energy; what are the alternative wood use options and land use options (forests versus golf courses) and how robust are these – as they significantly affect GHG balance considerations.
- Underlying assumptions of growth and yield dynamics of forests and the use of units of measurement at different scales.
- Scale of current development (e.g. utility power generation) and future deployment (e.g. scaling up traditional and commercial in Sub Sahara Africa) is what is driving stakeholder concerns.
- Some felt more science is needed so taking a precautionary approach is appropriate, however others feel enough is known to make valid decisions and investment now given the risks of inaction.

Contested Assumptions

- Is wood energy carbon neutral? This will remain highly contestable because different stakeholders will use different assumptions, boundaries and approaches.



Plenary Discussion

Forests and Land Use

Agreements

- In discussing forests and land use, be as site specific as possible due to variability across and within geographies and contexts.
- Avoid blanket statements like “biomass for energy causes deforestation” – this may be the case in some specific situations and circumstances, but cannot be necessarily extrapolated to larger geographies or landscapes at broader scale.
- Differentiate between external drivers and local underlying causes of deforestation and forest degradation.
- Global demand for forest products is increasing and managed natural forests are nearing their limits of productivity, although further mobilization of resources through management may be possible in some locations.
- Supplying increased demand for forest products, including wood energy, will largely come from planted forests, short rotation woody crops and trees outside forests.
- It is important to manage the risks of natural forest degradation or conversion and associated biodiversity and ecosystem service loss.
- Tools and approaches already exist to manage risks and ensure supply chain transparency such as 3rd party certification schemes which have restrictions on conversions, or Free Prior and Informed Consent (FPIC) processes which allows trade-offs between owner rights and environmental approaches – but these are not always the right tools.
- Sustainability usually involves additional costs which the market (supply chain actors, governments, final consumer) needs to bear.



Nadine Block and Peter deMarsh



Peter Kristensen

Challenges

- How to incentivize and ensure appropriate deployment of planted forests (e.g. on degraded or unproductive land) and how to create an enabling environment to plant more trees.
- Variable regional and national policy frameworks on wood energy are already impacting many individual landowners across many geographies.
- In traditional use contexts, some governments are wanting to move away from wood energy. Policy frameworks and local regulations may not even recognize charcoal e.g. in Tanzania where it accounts for 90% of urban energy.
- Data is lacking in many Developing Countries on forests, agroforestry and tree resources and so current impacts and future supply potential are unclear.



Group discussion led by Peter Wilson

Contested Assumptions

- Fiber for pellets is coming from previously unharvested forests (e.g. high conservation value bottomland hardwoods) **versus** these forests were always available for harvest but market conditions have changed (e.g. less pulp/paper demand).
- Bottomland forests are wetlands and should not be harvested **versus** they are wet only part of the year and are dry at other times and available for harvest.
- Sustainability assurance can only come for forest unit level certification **versus** manufacturing mills can take on assurance through procurement policies and practices (e.g. SFI Fiber Sourcing) – but this may be challenging in areas with weak governance.
- More planted forests are environmentally damaging **versus** planted forests can relieve pressure on natural forests and are well suited to meet expanding demand and contribute to global restoration and reforestation objectives on degraded lands.
- “Whole trees” are being burned or used for biomass energy **versus** whole trees are being used, but these are not suitable for sawing to timber or are mostly thinnings from stands grown for sawn timber markets.

Resource Efficiency and Cascading Use

Agreements

- The economic principles of cascading use apply to the market allocation of biomass resources, which generally allocate to highest value use options when these are available.
- Wood pellets are derived from by-product feedstocks which have value and should not generally be considered as waste.
- In some markets, wood energy competes for by-products with other use sectors e.g. US pulp and paper.
- In some Developing Countries, intervention opportunities exist for the urban charcoal sector addressing pressure on local supply “hotspots” and expanding agroforestry and farm forestry production.

Challenges

- Wood energy may be a matter of choice in many Developed Countries, but in traditional use contexts it can be the only option with very significant livelihood and daily existence implications.
- Wood energy is largely formalized within Developed Country economies, while in Developing Countries it is usually informal, unregulated and can be illegal. This means when new technologies are available (e.g. efficient stoves, high yielding trees) there is little incentive to improve supply and production efficiencies.

- The lack of political will to modernize traditional wood energy use and supply chains is a major problem – but some tools are emerging to help make changes within this sector, e.g. EUEI/GTZ “BEST” bioenergy development guide.
- Regulating cascading use through public policy is challenging – and could cause perverse outcomes. Further, only some stakeholders are really concerned about wood energy feedstock types.
- Overall, there is considerable mixed messaging about the role and value of wood energy among forest stakeholders and civil society groups.

Contested Assumptions

- Higher demand for wood energy will draw on forest resources:
 - Some say this is inherently bad, and may lead to over exploitation.
 - Alternatively, there is a view that wood pellets as an international commodity can enhance sustainable production and forest economic resilience.

Regulatory Frameworks

Agreements

- Forest resources, while dynamic, could be negatively impacted when wood extraction is unregulated.
- Regulatory frameworks governing supply and demand are inconsistent across geographies.
- Pragmatic decision-support tools recognizing internationally agreed principles could help advance the wood energy debate.

Challenges

- There is a disconnect between the need to act now on climate change and limit temperature increases and calls for the use of the precautionary principle in terms of slower wood energy development and deployment.
- How to best use all existing forest certification schemes to improve practices and verify wood energy markets when some groups have strongly stated preferences and bias and are reluctant to engage, e.g. activist groups not attending this scoping dialogue.
- Local, unilateral regulations can be inefficient and operate as barriers to trade.
- Governance capacity is a major limitation in many Developing Countries to the legitimization and modernized of the wood energy sector, e.g. array of barriers exists, rent seeking from middle men, unclear land tenure and access rights.

Contested Assumptions

- Increase demand will drive deforestation in the US south and US forests overall are not being effectively regulated – however inventory evidence counters this and extensive Federal and State regulations and Best Management Practices set the framework for effective forest management.
- In the absence of international wood energy framework, industry can develop effective verification frameworks e.g. SBP which leverages FSC/PEFC/SFI.
- Feasibility of using caps as an effective regulatory approach to manage demand or supply e.g. Canada’s annual total allowable cut.
- Fuelwood and charcoal production in many Developing Countries are driving degradation and deforestation – but where is the hard evidence? More likely to be caused by agriculture.

THE WAY FORWARD – OPPORTUNITIES AND OPTIONS FOR STAKEHOLDER DIALOGUE

The Wednesday program started with a short co-chairs summary of Day 1 plenary and break out group discussions and some further reflections from participants.

Co-chairs’ Summary

Based on the previous day’s discussion on areas of agreement, challenges and contested assumptions, there seems to be linked but double-tracked agendas.

The North American/European wood pellet supply chain dominated discussions and overshadowed other important geographic and context specific developments. A few stakeholders seem to view trade in wood pellets as being inherently bad, similar perhaps to the food miles debate of the late 2000’s. For others, especially civil society groups, the concern is the scale and speed of development supported through subsidies without clear evidence that forest impacts can be managed and that wood energy positively contributes to climate mitigation. Scaled up mobilization also seems to be a catalyst for disagreement– how rapid or large might development be, “boom and bust” within the pellet sector, different views on availability of acceptable supply sources, exchange rate fluctuations and the dramatic drop in fossil fuel prices – have likely impacted on economic viability. Taking a “case study” approach to this industrial supply chain could be useful to understand developments through dialogue and better establish what is fact and what is fiction.

The second key theme is formalizing the wood energy supply chain in Developing Countries – charcoal use in urban, commercial and industrial applications in Sub Sahara Africa is a significant example although other regions also rely on wood for energy at unrecognized dimensions – and the very substantial social and economic benefits associated with modernization of the production, processing, distribution and consumption cycles across many geographies. With some governments ignoring or wanting to move

away from wood energy, even when this usually is the only affordable and available energy option, the major challenge is generating the political will to focus on wood energy as a development and climate priority. Further, mobilizing the public and private finance and development assistance resources and processes (e.g. REDD+) needed to modernize the traditional use sector, is an associated challenge where dialogue might support and help catalyze action.

Finally, some wood energy impact assessment and public policy options surfaced that cut across all contexts where stakeholders seemed to have quite diverse views – carbon accounting and associated LCA methodologies, the application of the precautionary approach, the cascaded use of wood resources and the use of caps to regulate supply or demand. Each of these, could also warrant further dialogue to narrow differences between groups and, if possible, build consensus positions. Accessing existing or developing new issue specific briefs could assist in any dialogue processes.

Further Reflections from Participants

The following additional points were raised in response:

- There is a concern that controversy about the climate credentials of industrial wood energy will flow over to the forest products industry with a strong sustainable forest management foundation which is confirmed through 3rd party certification. It would be a perverse outcome if as a result this sector is seen as being “the same” as higher energy and carbon intensive industries.
- Wood energy needs to move from a single dimension climate and carbon discussion to a broader multi-dimensional, sustainable development and future focused discussion.
- There are two distinct agendas – traditional use in the “South” linked to sustainable development and social objectives; and industrial wood energy in the “North” linked to sustainable forest management and climate objectives. Some felt that while each agenda can inform the other, they should be progressed via separate paths. Others, however, saw considerable value in stronger linkages under a combined sustainable wood energy theme anticipating there will be greater convergence in the future e.g. industrial use developments in the “South”.
- There also seemed to be an agreed need for better data on forests and tree crop resources available for wood energy and further investigation on the sustainability limits of resource mobilization e.g. how much bioenergy do we have now and how much do we need in future?
- Any future dialogue tracks for either theme would need to be well structured with clear objectives, a deeper understanding of context, active and broad stakeholder participation, pre-agreement on the intended potential outcomes and awareness and links with other platforms and processes focused on key aspects of wood energy e.g. Sustainable Development Goals.
- US supply chain actors confirmed a strong interest in dialogue with its NGO critics seeking to narrow or resolve or better understand differences on 4 key supply chain issues – forest management versus risk-based certification; what kind of wood is appropriate for bioenergy;

appropriate carbon emissions accounting; and the scale of wood energy development and whether or not this scale is responsible for forest conversion or degradation.

- Many of the contested assumptions that have surfaced might be addressed and “solved” through better data and/or dialogue to determine guiding principles or safeguards.

Final Breakout Groups and Report Backs

A second round of group work, involving participants in self-selected groups considered;

- When is industrial scale wood energy use, primarily for heat and power generation in Developed Countries, sustainable?
- How would you enable development of the household and commercial wood energy sector in Developing Countries?

Household and Commercial Development in the “South”

Enabling development of a modern wood energy sector in the “South” will require changes in political attitudes, public policies, resource governance, including clarification of tenure rights, and mobilization of resources for capacity building and investments across:

- Production, e.g. planted trees, fuel tree crops,
- Processing, e.g. collection, kilns,
- Distribution, e.g. urban, commercial and eventual off-grid and industrial wood energy use markets,
- Consumption, e.g. improved cook stoves.

Such a process should be based around resource efficiency and could deliver substantial social (e.g. gender, health) and economic (e.g. livelihoods, tax revenue) benefits.

Four suggestions were provided to focus future dialogues:

- i. Securing long term security over land and resources.
- ii. Adapting forest sector regulation – complicated in some cases, not enforced in others – and formalizing the supply chain and markets – so taxes get paid, middle men are cut out.
- iii. Providing incentives for efficiency improvements – change cultural attitudes, labor practices and technological improvements.
- iv. Enabling locally controlled forestry – local level cooperation, aggregation of wood, market development, access to finance, decriminalize the sector

While some specific cases exist of positive development in some geographies, these are not at scale and throughout the supply chain.

Industrial Scale Development in the “North”

Two groups tackled this brief. One group adapted the question to: “Under what conditions should wood be used in the energy market (heat and power) at industrial scale?” It further split its views into two parts:

- Up to the forest gate:
 - Sustainable forest management needed to be a prerequisite regardless of end use,
 - Identify and avoid any perverse management outcomes – over harvesting, peatland deforestation, extensive conversion of natural forest areas to plantations,
 - Demonstrate sustainability including through forest certification,
 - Use carbon accounting and include it into management plans and verification through certification schemes,
 - Find a solution to spread forest certification across multiple small land owners,
 - SBP is a risk based certification approach for industrial wood energy use
- Beyond the forest gate:
 - Need to agree on how to determine carbon balance – a challenge when some groups claim wood energy is “dirtier than coal”.
 - LCA is a key but complex tool – payback periods are a function of species, climate, harvest management; counterfactual scenarios are diverse (compared to what fossil fuel, assumption the forest will remain, but not always the case)
 - Projecting the 2050 global emissions balance, future energy needs and the expanding role of renewables including wood energy is challenging.
 - Need to appreciate most renewable options to wood energy have unintended impacts on forest resources as well, including the associated support infrastructure (e.g. hydro, solar, wind, geothermal often require access to forest areas).
 - Subsidy issues are complex – coal is supported in many ways, is subsidizing biomass markets unfair to other fiber uses because wood energy sector can pay more?
 - Expanded use of wood as a building material has significant carbon benefits and is not mutually exclusive to wood energy growth based on utilization of the expanded availability of thinnings and processing residues. This can be influenced through building standards but avoid directed use or prescribed cascading.

This group proposed two ideas to move the dialogue forward:

1. Look at the sustainability of the energy system as a whole rather than a narrow focus on wood energy including – LCA of wood energy and other renewable and fossil fuel options; assess optimal structure to delivery security of supply and carbon benefits; and the place and role of wood energy within this structure.
2. Structured dialogue to produce fact sheets and perspectives on carbon debt – based on transparency; draw together existing key findings (IPCC); debate the models, systems and boundaries; generate understanding on appropriate wood energy use (could use a questionnaire approach).

The second group remained focused on the original question and provided these points:

- There was agreement that there are conditions for industrial scale wood energy that are sustainable with most of the key conditions and criteria under discussion in Europe at the Member State and EU level – e.g. LCA to determine net climate benefit, biodiversity, sustainable forest management and cascading use – however some of these conditions are politically compromised.
- As scale of use increases, so does the associated sustainability challenges including sustainable forest management capacity.
- Resource mobilization, adaptive forest management, utilization of alternative fibers and non-merchantable wood, optimal tree species are ways forward to meet future wood energy and broader bio-based economy demand.
- Wood energy boundaries are currently set by political processes but should be better informed by sustainability science and evidence based research, especially better data.
- Subsidies and regulations should be harmonized between the energy and forestry sector to avoid displacement and system leakage.

WRAP-UP AND NEXT STEPS

In the final plenary, discussions focused on whether and how dialogue could progress development of a sustainable wood energy future.

There was general agreement that further structured dialogue with clear objectives and outcomes focused on current and future wood energy challenges and opportunities was needed.

To make progress, parallel dialogue tracks should be considered – traditional & commercial use/South and industrial & utility use/North – but linked to allow cross fertilization of thinking, reporting on progress, sharing of case studies and best practice learning as well as joint discussions on cross cutting issues e.g. carbon accounting/LCA, sustainable forest management.

These dialogues would benefit from a well-planned field visit program (e.g. North America, Sub-Saharan Africa) to illustrate on-the-ground challenges and opportunities already identified as the fracture lines and contested assumptions by this scoping dialogue. These dialogues should be well informed on critical issues drawing from existing science and policy literature but also through purpose developed facts sheets and illustrative case studies.

For future dialogues on this topic, complimentary experts on key topics need to be invited to deepen the discussions e.g. carbon accounting and analysis and sustainability issues. Further, it is essential to involve critical but “missing” stakeholders such as government officials in the traditional/South dialogue stream and activist NGO’s and policy makers in the industrial/North dialogue stream. In some cases, especially the US Southeast, participation of missing groups would be essential if the dialogue was to be worthwhile.

These dialogue programs could be planned using a staged and timetabled approach to build confidence, momentum and participation and address linked key issues on a sequential basis. This would also allow consideration of the full range of factors associated with the sustainable production, processing, distribution and consumption of wood energy.

In closing, the TFD secretariat indicated the two days of robust discussion had largely achieved the scoping dialogue’s objectives of confirming areas of wood energy agreement and disagreement, identifying some key information and issues gaps and, at a preliminary level, exploring potential solution areas and future dialogue opportunities.

The following next steps were outlined:

1. The draft background paper remained available for final comments by close of business June 24th.
2. A Co-chairs summary will be prepared and a draft copy will be circulated to all dialogue participants by mid-July for comment before finalization.
3. The summary will be used to brief the TFD Advisory Group and sponsors that have supported this scoping dialogue and will provide the basis for considering any further TFD wood energy dialogue initiatives as suggested by participants over the last two days.
4. Any participant wanting to join this Advisory Group should contact the TFD secretariat directly.
5. All scoping dialogue materials will be posted on the TFD website by late July/early August.
6. Finally, any next steps will require support by TFD Steering Committee as well as adequate resourcing by leading stakeholder groups wanting to progress sustainable wood energy outcomes.

APPENDIX 1 – PARTICIPANTS LIST

Rob Bailis	Stockholm Environment Institute
Michael Berger	PEFC
Nadine	Block SFI
Peter deMarsh	International Family Forestry Alliance
Philip Dobie	ICRAF
Gary Dunning	The Forests Dialogue
Sini Eräjää	Birdlife Europe
Tim Foley	Southern Group of State Foresters
Parfait Gasana	The Forests Dialogue
Adrian Ghilardi	UNAM
Seth Githner	US Industrial Pellet Association
James Griffiths	James Griffiths & Associates
Edward Hewitt	TNC
John Hontelez	FSC
Carsten Huljus	Sustainable Biomass Partnership
Jen Jenkins	Enviva LP
Martin Junginger	Utrecht University
Skip Krasny	Kimberly-Clark
Peter Kristensen	Dong Energy
Diana Mangalagiu	Oxford University
Ruth Metzel	The Forests Dialogue
Gordon Murray	Wood Pellet Association of Canada
Tuyeni Mwampamba	UNAM
Robert Nasi	CIFOR
Cecile Ndjebet - Co-Chair	REFACOF
Dorothy Otremba	GIZ
Matthew Owen	Kikenni Consulting Ltd.
Mohammad Rafiq	Sustainable Futures Worldwide
Matthew Reddy	WBCSD
Heikki Rissanen	Stora Enso
Matthew Rivers - Co-Chair	Drax Group
Klas Sander - Co-Chair	World Bank
Rod Taylor - Co-Chair	WWF International
Peter Wilson	Sustainable Biomass Partnership
Zuzhang Xia	FAO

APPENDIX 2 – DIALOGUE PROGRAM JUNE 20/22ND 2016



CONVENOR



CO-ORGANIZERS



FINANCIAL SUPPORT



THE FORESTS DIALOGUE

ENGAGE! EXPLORE! CHANGE!

Scoping Dialogue on Sustainable Woody Biomass for Energy
20-22 June 2016 – Montpellier, France

Location

Mercure Montpellier Centre Antigone Hotel
285 Bld De L'aÉroport - International-Antigone, 34000
Montpellier, France
+33 4/67206363
www.mercure.com
H1544-GM@accor.com

Objectives

- Confirm key areas of agreement and disagreement or “fracture lines”;
- Identify any additional issue areas and information “gaps”;
- Explore possible sustainable and climate smart energy solutions for communities, business (forest owners, biomass producers, and power generators), NGOs, regulators, certification schemes, and other key stakeholders from across multiple contexts;
- Determine if there is a dialogue-based path forward for stakeholders to make meaningful progress in achieving a common and compelling vision for a sustainable wood energy future.

Dialogue Co-Chairs

Cécile Ndjebet – REFACOF
Matthew Rivers – Drax
Klas Sanders – World Bank
Rod Taylor – WWF

Dialogue Agenda

Monday, 20 June

18:00 Welcome – **Gary Dunning**

- Introductions
- Scoping Dialogue Overview – process and rules of the game

20:00 Adjourn for the evening

Tuesday, 21 June

08:30 Opening Remarks – **Co-Chairs**

09:00 Presentation of Background paper – **James Griffiths**

10:30 “Stakeholder” perspectives on a vision for a sustainable wood energy future

The Forests Dialogue, 360 Prospect Street, New Haven, Connecticut, 06511, USA

Agenda

Scoping Dialogue on Sustainable Woody Biomass for Energy
20-22 June 2016 - Montpellier, France

- 11:15** Break
- 11:30** Plenary Discussion: key issues from background paper and stakeholder perspectives
- 12:30** Lunch
- 13:30** Introduce and organize Breakout group work
- 14:00** Breakout Groups: further identify and prioritize key challenges in sustainable production
- 15:30** Break
- 16:00** Breakout Groups: report back
- 17:30** Adjourn for day
- 19:00** Group dinner

Wednesday, 22 June

- 08:30** Summary of Day 1 - **Co-Chairs**
- 09:00** Key Concepts learning session
- 10:00** Breakout Groups: What do we need to seek a more sustainable wood energy future?
- 11:30** Break
- 11:45** Breakout Groups: report back
- 12:30** Discuss initiative going forward including possible next dialogues
- 13:30** Agree on follow up and wrap up
- 14:00** Adjourn