

Summary of IEA Bioenergy Task 43 Workshop
“Mobilizing Sustainable Supply Chains for Forest Biomass for Energy”

Charleston, South Carolina

21 February 2012

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The workshop opened with a greeting from the local host, Marilyn Buford from US Forest Service in Washington, DC who spoke about the history and cultural richness of Charleston, South Carolina. Tat Smith, Associate Task Leader of Task 43, from the University of Toronto gave a short introduction to the purpose and work activities of Task 43 as it relates to mobilizing sustainable biomass feedstocks to promote economically and environmentally feasible bioenergy production worldwide.

Session I addressed supply chains and feedstocks, with talks by Marilyn Buford, Antti Asikainen from the Finnish Forest Research Institute, and Ger Devlin from the University College of Dublin. Marilyn Buford discussed the US Billion Ton Update report, recently released by the US Department of Energy in 2011. She described the methodology involved in making the analysis, identifying how food, fuel, fiber and land use changes were specifically addressed. Antti Asikainen discussed the recently released EU Report on Wood, which identified some of the limiting factors to biomass production in the EU, including storage space, cost of investment for processing equipment and labor shortages. Ger Devlin from the School of Biosystems Engineering at the University College of Dublin analyzed logistical challenges in developing supply chains for co-firing peat with woody biomass for power generation in Ireland. He described through GIS analysis how competing uses for biomass may act as a major constraint to biomass production. Following the presentations there was a short panel discussion in which questions were raised about supply projection methodologies, and how climate change can be factored into supply projections for biomass feedstocks. There were also several questions concerning the amount of imports coming into the EU and where those imports may come from, both now and in the future.

Session II was titled “Improving existing supply chains” and the first speaker was Raffaele Spinelli, from the Trees and Timber Research Institute in Italy (CNR-IVALSA). He discussed the operational challenges of forestry in Italy due to the mountainous landscape and his analysis to identify the most cost effective harvesting and biomass production methods for these conditions. His work included comparing different methods of harvesting such as bundling, on-site chipping, and examining storage methods of slash, and hauling logs offsite. Robert Prinz, from the Finnish Forest Research Institute, discussed his and Dominic Röser’s ongoing work to improve the operational efficiency of biomass supply chains in different operational environments. The second panel discussion involved questions about how to ensure that investments made into biomass production are evenly distributed along the supply chain, using the case of EU investments in the US Southeast as an example. Questions about the necessary amount of residue to leave for environmental purposes were also raised. Spinelli mentioned that in Italy it is difficult to leave residues on-site, since steep terrain requires whole-tree extraction to a landing, and as a result, most of the debris left on-site is from felling-related breakage. Asikainen provided retention numbers from 30 to 35% for Finland and Sweden, highlighting the fact that that green residue from needles or leaves isn’t wanted for commercial scale bioenergy production. A discussion was also initiated about an increase in roundwood for bioenergy, and what the

environmental or economic implications of this may be. Additional comments were made about the need to incorporate operational challenges into regional assessments of resource availability.

“Mobilizing sustainable supply chains” was the title of Session III and the first speaker was Tat Smith. He discussed the enormous potential of woody biomass in Canada, and about the need for reasonable and realistic resource assessments, in a manner that is fundamentally cost efficient and environmentally responsible. Evelyne Thiffault from the Canadian Forest Service discussed the various possible interfaces between research on ecological and logistical aspects of forest biomass harvesting. She outlined the efforts being made to integrate ecological constraints into modelling of forest biomass supply chains. Finally, Inge Stupak from the University of Copenhagen discussed how ecological constraints on biomass resource levels are implemented, using the EC RED guidelines as a primary example. This was followed by a lively panel discussion about which variables should be included in ecological constraints. This moved into a discussion about the need for simplification of certification systems, and addressed the difficulties faced by scientists when conveying uncertainty to policy makers.

Session IV was a moderated discussion on “Sustainable supply chains under construction”. Brian Kittler from the Pinchot Institute gave a short introduction to the session, evaluating the different methods of demonstrating sustainability that exist within the US. Aside from certification, those methods may include implementation of BMPs, and voluntary biomass guidelines. The first speaker was Keri Crosby from FRAM Renewable Fuels. She analyzed the ways in which EU investments are shaping and influencing the pellet industry in the United States, and discussed the need for communication along the entire supply chain to ensure sustainability and efficient trade. Nathan McClure from the Georgia Forestry Commission analyzed the methods employed in Georgia to encourage landowner adoption of sustainable practices. These methods included the Forest Stewardship Program, programs run by the Association of Consulting Foresters of America, and the adoption and promotion of best management practices. The final speaker of that session was Ben Larson, on behalf of the Environmental Defense Fund, who evaluated the environmental perspective of sustainability practices in the US South. Ben Larson used a case study of a power plant in Florida with sustainable procurement policies for biomass sourcing to demonstrate another method of ensuring supply chain sustainability in the USA. The panel discussion revolved around the need for communication among different actors (such as the EU pellet consumers and the US pellet producers) to develop inclusive sustainability principles that facilitate trade rather than hamper it. The necessity for certification was debated, using the US South as a case study due to its low percentage of certified land and high measures of sustainability.

The final presentation was given by Tanja Ikonen from the Finnish Forest Research Institute, who discussed the efforts of IEA Bioenergy Task 43 to build an economic case for forest-based biomass utilization. She outlined the work that has been done so far, and the anticipated timeline to completion of this project. This was followed by closing words from Tat Smith, who summarized the themes of the day and again highlighted the importance of continued collaboration among all actors to ensure that biomass supply chains are sustainably optimized. That concluded the workshop for the day.