

IEA Bioenergy Task 39
Commercializing Conventional and Advanced Transport Biofuels from Biomass
and Other Renewable Feedstocks

Draft Meeting Minutes and Agenda

IEA Bioenergy Task 39 Virtual Business Meeting
Monday-Wednesday, 19-21 April 2021

Attendance:

Monday, 19 April 2021

Alok Satlewal, Adrian O’Connell, Cecilia Higa Gonzales Morilla, Dina Bacovsky, Duncan Akporiaye, Franziska Müller-Langer, Glaucia Mendes Souza, Jack Saddler, Jianping Su, Jim McMillan, Johan van Doesum, Jose Muisers, Leif Jönsson, Mahmood Ebadian, Nicholas Islongo Canabarro, Oshada Mendis, Pablo Silva Ortiz, Paul Sinnige, Ravi P. Gupta, Rubens Maciel Filho, Tomas Ekblom, Toshiaki Kimura, Steve Rogers, Sune Tjalfe Thomsen, Susan van Dyk, and Yuta (“Shibby”) Shibahara.

Tuesday, 20 April 2021

Adrian O’Connell, Cecilia Higa Gonzales Morilla, Dina Bacovsky, Don O’Connor, Glaucia Mendes Souza, Jack Saddler, Jianping Su, Jim McMillan, Johan van Doesum, Jose Muisers, Leif Jönsson, Mahmood Ebadian, Nicolae Scarlat, Nicolaus Dahmen, Nicholas Islongo Canabarro, Oshada Mendis, Pablo Silva Ortiz, Paul Sinnige, Ravi P. Gupta, Rubens Maciel Filho, Tomas Ekblom, Toshiaki Kimura, Sune Tjalfe Thomsen, Susan van Dyk, and Yuta (“Shibby”) Shibahara.

Wednesday, 21 April 2021

Alok Satlewal, Adrian O’Connell, Andrea Sonnleitner, Cecilia Higa Gonzales Morilla, Dina Bacovsky, Duncan Akporiaye, Franziska Müller-Langer, Glaucia Mendes Souza, Jack Saddler, Jim McMillan, Johan van Doesum, Jose Muisers, Leif Jönsson, Mahmood Ebadian, Nicolaus Dahmen, Nicholas Islongo Canabarro, Pablo Silva Ortiz, Paul Sinnige, Ravi P. Gupta, Rubens Maciel Filho, Tomas Ekblom, Sune Tjalfe Thomsen, Susan van Dyk, and Yuta (“Shibby”) Shibahara.

Regrets: Kyu-Young Kang, Paul Bennett, Michael Persson, Seonghun Park, Shiro Saka, Stephen Dooley, Jin-Suk Lee.

Similar to the business meetings in 2020, this first Task 39 business meeting of 2021 was held virtually, using Zoom; the originally planned meeting to be held in Denmark was cancelled in light of the ongoing global COVID-19 pandemic. The meeting agenda comprised: a) country updates; b) current triennium project updates; c) next meeting/newsletters; and d) proposed work for the next triennium (2022-2024). To accommodate these agenda items, the Task business meeting was organized into three, 2-hr sessions on Monday 19 April, Tuesday 20 April and Wednesday 21 April, as shown below.

Task 39 April Business Meetings Start Times by Geographic Region (Meet for 2 hours each day)			
Region	Day 1 - Monday 19 April 2021	Day 2 - Tuesday 20 April 2021	Day 3 - Wednesday 21 April 2021
Denver, USA	6:00 am	1:00 pm	7:00 am
Vancouver, Canada	5:00 am	12:00 pm	6:00 am
Central European Time	2:00 pm	9:00 pm	3:00 pm
Auckland, New Zealand	12:00 am (midnight)	7:00 am (Wed)	1:00 am (Thursday)
Sydney, Australia	10:00 pm	5:00 am (Wed)	11:00 pm
Tokyo, Japan	9:00 pm	4:00 am (Wed)	10:00 pm
Seoul, South Korea	9:00 pm	4:00 am (Wed)	10:00 pm
New Delhi, India	5:30 pm	12:30 am (Wed)	6:30 pm
Sao Paulo, Brazil	9:00 am	4:00 pm	10:00 am

Individual member country updates were presented on the first day and first half of the second day of the meeting. After the country reports, on the second and third days, the project leaders presented progress updates for their respective projects. On the third day, future meetings/newsletters and the “proposed work for the next triennium” were discussed. To facilitate more effective discussion within the Task 39 business meeting, a copy of the Task’s draft prolongation proposal for the next triennium (submitted to the IEA Bioenergy ExCo in mid-March) had been distributed to Task 39 membership prior to the meeting.

1. Welcome and Introduction

Jim McMillan (Jim M.) called the meeting to order at 14:00 CET (5:00 PST) on Monday 19 April, welcoming Task 39 members to the first Task 39 business meeting of 2021. Jim M. thanked everyone for joining the meeting and then reviewed the meeting agenda which was structured to provide updates of the Task 39’s activities and progress since the Task’s last virtual meeting held in November 2020; this information was briefly reviewed in an introductory presentation. Since the November meeting, the Task has: published newsletter #56 (profiling India); organized and hosted (in December 2020) a joint webinar panel discussion with the [BC-SMART Biofuels Consortium](#) entitled “Decarbonising the Marine Sector: Progress and Aspirations?”; prepared the draft Task 39 prolongation proposal for the next triennium, incorporating suggestions and ideas shared in advance of and during the February Task 39 brainstorming session; submitted Task 39’s working prolongation proposal (“Programme of Work for 2022-2024 triennium and budget spreadsheet”) to the IEA Bioenergy Executive Committee in advance of the ExCo87 meeting (virtual) in May; and two draft project reports were distributed to Task 39 membership for internal review and comments, the drop-in “biojet” and updated “biomarine” reports, formally entitled, “Progress in commercialization of biojet /Sustainable Aviation Fuels (SAF): Technologies, potential and challenges” and “Progress towards biofuels for marine shipping” respectively.

At the end of this presentation, Jim M. and Jack Saddler (Jack) briefly described the status and breakdown of Task 39’s 2020 budget which had also been submitted to the IEA Bioenergy ExCo.

2. Country Updates

On the first and second days of the Task meeting, Task member country representatives (or national team leaders, NTLs) presented updates on recent biofuels-related developments, especially policies and biofuel production/use in their respective countries. All member countries excepting New Zealand presented country updates. (Paul Bennet (New Zealand’s NTL) had previously indicated that he would not be able to attend the Task meeting),

Rather than repeating/summarising the country updates, Task 39 members are encouraged to review the PowerPoint files directly via the members-only part of the Task’s website.

A copy of the presentation slides and the recording of the virtual meeting are posted on the “Members Only” section of Task 39 website (please contact Mahmood if you have difficulty accessing them). **The password is T392021.**

3. Current Triennium Project Updates

On the second and third days of the business meetings, the various project leaders described “project progress”, highlighting the steps that will be taken to complete their respective projects by the end of the triennium.

Copies of the project leaders’ slide decks are posted in the “Members Only” section of Task 39 website.

4. Proposed Work for the Next Triennium (Group Discussion)

To initiate the discussion, Jack thanked everyone for providing feedback on the circulated, draft proposal. Feedback was largely supportive, with the vast majority of colleagues supporting the Task continuing many of its ongoing activities. All of the project “champions” who had been leading their respective projects all indicated their interest in continuing in these roles. The concept of “leveraging” in-house expertise (and possible additional in-house support) to better enable and support the Task 39 projects was also widely supported. This type of leveraging remains key for the Task to deliver on its ambitious program of work, with its limited budget. A widely shared concern among membership was that many projects were being proposed and that it is unlikely that they could all be successfully completed. Specific projects that the membership strongly supported include: Biomarine/Low CI shipping, SAF/biojet fuel aviation, lessons learned (Inter-Task), biofuels status and opportunities in non-IEA Bioenergy countries/emerging economies, and the implementation agendas compare and contrast of biofuels policies project.

Although some proposed activities were questioned by some members (e.g. Algal Biofuels), these activities were supported by others.

To summarise the feedback received so far, on the draft proposal, there is significant support for the overall Task direction and scope. However, specifics remain to be finalized. Jim and Jack emphasised that the main challenges remain prioritizing the current project list, to maximize participant-country leverage where available, as well as “recruiting” the Task 39 member “project champion” who will lead the project. They thanked the current project champions for all of their efforts.

Jim/Jack mentioned that IEA Bioenergy ExCo is encouraging the Inter-Task projects for the next triennium. This was highlighted in the proposed work for the next triennium, by describing projects (such as continuing the current Lessons Learned Inter-Task project lead by Tomas/Franziska) that might be carried out in collaboration with other Tasks. Tomas indicated that he will develop and draft a proposal for phase 2 of lessons learned biofuels. If of strategic interest, DE/Franziska will support in WPs work, but taking a coordinating function is unlikely.

They also highlighted that Task 39 should continue its efforts to recruit additional countries to join the IEA Bioenergy TCP and Task 39 specifically. Recruiting both past members (e.g., Finland, Italy, UK, South Africa, etc.) as well as new members (e.g., China, Indonesia, Malaysia, Mexico, Thailand, etc.).

Paul Sinnige (Paul) suggested that the Task might consider, “What feedstocks should be used for what biofuels? What is the best/profitable use of biomass for biofuel production”? Jim supported this suggestion as it is consistent with what is currently happening in the US, where the US DOE biofuels R&D strategy is changing to emphasize using biomass for decarbonizing the long-distance transport sector, particularly the hard to decarbonize aviation and marine sectors. Adrian O’Connell (Adrian) suggested focusing this activity as, “What feedstocks can most contribute to decarbonizing long-distance transport sectors” and noted efficiency of use would likely become more important into the future.

It was suggested, in discussion, that this could be a productive Inter-Task activity with Task 43 (Biomass Supply).

However, Duncan Akporiaye (Duncan) cautioned that, in addition to biofuels, biomass is also being considered for other industrial applications such light metals and biochar production. The ongoing wider commercialization of these applications will likely increase future competition for limited biomass resources.

Ravi P. Gupta (Ravi) suggested the Task consider the use of lignin and other wastes from 2G ethanol plants. Plus, the possible production of biogas from “waste streams”, in collaboration with Task 37. He also suggested the Task consider carbon capture and utilization as part of the production of low carbon intensive biofuels. As there is an ongoing effort on this topic within IEA Bioenergy, Jim suggested that Task 39 might participate, but perhaps not lead, a possible inter-Task activity in this area (bioenergy carbon capture and utilization or BECCU).

Gasification (Task 33) and pyrolysis (Task 34) pathways to transport biofuels provide other possible Inter-Task project opportunities. Tomas Ekbom (Tomas) has been in contact with Task 33 and they have shown interest in a possible collaborative project with Task 39 in the next triennium, assessing barriers and prospects for gasification based biofuels for commercialization and deployment. The hurdles and barriers of international gasification commercial progress to identify which approaches should be the most effective so they can be more broadly deployed to get transport decarbonization back on track with SDS goals.

Franziska Müller-Langer (Franziska) mentioned another Inter-Task project opportunity on “Synergies of green hydrogen and bioenergy deployment”, which is currently under development by Task 44. The scope of this proposed Inter-Task project is threefold: 1) How can green hydrogen and bioenergy support each other i.e., what are the major synergies between their deployment pathways? 2) Are there potential synergetic value chains in different sectors and at different timeframes? and 3) What is needed to realize the potential of these synergies? Franziska and Dina Bacovsky (Dina) hope to continue as Task 39’s main representatives on this Inter-Task activity. Franziska emphasized that the integration of biomass and bioenergy with green hydrogen and E-fuels will encourage more use of sustainable biomass resources as a carbon neutral source. Ravi and Glaucia Mendes Souza (Glaucia) also expressed interest in India and Brazil, respectively, participating in this Inter-Task project. It is noteworthy that Dina and Franziska participated in a meeting on April 30 on further discussion of the intertask-project to be led by T44 today. Further discussions on the proposal will take place in June/July 2021.

Glaucia indicated that Brazil would like to continue leading and extending the current “emerging markets” project which involves collecting and evaluating data from developing countries. Rubens Maciel Filho (Ruben) added that the continuation of this project will help them collect more accurate data and better evaluate the increased use of biomass in emerging economies. Jim M. supported this work and sees it as one of the best ways to engage emerging countries with significant bioenergy potential and while showing them the value of joining the IEA Bioenergy TCP and Task 39.

Paul and Jose Muisers (Jose) would like to continue their leadership of the “Review of existing and proposed certifications for oleochemical and lignocellulosic-based biofuels” project. The project will involve: 1) Compare the sustainability criteria, GHG emission reduction characteristics and the requirements and/or methods for compliance and verification for a number of selected policy frameworks; 2) Compare a number of modules within selected certification schemes and how they anticipate on these requirements, covering different policy frameworks; and 3) Assess potential risks related to the reliability of compliance with the requirement of sustainability and GHG emissions from selected supply chains, leading to preferred routes for biofuel flows. The primary focus of the work will be on oleochemical and lignocellulosic-based biofuel supply chains. Other potential renewable fuel supply chains will be assessed based on interest/data availability. It is hoped that “Activity one” might be completed by the end of this year. “Activities two and three” will be tackled in the next

triennium. Task 45 is expected to cooperate and possibly collaborate, especially regarding parts two and three of the project.

Steve Rogers emailed comments, as he was unable to attend the third day of the meeting (due to the difficult late-night timing). He suggested Task 39 work with groups such as the US's Oak Ridge National Laboratory (ORNL) to develop a suitable set of "biomarine" fuel standards. Steve highlighted the significant opportunity (with suitable standards!) to use biofuels in marine applications to help "boot strap" /facilitate the establishment of biofuels plants around the world. It was also highlighted by several members that the current draft report of marine biofuels needs additional efforts to convey a positive message on the use of biofuels for the marine sector in the short term to attract investors to support the increase in the marine biofuels production capacity.

Dina indicated that the current draft Task 39 proposal needs to be further improved in several ways, e.g., the Task title needs to be shortened and to explicitly include "wastes"; the described Task structure does not reflect how the Task actually operates; etc. Jim mentioned that the "and Other Renewable Feedstocks" part of the Task's title is intended to encompass wastes. Jim noted that the Task's current draft proposal (actually all of the IEA Bioenergy Task prolongation proposals) are currently being reviewed by the ExCo members and that Task prolongation proposals they will be presented and discussed at the virtual ExCo87 meeting in May 2021.

In terms of future Task leadership, Jim indicated he intends to step down as the Task leader at the end of this year. Jack indicated that he and the UBC group would be happy to continue to act as the Task "back up", producing newsletters, maintaining the Task webpage, etc. However, this would be up to the future Task Leader. Although Tomas and Dina each expressed their interest in taking on the Task 39 leadership role, several other members subsequently also indicated their interest after hearing that Jim would stand down from this role at the end of the year. Franziska indicated to support the new leadership by taking more responsibility in the next triennium. Nicolaus Dahmen (Nicolaus) and Franziska need to discuss whether and under which conditions Germany could take task leadership position with the ExCo as this depends on different issues. Franziska also provided some suggestion on the Task structure including sharing task management into groups, decision rules within the T39 team regarding project development and background for project management (e.g. via OneDrive like in Lessons Learned Biofuels), especially for InterTask projects.

Jim indicated that the main purpose of the current meeting was to discuss project progress and the ideas described in the proposed program of work for the next triennium. As several Task members were not present due to the difficult timing (e.g. Korea, New Zealand and Australia), plus the time zone challenges make it very difficult to get the whole group together at the same time, the topic of possible Task leadership needed further discussion.

Franziska suggested (and endorsed by Paul) that several regional groups in "workable" time zones might try to get together to further discuss the proposed program of work and Task leadership. Jim and Jack both supported this suggestion and will separately follow up with regional Task members (recognising that some countries might join/leave Task 39 in the next triennium). It was suggested that these follow-up meetings be held after the meeting minutes had been circulated and approved.

Jack indicated that, after this current business meeting, no other future meetings have been planned. He suggested a possible hybrid (virtual and in-person) Task 39 business meeting in late 2021 and asked if there were any volunteers to

host this meeting. Tomas noted that Svebio is organizing the workshop of the Intertask on 21 Sept and can of course extend a couple of hours for a business meeting catch-up/touch-base style.

The Task still needs to publish 2-3 newsletters this year. Mahmood will follow up with Ireland and Norway as it is expected that these countries will provide the feature articles for the Task's next two newsletters.

Jim closed the meeting and also thanked the potential authors of the upcoming feature newsletter articles, Ireland (thanks to Adrian) and Norway (thanks to Duncan)!

Additional Notes:

Requested by Franziska, please add your suggested publications related to "Lessons learned biofuels" intertask project the success stories and the lessons learned in the table/folder provided in the below link:

<https://onedrive.live.com/redir?resid=6ABD8881781081B0%21118&authkey=%21Ah3PMGvwBjyay2s&page=View&wd=target%28WP%20%20-%20Meta-analysis%20on%20existing%20studies.one%7C%2FPublications%20to%20be%20reviewed%7Cfda3388-4e01-4a9c-a3e3-29e772096c43%2F%29>

Meeting Agenda

Monday, 19 April 2021

10 minutes	General introduction, IEA Bioenergy Task 39 activities update, etc. (Jack Saddler and Jim McMillan)
Country Update Presentations	
10 minutes	Country Update - Australia (Steve Rogers)
10 minutes	Country Update - Japan (Shibahara Yuta)
10 minutes	Country Update - South Korea (Jin-Suk Lee)
10 minutes	Country Update - India (Ravi Gupta and Alok Satlewala)
10 minutes	Country Update - Austria (Dina Bacovsky)
10 minutes	Country Update - Denmark (Sune Tjalfe Thomsen)
10 minutes	Country Update - Germany (Franziska Müller-Langer)
10 minutes	Country Update - Ireland (Stephen Dooley)
10 minutes	Country Update - The Netherlands (Paul Sinnige)
10 minutes	Country Update - Norway (Duncan Akporiaye)
10 minutes	Country Update - Sweden (Tomas Ekbohm)



Tuesday, 20 April 2021

Country Update Presentations	
10 minutes	Country Update - European Commission (Adrian O’Connell and Nicolae Scarlet)
10 minutes	Country Update - Brazil (Glaucia Mendes Souza and Rubens Maciel Filho)
10 minutes	Country Update - The USA (Jim McMillan)
10 minutes	Country Update - Canada (Jack Saddler and Mahmood Ebadian)
10 minutes	Country Update - New Zealand (Paul Bennett)
Task 39 Project Updates	
15 minutes	Implementation agendas report (compare-and-contrast of biofuels policies) (Mahmood Ebadian)
15 minutes	Biofuels production and use status in non-IEA Bioenergy countries/emerging economies (Glaucia Mendes Souza and Rubens Maciel Filho)
15 minutes	LCA, sustainability of biofuels pathway to identify key metrics beyond GHG reduction, spanning both feedstocks and conversion technologies (Adrian O’Connell and Don O’Connor)
15 minutes	Progress in the production of drop-in biofuels (Jianping Su, Susan van Dyk and Jack Saddler)
10 minutes	Biojet fuel/SAF/decarbonization of the aviation sector (Susan van Dyk and Jack Saddler)

Wednesday, 21 April 2021

Task 39 Project Updates, continued	
15 minutes	Feedstock-to-biofuel(s) supply chain analysis. Focus on CAPEX and OPEX cost reduction opportunities for advanced biofuels- proposed project for 2021 (Ravi Gupta and Alok Satlewala)
10 minutes	Update on Biofuels Demonstration Plants website (Dina Bacovsky)
20 minutes	Successes and lessons learned for conventional/advanced biofuels deployment (Tomas Ekbom and Franziska Müller-Langer)
15 minutes	Update on biofuels in marine shipping report/Issues affecting utilization of advanced biofuels in the marine sector (Sune Tjalfe Thomsen and Tor Ivan Simonsen)
40 minutes	Proposed work for the next triennium (Group Discussion)
10 minutes	Possible virtual/hybrid Task 39 business meetings in late 2021? (Group Discussion) Newsletters to be published in 2021: First half of 2021 - Ireland? Second half of 2021 - Norway?
10 minutes	Concluding remarks and wrap up (Jim McMillan and Jack Saddler)