IEA Bioenergy Task 39

Commercializing Conventional and Advanced Transport Biofuels from Biomass and Other Renewable Feedstocks

Draft Meeting Minutes and Agenda

Brainstorming Session (virtual) to discuss 2022-2024 Triennium Project suggestions

Tuesday, 10th August, 4:30-6pm CEST

Wednesday, 25th August, 10-11:30pm CEST

Attendance:

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Attendees: Alok Satlewal, Cecilia Higa Gonzales Morilla, Dina Bacovsky, Duncan Akporiaye, Glaucia Mendes Souza, Jack Saddler, Jianping Su, Jim McMillan, Leif Jönsson, Mahmood Ebadian, Marco Buffi, Nicholas Islongo Canabarro, Nicolaus Dahmen, Oshada Mendis, Oriana Vanderfleet, Ravi P. Gupta, Rubens Maciel Filho, Tomas Ekbom, Sune Tjalfe Thomsen, Susan van Dyk, and Yuta ("Shibby") Shibahara.

Regrets: Adrian O'Connell, Franziska Müller-Langer, Johan van Doesum, Jose Muisers, Kyu-Young Kang, Paul Bennett, Paul Sinnige, Michael Persson, Seonghun Park, Steve Rogers, Stephen Dooley, Jin-Suk Lee.

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The third Task 39 business meeting of 2021 was held virtually (using Zoom) on Tuesday 10th August and Wednesday 25th August. The main meeting agenda was to discuss the proposed projects for the next triennium (as listed in the proposed POW), to confirm the highest-priority projects that Task 39 and the likely champions that would lead the various projects (recognising the limited budgets and resources available to Task 39).

The agenda below was sent out ahead of time and a short summary of what was discussed/recommended is added in red.

2019-2022 triennium projects (both Task 39 and InterTask) that are expected to continue in the coming triennium

T39-T5: Phase 2- **Successes and Lessons Learned for Advanced Biofuel Technologies Commercialization** (**InterTask** with Tasks 40 and 45) (Tomas-Sweden/Franziska-Germany)

Decision: Full support to continue the project. The scope of the project needs to be better defined, based on the key findings of phase I that will be completed in this triennium.

T39-P3: Review existing and proposed **Certifications for oleochemical and lignocellulosic-based biofuels and other potential renewable fuel supply chains**; identify certification scheme improvement opportunities (Paul- Netherlands/ Marco -EU)

Decision: Full support to continue the project. However, recommended that the scope of the project needs to be expanded beyond "advanced biofuels". for example, the project should include the emerging biofuel policies that include sustainability criteria. This will be needed to "certify" the use of biogenic feedstocks for low-carbon intensive biofuels production and use.

T39-P4: Extend assessment on the status of **Biofuels in Emerging Markets** -potential for sustainable production and consumption (Glaucia-Brazil/Ravi-India)

Decision: Full support to continue the project. However, try to expand the scope of the project to include new and emerging markets, particularly Asia; and Africa. Possibility of adding various feedstocks and LCA data collection and analysis to the scope of the project.

T39-P5: **Feedstock-to-biofuel supply chain analysis for cost reduction/financial risk reductions/TEA of advanced biofuels** (Ravi-India/Glaucia-Brazil/Franziska-Germany/Jim-US/Paul-The Netherlands) (Link to Task 42 assessment methodology and Task 43 feedstocks)

Decision: The scope of the project needs to be further clarified. Suggestion that this project (or the other way around) could be incorporated into projects such as T39-P3 and T39-P4.

T39-T3: Update **Decarbonizing the Marine Sector** (Sune-Denmark/Steve-Australia/Paul-NZ/Jack-Canada)

Decision: Full support to continue the project. Particularly given the growing pressure and initiatives to decarbonize the shipping sector. This topic is of considerable interest to many of the Task 39-member countries and should be a high priority for the next triennium. Suggestion that the project update needs to further focus on advanced biofuels (such as biocrudes and fuels standards that accommodate biocrude-derived marine fuels) as potential low-carbon fuels for the shipping sector.

T39-T4: Assessment of **Large-scale Demonstration Plants** (Dina-Austria)

Decision: Full support to continue the project. In addition to the online database, an annual report on the status of advanced biofuels facilities could be prepared.

T39-T2: **Decarbonisation Strategies for the Aviation Sector** (Jack-Canada/Jim-US/ Duncan-Norway/Shibby -Japan/ Paul-NZ/Steve-Australia)

Decision: Very high priority. (Over 300+ participants involved in recent webinar (more than 700 registrant's) and HUGE interest in published Task 39 report). Similar to the marine biofuels project, full support to continue the project given the growing pressure and initiatives to decarbonize the aviation sector. Continue use of "leverage" with support of groups such as Boeing, IATA, ICAO, CAAFI, etc. Dina Bacovsky mentioned possible AMF collaboration with Task 39 on this topic.

T39-P2: **Sustainability of Biofuels Pathways (LCA)** (Don-Canada/Marco-EC/Glaucia-Brazil/Michael Wang-US/ Paul-NZ)

Decision: Full support to continue the project. LCA is a high priority for Task 39 with "measuring and understanding the carbon intensity of biofuels" key to supporting the further development of low-carbon sustainable transport biofuels. Task 39 is fortunate to have the involvement of some of the best global expertise on the LCA of biofuels. It was suggested that Task 39 reengage with Task 45 on the possible collaboration on the sustainability of transport biofuels beyond LCA. Also, suggestion of incorporating LCA aspects into other projects such as T39-T1, T39-T2 and T39-T3.

Suggestion that Task 39 collaborates with other Tasks, particularly Task 45 on the sustainability of feedstocks.

T39-T1: **Drop in biofuels/Co-Processing** (possibly with Task 33 &34) (Duncan-Norway/Marco-EC/Jack-Canada)

Decision: Full support to continue the project. In addition to the stand-alone drop-in biofuel's facilities, there is a growing number of oil refineries that are pursuing co-processing as a proven and viable pathway to reduce the carbon intensity of their co-processed fuels. However, measuring the carbon intensity of the co-processed fuels, increasing the blending rate of lipid feedstocks, potential of co-processing biocrude feedstocks, as well as other topics should be the focus for the next triennium.

T39-P1: **Biofuels Implementation Agendas: Policies Compare and Contrast** report covering member country policies and deployment successes (Mahmood lead but contributions from all member countries)

Decision: Full support to continue the project. It was recognised that biofuel policies will be the key to the production and use of transport biofuels. Noted that there is an increasing number of policies that require the quantification of the carbon intensity of the transport biofuels. However, given the large size of the implementation agendas report, Task 39 will try to prepare and publish summary factsheets for each member country. These will summarise the main outcomes of the implementation agendas report. Recommend to also continue to "publish" specific country chapters as feature articles in the Task 39 newsletters.

Suggested projects that Task 39 might tackle in the coming triennium (that are not currently part of Task 39 activities during this triennium)

T39-T7: Update on status of **Algal Biofuel Technologies** (US/Japan)

Decision: If resources available, full support to work on this project while leveraging the expertise in members such as the US, Australia, Japan, etc.

T39-T10: **Conversion of wastes/co-products generated from 2G ethanol industry (to biogas, etc)**: Reduction in OPEX and GHG emissions (US/India/Denmark/....)

Decision: The scope of this project needs to be better defined and a champion needs to be identified. Possibly of incorporating these goals into other projects (or it could be pursued as a separate project upon the availability of budget and an identified champion(s).

T39-T11: **Opportunities for, and key issues limiting, the efficient integration/use of advanced biofuels into existing infrastructure and engines for transport** (US/Brazil/Germany)

Decision: Scope of the project needs to be better defined. Possibly of incorporating goals into other projects (or could be pursued as a separate project upon the availability of budget and champion(s).

T39-P6: **Cost/benefit Analysis and Comparison of Drop-in Biofuels** versus conventional ethanol/biodiesel biofuels and feedstock implications. Feedstock versus infrastructure integration challenges. (US/Brazil/Austria/Canada and possible collaboration with Task 43 (feedstock supply))

Decision: Scope of the project needs to be better defined. Possibly of incorporating goals into other projects (e.g. T39-T1) (or it could be pursued as a separate project upon the availability of budget and champion(s).

T39-P7: Evaluate and recommend **policies for decarbonizing the international transport (e.g. aviation and marine sectors)** (Netherlands/Sweden/Brazil/Canada/Denmark/US…)

Decision: Scope of the project needs to be better defined. Possibility of incorporating the goals of this project into others (e.g., T39-T1, T39-T2, T39-T3 and T39-P1) (or it could be pursued as a separate project upon the availability of budget and identified champion(s).

InterTask projects that Task 39 might participate in during the coming triennium

T39-T8: **Synergies of green hydrogen and bioenergy deployment** (lead by Finland (Task44), but involvemant of Brazil, Germany, Austria, Canada, US,….)

Decision: Full support to continue the Task 39 participation in this InterTask project. Task 39 will be mainly involved in WP3 which will focus on case studies regrading the use of green hydrogen as an input into the biorefining processes/transport biofuel production.

T39-T6: Assess the potential of **Electrofuels/power-to-fuels Technologies**, particularly their strategic relevance and potential to provide cost-competitive (Lead by Germany (Task 44) but of interest to Austria, Norway, ...)

Decision: This project has already been incorporated into the above InterTask project. Consequently, it will not be pursued as a separate project by Task 39.

T39-T9: **Biogas as a Transportation Fuel** (Ireland/Sweden/Korea/..., collaboration with Task 37)

Decision: If resources available and a Task 39 champion expresses strong interest to lead this project, Task 39 should consider participation in this project. As mentioned during the meeting, Task 37 has been working on a related project but the final report has not yet been released for peer review. It was recommended that Task 39 waits until this report is released. We can then decide about the scope of this project, building on what Task 37 has done.

Other suggestions for structure/function for next triennium?

1) Organizational structure and possible subgroups, budget issues etc.

Decisions:

- Once the proposed POW is approved by ExCo, the new Task leadership will ask all project leaders for a one/two-pager that describe the project scope and objectives. These project summaries will then be shared with all Task 39 members, for their review and comments.
- The Task leadership will also communicate the allocated budget to each proposed project. The budget allocation will depend on the projects' deliverables and timelines.
- The Task leadership will assess possible subgroup structure in the next triennium. The membership in the subgroups will be influenced by possible synergies and the interest and availability of members to participate in each subgroup.
- It was suggested that, in the next triennium, the Task looks into better "formalizing" Task structure. However, the challenge will be making sure it does not result in an increased administration load that impacts the delivery of the projects.

2) Individual and consolidated country reports
3) Other?

1) Location of next meeting (first half of 2022)

- Task 39's next business meeting will be held virtually on the second week of November. The business meeting will be likely organized as two 2-hr sessions with the focus on the updates on Task projects recently completed or almost completed. We will also try to "firm up" the Task's program of work for the coming triennium. One of these sessions will likely be scheduled at 4:30-6:30pm CET and the other one at 10-12pm, CET (similar to the time slots scheduled/used for the August 2021 meetings)
- IEA Bioenergy's End of Triennium conference is scheduled for two weeks at the end of November/early December 2021. Task 39 sessions will be held on Dec 1st. Task leadership has been working on inviting speakers from Task 39 and industry. The final Task 39 program will be shared with Task members as soon as it is finalized.
- In light of the ongoing global COVID-19 pandemic affecting travel and in person "gatherings", the first meeting of 2022 (probably hybrid) will be further discussed during the November Task meeting (given the changing and dynamic nature of member countries' regulations for international travel).

2) Leads for next newsletters
3) Other?

Meeting wrap-up (Tomas/Glaucia/Jim/Jack)