

GBEP Working Group on Capacity Building for Sustainable Bioenergy

Draft Proposal for an Activity Group on “Bioenergy and Water”

Introduction

Energy systems and water resources are inextricably linked, especially in the case of bioenergy, which may have implications for water availability as well as water quality. Bioenergy can be very water intensive relative to other energy carriers primarily due to the water requirements of some crops. In certain areas, rainfed cultivation of crops such as soy, sugarcane, perennial grasses or short-rotation coppices is possible, while in other areas - especially those already struggling with water scarcity - bioenergy development may increase water scarcity challenges for other sectors. Yet, bioenergy systems can be designed to improve adaptation to water constraints and to optimize overall resource management e.g., well designed plantations that reduce direct surface runoff, trap sediment, enhance infiltration to reduce water erosion and improve water quality.

The role of water in developing sustainable bioenergy systems is complex and often there are no single solutions in developing sustainable outcomes from bioenergy. For example, increasing water efficiency of bioenergy appears to be a positive approach but in areas of water scarcity may not lead to positive outcomes if water consumption is greater than water availability. Water is also linked to and influences other key aspects of sustainability such as GHG (e.g., through energy used for irrigation – if needed - and wastewater management) and food security, and a broader approach is needed to ensure bioenergy systems contribute positively to sustainable land and natural resource management.

As a key intergovernmental forum for knowledge-sharing and development of sustainable bioenergy, GBEP is well positioned to support development of water-smart bioenergy systems. The proposed Activity Group would act as a nexus for that work within GBEP.

Objectives of the activity group

The **goal** of this Activity Group (AG) is to identify and disseminate ways of integrating bioenergy systems into agriculture and forestry landscapes to **improve** sustainable management of water resources, including waste water. This includes sharing knowledge and experiences on best management practices as well as on policies and instruments supporting bioenergy implementation that contributes **positively** to the state of water.

The AG will also serve as a vehicle for awareness raising on the GBEP sustainability indicators on water and spreading the use of them to other countries and regions.

Method of working

- The AG will work mainly via e-mails and teleconferences to implement the workplan and monitor progress. It is anticipated that in-person meetings will be held in conjunction with the GBEP meetings and that side events may be organized.
- The AG will arrange a **workshop** in 2015 and produce preparatory documents (as required). A call for positive examples and best practice experiences for bioenergy systems contributing to sustainable water management will be circulated widely.

- The workshop will make room for presenting experiences and examples from GBEP Partners and Observers, e.g. outcomes of case studies presently being carried out, to illustrate and document how specific bioenergy feedstock systems deliver improvements to the state of water in different countries around the world.
- The AG will act as a hub for information on bioenergy-water issues, including results from contributing researchers. It will co-ordinate transfer and exchange of relevant information between AG members and interested GBEP Partners and Observers.
- Results of the AG will be disseminated through the GBEP website, through AG members, and at the IEA Bioenergy Conference in Berlin 2015.

Members, Contributors and Chairing of the proposed AG “Bioenergy and Water”

The IEA as a GBEP partner will be available (through IEA Bioenergy Task 43, supported by Task 40)¹ during 2015 to co-chair the AG and contribute to the work defined in the workplan (see below), should the GBEP Steering Committee approve its establishment.

GBEP Partners and Observers are invited to express their interest in and become members of the AG, and to contribute to finalizing this draft proposal.

In order to maximize value and outcomes of the AG organizations and experts who are not directly GBEP Partners or Observers but could contribute knowledge and experiences should be invited as well, subject to approval by GBEP.

Examples for organizations which may contribute are those working with a ‘Nexus approach’, such as Stockholm Environment Institute, GIZ, and Water Footprint Network, among others.

Work plan and timetable

The following draft workplan is intended to facilitate a quick start if the GBEP Steering Committee agree on the establishment of this AG.

December 2014

- First meeting: Discussion of draft workplan and possible amendments to reach agreement on details and timetable, clear roles and funding coverages for all parts.
- The meeting will use skype/phone and will be organized and managed by the Co-Chairs.

January 2015

A number of documents will be circulated for comments within the AG:

1. Draft presentation of workshop scope and aim, location and dates
2. Draft Call for Positive Examples
3. List of documents in support of the workshop, existing and to be produced (if any)
4. List of possible target organizations and individuals

¹ IEA Bioenergy Task 43 is on “Biomass Feedstocks for Energy Markets” (see <http://www.ieabioenergytask43.org>) and Task 40 on “Sustainable Bioenergy Trade” (see <http://www.bioenergytrade.org>).

February 2015

- Call for Positive Examples sent out, including information that a workshop will be arranged (no definite location and dates at this point)
- Appointment of authors to publications in support of workshop (if any)

March 2015

- Call responses collected and analysed, workshop program developed based on this
- Workshop announcement sent out to workshop invitees, including invited speakers
- List of publications in support of the workshop revisited

June-September 2015

- Publications in support of workshop circulated (about 1 month before workshop)
- Workshop being held (July/August)
- Workshop outcome and post-workshop documents produced and circulated (about 1.5 month after workshop)

October 2015

- Presentation of AG results at IEA Bioenergy Conference, Berlin Oct. 26-29
- Discussion on possible extension of AG work beyond 2015 within the AG, development of respective proposal (if agreed)

November 2015

Presentation of AG activities and results at GBEP meeting, discussion and decision on post-2015 continuation

Budget

IEA (through Bioenergy Task 43) has reserved 30 000 \$ for activities associated with the AG. These will be used primarily for two purposes:

- \$ 10 000: Production of publications in support of workshop and outcome document (as required)
- \$ 20 000: Travel and accommodation costs for selected invited speakers

Additional funding options will be explored to extend travel and accommodation support for the workshop, especially for GBEP Members and Observers.

The AG will seek collaboration with an organization capable to host the workshop at their premises, i.e., cover costs for meeting rooms and meals served during the workshop.

Background of the proposal

IEA Bioenergy Task 43, together with UNEP, IINAS and Winrock International, organized the workshop 'Bioenergy and Water: Developing strategic priorities for sustainable outcomes' from Feb 20-21, 2014 in Paris². The workshop was the 5th event concerning inter-linkages

² See <http://www.ieabioenergytask43.org/workshop-documents/>

between bioenergy and water and ways to address related risks and harness opportunities since 2010 in collaboration with different organizations.

The aim of the 2014 Bioenergy and Water workshop was to develop a coordinated and common approach to addressing and communicating water-related issues for bioenergy. The common vision derived at the workshop was that

*“good management of resources - benefiting from complementarity of different systems - can provide food, bioenergy and biomaterials **and** improve the state of water”.*

The workshop specifically explored how integration of bioenergy systems into forest and agricultural landscapes can deliver positive environmental and socio-economic outcomes, and concluded that opportunities to extend the discourse should be sought, e.g. together with the GBEP.