

GBEP Working Group on Capacity Building for Sustainable Bioenergy

Final Report of the Activity Group 5

“The Global Renewable Energy Atlas – Bioenergy Component”

24 June 2015

Background

At the 3rd meeting of the GBEP Working Group on Capacity Building (WGCB) in Rome (November 2012), IRENA, as a GBEP Partner, proposed a new Activity Group for which presented a draft scope of work. The main outcome of the proposed Activity Group was intended to be the development of the bioenergy component of the [Global Atlas for Renewable Energy](#), a single joint platform providing free and open access to the most advanced datasets and tools, and to help countries willing to initiate the assessment of their renewable potentials. The Internet-based platform is intended to raise awareness of technology opportunities, to limit the financial risk for countries willing to investigate their technical potentials further, and for companies willing to invest in a new market. To this end, it provides high quality resource maps from leading technical institutes worldwide, and simplified models for evaluating the technical information.

The assessment of bioenergy potential is a complex process, requiring large amounts of information, critical expertise, and ground-based analysis. The complexity and depth of the analysis, as well as the amount of data required to provide an accurate estimate of the bioenergy potential makes it unlikely to carry a detailed analysis at global scale with an online tool in a near future. Therefore, IRENA called upon the collaboration of the GBEP in order to manage with the due care the several implications that bioenergy potential mapping has on sustainability. The draft scope of work was revised in order to better reflect the preliminary discussions that took place during the 3rd WGCB meeting and throughout the first half of 2013.

At the 4th Meeting of the WGCB in Berlin (May 2013), IRENA presented a revised scope of work of the proposed Activity Group and gave a demonstration of the internet-based platform that serves as a repository of high quality resource maps from leading technical institutes worldwide, along with a framework model for presenting the GBEP sustainability indicators within the context of the technical information. The Working Group appreciated the revised proposal and agreed to establish the Activity Group to start working – mainly through an e-group and webinar discussions – to develop guidance on how to interpret and use maps in light of the GBEP indicators and also to incorporate a component of the efforts on building the capacity of developing countries / institutes to use mapping as a tool to support good policy development. It was agreed to use the GBEP logo for sustainability considerations as they related to the

indicators and not to use the GBEP logo for the maps and data compiled and used from other sources. The Working Group further agreed to review the programme of work and the resources needed, after the guidance was developed, to further translate, if there was a need, the sustainability indicators into the maps.

Work of the Activity Group 5

In July 2014, the Activity Group 5 (AG5) organized a dedicated meeting in Bonn, Germany, to discuss practical guidance on the use and interpretation of maps on bioenergy resources as well as how to identify the process and resources required to present the GBEP indicators through the geographic information systems (GIS) of the Global Atlas. Argentina, Brazil, Cambodia, France, Germany, Indonesia, Japan, Paraguay, European Commission, FAO, IRENA and UNEP participated in the meeting as members of the AG5. Speakers from Utrecht University (The Netherlands) and University of KwaZulu-Natal (South Africa) also participated.

The first session of this meeting aimed at receiving examples of how relevant is geospatial information to map sustainability aspects of the potential bioenergy production; what geospatial data can better help to identify or illustrate the risks for sustainability; and minimum requirements that could be foreseen to identify if a sustainability aspect was adequately illustrated by a map.

The second session aimed to identify which indicators would be more relevant to the mapping exercise and which can be related to map-based information; how far datasets inform different GBEP indicators; the minimum scale required for a dataset to illustrate a measurement of indicator on a map; the variability over time that would require regular updates; and what data would be required or is recommended. The general outcome was that many GBEP sustainability indicators are not suitable to be represented in a map as the GIS information can be considered as intermediate calculations or analyses performed in support of the assessment process. Useful information to assess the indicators include land cover, land use and protected areas, land suitability/availability/productivity, slope, altitude, roads, population density, local infrastructures, etc.

In light of the above and considering that it would not be appropriate to map only few indicators as this will not give a full picture of the sustainable production of bioenergy, the AG5 agreed to modify its original scope of work. The AG5 proposed to work on a bottom-up approach towards the development of a collection of supporting datasets and best practices, regarding the mapping for each of the 24 GBEP sustainability indicators. The various elements collected could benefit from being presented inter alia through a knowledge platform. To this end, within the context of the AG5, IRENA collaborated with several GBEP Partners and Observer with a view to link relevant bioenergy maps into the IRENA's Global Bioenergy Atlas: e.g. FAO inserted, into FAO Geonetwork, bioenergy and food security maps for Peru and Tanzania (related to the FAO project Bioenergy and Food Security – BEFS), and consequently, IRENA's Global Bioenergy Atlas linked to the FAO generated maps..

The 6th GBEP Working Group on Capacity Building, which gathered in Rome in December 2014, acknowledged the work made by the Activity Group 5 and thanked IRENA for its leadership. It was agreed that no additional work on mapping related matters is foreseen and therefore that this Activity Group 5 is closed.