13th Meeting of the GBEP Task Force on Sustainability

FAO Headquarters, Lebanon Room D-209 Bis
Rome, 12 November 2015

CONCEPT NOTE

A. BACKGROUND

In 2014, discussions of the Activity Group 2 "Raising awareness and sharing of data and experiences from the implementation of the GBEP indicators" under the Working Group on Capacity Building for Sustainable Bioenergy (WGCB) led to the development of a table summarizing lessons learned and recommendations emerging from the testing/implementation of the GBEP Sustainability Indicators (GSIs).

During the GBEP meetings held in Rome, in November 2014, it was suggested to develop an Implementation Guide on the use of the GSIs, in order to:

- Facilitate the testing and implementation of the GSIs by future users, enabling them to take advantage of relevant lessons learned; and
- Clarify and explain in more details some identified issues within the methodology sheets in the 1st edition of the "Global Bioenergy Partnership Sustainability Indicators for Bioenergy" report.

A scope of work of the Task Force on Sustainability (TFS) for the production of an Implementation Guide on the use of the GBEP Sustainability Indicators for Bioenergy (GSIs) was developed and further endorsed by the GBEP Steering Committee.

As mentioned in the aforementioned scope of work, the Implementation Guide, which is expected to be one of the most important outputs of the GBEP Task Force on Sustainability, aims to provide additional guidance on the testing and implementation of the GSIs. As such, it will complement – rather than replace - the 1st edition of the "Global Bioenergy Partnership Sustainability Indicators for Bioenergy" report.

B. METHODS OF WORK

Under the new scope of work described above, the TFS will work mainly via e-mail and teleconferences. In addition, a physical meeting will be organized once a year back to back with the regular GBEP meetings in November in Rome. Additional physical meetings will be organized only if deemed necessary by the TFS and subject to the availability of funds.

Work related to the cross-cutting issues affecting the measurement of all or most of the indicators will be carried out under the TFS as a whole, while issues specific to the individual indicators will be dealt with under the Sub-groups covering the three sustainability pillars that the indicators fall under, i.e. Environmental, Social and Economic.

C. PRIORITIES FOR DISCUSSION

In line with the approach described in the scope of work of the Task Force on Sustainability for the production of an Implementation Guide, during the 13th meeting of the Task Force on Sustainability, it is proposed to give priority to the cross-cutting issues that affect the measurement of all or most of the indicators.

Discussions related to the guidance to be provided in relation to each individual indicator could then take place at a later stage under the TFS Sub-groups dealing with the three sustainability pillars that the indicators fall under, i.e. Environmental, Social and Economic.

In the Annex to the scope of work for the production of the Implementation Guide, where the lessons learned and recommendations emerging from the GSIs testing/implementation were summarized, three categories of cross-cutting issues were identified (see Annex I):

- Integration of definitions and methodologies;
- Ensuring an effective implementation of the indicators; and
- Enhancing the practicality of the indicators.

A brief overview of these three categories of cross-cutting issues and of the individual items listed under them will be provided at the TFS meeting, in order to evaluate whether any integrations would be necessary and possibly identify them (if any).

It is then proposed to focus the discussion on the first category of cross-cutting issues listed above (i.e. Integration of definitions and methodologies), which comprises three items:

1. A more clear definition and demarcation of traditional versus modern bioenergy should be developed and illustrated with concrete, detailed examples.
2. Further guidance would be needed on the complex and crucial issue of the attribution of impacts to bioenergy production and use. For each indicator, a range of suitable approaches for attribution could be identified and illustrated in detail providing specific examples, and the pros and cons of using one approach versus another should be discussed.
3. When indicators cannot be measured due to lack of data, skills and/or resources, and when appropriate as a complement to the measurement of the current quantitative indicators, the implementation of relevant good practices in bioenergy production and use could be assessed, including regarding their coverage and (if possible) their quality.

In order to inform the discussion related to item #1, the definition of modern bioenergy from the report on the GSIs was included in Annex II, together with the definitions of this term that were used in the context of other relevant organizations and initiatives. These additional definitions could be included in the Implementation guide to provide further guidance to users and help them develop a working definition of modern bioenergy appropriate to the specific circumstances in which the GSIs are applied.

With regard to item #2, the approach proposed by the TFS Chair for discussion during the November meeting entails the preparation of an issue paper on the main approaches to attribution and the related advantages and disadvantages. This paper would then inform subsequent discussions and the development of guidance on the issue of attribution within the Implementation guide.

Finally, concerning item #3, the possibility to refer to relevant good practices and provide guidance on them in the context of the Implementation guide, either as a complement to the measurement of the indicators or as an alternative to them (when the indicators cannot be measured) should be discussed. If the inclusion of good practices in the Implementation guide will be deemed relevant, these good practices could then be identified, for each individual indicator, by the relevant TFS Sub-group, i.e. Environmental, Social and Economic.

Depending on time availability, additional cross-cutting issues could be preliminary discussed, such as the engagement of stakeholders to facilitate data collection, including private sector engagement.

Annex I

GBEP SUSTAINABILITY INDICATORS FOR BIOENERGY: LESSONS LEARNED AND RECOMMENDATIONS EMERGING FROM TESTING/IMPLEMENTATION

CROSS-CUTTING

INTEGRATION OF DEFINITIONS AND METHODOLOGIES

- A **more clear definition and demarcation of traditional versus modern bioenergy** should be developed and illustrated with concrete, detailed examples.
- Further **guidance** would be needed on the complex and crucial issue of the **attribution of impacts to bioenergy production and use**. For each indicator, a range of suitable approaches for attribution could be identified and illustrated in detail providing specific examples, and the pros and cons of using one approach versus another should be discussed.
- When indicators cannot be measured due to lack of data, skills and/or resources, and when appropriate as a complement to the measurement of the current quantitative indicators, the **implementation of relevant good practices** in bioenergy production and use could be assessed, including regarding their coverage and (if possible) their quality.

ENSURING AN EFFECTIVE IMPLEMENTATION OF THE INDICATORS

- A **multidisciplinary team of experts** with an in-depth knowledge of the national context and of the domestic bioenergy sector is needed in order to implement the GBEP indicators and analyse the results.
- A proactive **engagement of all relevant stakeholders** including government agencies, private sector organizations and civil society organizations is key to the effective implementation of the indicators and to a proper interpretation and use of the results.
- Where possible, **empirical information** is preferred to model estimates. In any cases, **assumptions** about the data and underlying conditions need to be made clear.
- Because there is much spatial variability in the indicator values, the **spatial extent of the assessment** needs to be carefully defined, and care needs to be taken in extrapolating site-level information to national-level indicators.

ENHANCING THE PRACTICALITY OF THE INDICATORS

- An **implementation guide** would be needed in order to complement the indicator methodology sheets with detailed guidance on both methodological and practical issues related to the measurement of the indicators.

- An **Excel and/or web interface based on a computerized model** could be developed, in order to significantly reduce the time, skills and cost required to measure the GBEP indicators. This would allow users to easily enter all data required for the 24 indicators into one single data entry sheet and to get a set of results for each indicator based on the related methodologies. In addition to the aforementioned benefits, this process would also simplify considerably the data collection process, and it would allow to easily save and share the results and to re-run the tool over time with up-to-date information.
- **Mechanisms to facilitate the systematic flow of data and information from the private sector** to the organizations/agencies measuring the GBEP indicators could be identified and exploited.
- Last, but not least, given the global nature of the GBEP indicators, the report containing the methodology sheets could be **translated into other official languages of the UN** beside English (a Spanish translation is currently being prepared as well). This would greatly facilitate the dissemination and implementation of the indicators in developing countries around the world.

Annex II

DEFINITIONS OF MODERN BIOENERGY

There is no globally accepted definition of modern bioenergy like there is for biomass and bioenergy. However, the term is used throughout publications from a variety of international organizations and initiatives.

In the Glossary of the **Global Bioenergy Partnership** Sustainability Indicators for Bioenergy report, it reads: "*Modern bioenergy* is used to describe energy, for example when we need to quantify it or use the term in an abstract sense, which delivers *modern bioenergy services*".

In the same report, *Modern bioenergy services* were defined as "modern energy services relying on biomass as their primary energy source. Modern bioenergy services include electricity delivered to the final user through a grid from biomass power plants; district heating; district cooling; improved cookstoves (including such stoves used for heating) at the household and business level; stand-alone or grid-connected generation systems for household or businesses; domestic and industrial biomass heating systems; domestic and industrial biomass cooling systems, biomass-powered machinery for agricultural activities or businesses; biofuel-powered tractors and other vehicles, grinding and milling machinery. Modern bioenergy services do not include biomass used for cooking or heating purposes in open stoves or fires with no chimney or hood or any other energy systems that release flue gases indoors or release high concentrations of air pollutants, irrespective of the feedstock or biofuel employed".

Definitions of modern bioenergy from **other relevant organizations and initiatives** are summarized in the table below.

Organization/ Initiative	Source	Definition
Global Alliance for Clean Cookstoves (GACC)	GACC. 2015. About. (available at: http://cleancookstoves.org/)	GACC does not explicitly define modern bioenergy. The term modern bioenergy is used as an alternative to the traditional burning of biomass.
International Energy Agency (IEA)	IEA. 2015. Bioenergy. (available at: https://www.iea.org/topics/renewables/subtopics/bioenergy/)	The IEA does not explicitly define modern bioenergy. The agency refers to it as the opposite of traditional biomass use, which is, "the use of wood, charcoal, agricultural resides and animal dung for cooking and heating in the residential sector. It tends to have very low conversion efficiency (10% to 20%) and often unsustainable supply".
International Panel on Climate Change	Chum, H. et al. 2011. Bioenergy. In *IPCC Special Report on Renewable Energy*	The IPCC does not explicitly define modern bioenergy. However, in line with IEA's World Energy Outlook 2010, it distinguishes between traditional biomass and

Organization/ Initiative	Source	Definition
(IPCC)	*Sources and Climate Change Mitigation*. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. (available at: http://srren.ipcc-wg3.de/report/IPCC_SRREN_Ch02.pdf)	modern biomass, defining the former as 'biomass consumption in the residential sector in developing countries and refers to the often unsustainable use of wood, charcoal, agricultural residues and animal dung for cooking and heating'. All other biomass use is defined as modern biomass.
International Renewable Energy Agency (IRENA)	IRENA. 2014. REmap 2030: A Renewable Energy Roadmap. (available at: http://www.irena.org/remap/IRENA_REmap_summary_findings_2014.pdf)	IRENA does not explicitly define modern bioenergy. Instead, it affirms that, "bioenergy covers solid, liquid and gaseous biomass and can be used for heat, electricity generation and transportation". It also references "modern renewable energy'' but does not provide a definition. Access to modern energy through the use of renewable sources will be achieved partially by replacing traditional biomass for cooking and space heating with modern biomass fuels and modern cooking stoves.
Renewable Energy Policy Network for the 21st Century (REN21)	REN21. 2013. Renewables 2013 Global Status Report. (available at: http://www.unep.org/pdf/GSR2013.pdf)	"Energy derived efficiently from solid, liquid, and gaseous biomass fuels for modern applications, such as space heating, electricity generation, combined heat and power, and transport (as opposed to traditional bioenergy)".
Sustainable Energy for All Initiative (SE4ALL)	SE4ALL. 2015. Our Vision. (available at: http://www.se4all.org/our-vision/) AGECC. 2010. AGECC Summary Report. (available at: http://www.scribd.com/doc/30642804/AGECC-Summary-Report)	SE4ALL does not explicitly define modern bioenergy. Energy access is defined as, "modern energy services, including electricity and improved end-use devices, such as cookstoves, to meet basic human needs at affordable prices" and includes renewable and other 'low carbon' energy sources. SE4ALL's definition of unsustainable energy is: 'Traditional fuels', including wood, charcoal and animal waste as well as coal used for cooking and heating.
United Nations Development Programme (UNDP)	UNDP. 2000. Bioenergy Primer: Modernised Biomass Energy for Sustainable Development. (available at: http://www.undp.org/content/dam/aplaws/publication/en/publications/environmen	UNDP does not explicitly define modern bioenergy. It does highlight the need to promote sustainable biomass energy production through modern bioenergy technologies, including biogas, combined heat power and ethanol.

Organization/ Initiative	Source	Definition
	t-energy/www-ee-library/sustainable-energy/bioenergy-primer-modernised-biomass-energy-for-sustainable-development/Bioenergy%20Primer_2000.pdf)	
United Nations Environment Programme (UNEP)	UNEP. 2015. Bioenergy Issues. (available at: http://www.unep.org/climatechange/mitigation/Bioenergy/Issues/ModernBioenergy/tabid/29474/Default.aspx)	"Modern bioenergy or biofuels refer to biomass converted to higher value and more efficient and convenient energy carriers, such as e.g. pellets, biogas, ethanol and biodiesel. Beyond this, future technologies are emerging to make biofuels use even more efficient, cleaner, and provide greater greenhouse gas reductions (the so-called second generation biofuels). There are two main applications of modern bioenergy: transport and stationary applications".
United Nations Industrial Development Organization (UNIDO)	UNIDO. UNIDO's Biofuels Strategy: Sustainable Industrial Conversion and Productive Uses of Biofuels. (available at: http://www.unido.org/fileadmin/import/68441_FINAL_DRAFT_UNIDO_BIOFUEL_STRATEGY.pdf)	UNIDO does not explicitly define modern bioenergy. It describes modern energy systems as being based on locally available renewable sources (biomass, solar, wind, mini-hydro). The concept of biofuels is used to define energy carriers derived from the conversion of biomass to provide sustainable inputs for heat, power, and transport applications and can be liquid, solid or gaseous.