



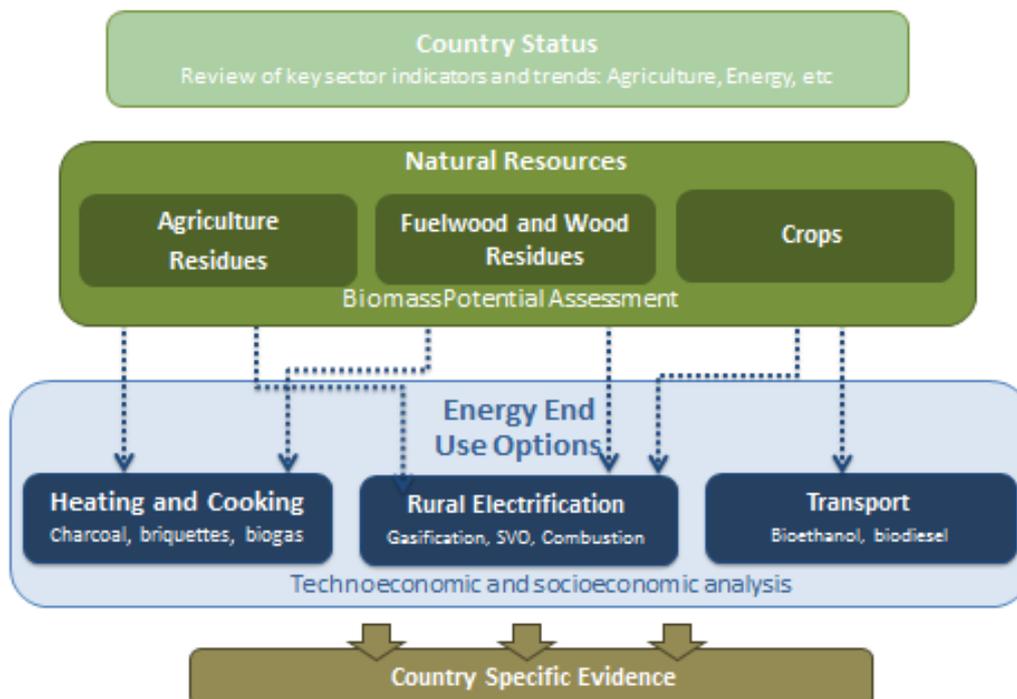
**Capacity Development in the Application of the  
Bioenergy and Food Security Rapid Appraisal (BEFS RA)  
Novotel Bangkok Ploenchit Sukhumvit  
Bangkok, Thailand  
27-31 October 2014**

**Introduction**

FAO has developed the Bioenergy and Food security Rapid Appraisal (BEFS RA). The BEFS RA consists of a set of easily applicable methodologies and user-friendly tools which allow countries to get an initial indication of their sustainable bioenergy potential and of the associated opportunities, risks and trade-offs.

The BEFS RA covers the whole biofuel supply chain from feedstock production to the processing plant gate. The BEFS RA guides the country in the first level of assessment of all bioenergy options of interest as illustrated in Figure 1. This is based on the initial level of assessment of potential feedstock production for bioenergy production, techno-economic viability and socio-economic implications. This first level of assessment will guide the country in excluding some options while focusing the detailed analysis on the more environmental, technical and socio-economically viable solution.

**Figure 1: The BEFS Rapid Appraisal**



The tools are globally applicable and are tailored for country level or area level assessment depending on country size and data availability. The tools are implementable in a relatively short time and can be used with limited data. The user has the option to rely on default values, provided throughout the tools where possible, or enter more reliable data they may have. The more accurate the data used, the more accurate the results. The analysis can be tailored to address specific needs of countries by selection of specific modules or components of the BEFS RA; nonetheless users are encouraged to run the whole BEFS RA to get an initial overview of the options based on country validated evidence.

In summary, the tools of the BEFS RA assist policy-makers/technical officers in:

- Outlining the country energy, agriculture and food security context;
- Obtaining initial estimates of which sustainable bioenergy supply chains are viable in the country, based on economic profitability, financial viability, investment requirements, labour implications and smallholder inclusion; and
- Identifying options of interest that require more in-depth analysis and planning e.g. more detailed BEFS analysis, local level analysis, and/or detailed spatial level planning, etc.

## **Capacity Development**

FAO has initiated activities on awareness raise and technical capacity in the use of the BEFS RA. The awareness raising are aimed activities will focus on disseminating the existence of the BEFS RA with policy makers, donors and other potential users. The technical training activities on the other hand are intended to train academic/research/centres of excellence or technical government personnel in the operation of the BEFS RA. The dissemination activities will be carried out primarily through the participation of global key events related to bioenergy while the trainings will be carried out through technical workshops.

The training workshops will demonstrate participants how to operate the various tools through a combination of conceptual discussions and practical exercises. Participants will need to have technical profile in one of the following areas: agriculture, forestry, energy and economist. The training workshops will be design for a maximum capacity of 30 experts with equal representation from all expert profiles in order to ensure a balance discussion. They workshops can cover all of the BEFS RA tools at once, i.e. full BEFS RA training or alternatively can be easily tailored to specific modules of analysis depending on the areas of interest that a particular organization may have. For example, if the topic of interest is residues for rural electrification, then the training will cover the modules and tools related to this topic, requiring less time when compared to the full training.

A full BEFS RA technical workshop as described in Table 1 requires five days. The full training programme starts with an introduction to basic concepts on energy, food security follow with an overview on how these concepts are building into the BEFS RA tools. This will be followed by an introduction to each one of the modules of analysis of the BEFS RA first focusing on an introduction to the methodology followed by a presentation of the tool that includes exercise and discussion with participants. In the final day, a discussion will be held focusing on interpretation of results and collections data sheets. Participants will have the opportunity to provide general feedback on the tools set throughout the week. A similar structure and approach can be used for shorter versions of the training.

**Table 1: BEFS RA Full Training Programme**

Time		Monday	Tuesday	Wednesday	Thursday	Friday
09:00	09:30	Introduction of the participants, objectives of the training, BEFS approach	Crop budget exercise and discussion	Agriculture residues: crops residue	Demonstration – Straight Vegetable Oil (SVO) and combustion tool	Charcoal
09:30	10:00					
10:00	10:30		Introduction to Techno Economic (TE) methodology	Exercise and discussion – Crop residue	Woodfuel – Forest harvesting, wood processing residues	
10:30	11:00					
11:00	11:15					
11:15	11:30	Country status	Transport – Ethanol tool	Gasification	Exercise and discussion – Wood residues	Exercise and discussion
11:30	12:00					
12:00	12:30	Introduction to Natural Resources (NR) methodology	Exercise and discussion – Transport (ethanol)			
12:30	13:00	lunch				
13:00	13:30					
13:30	14:00	Crop production	Exercise and discussion – Transport (ethanol)	Exercise and discussion – Gasification	Crop budget	Demonstration – Livestock residues and biogas
14:00	14:30					
14:30	15:00	Exercise and discussion			Exercise and discussion – Crop budget	
15:00	15:30					
15:30	15:45					
15:45	16:00	Crop budget	Demonstration – Transport (biodiesel tool)	AIT gasification experience	Briquettes	Wrap up of the training
16:00	16:30					
16:30	17:00					

FAO with support from the German Government has already stated capacity building activities. Under the framework of this grant, FAO will carry out dissemination events and will implement two full BEFS RA training workshops, one in Latin-American and one in Asia. The training workshops will take place between September and December 2014. These workshops aim to develop the skills of academic institutions and centers of excellence working on bioenergy related issues in the use of the BEFS RA tools set. The vision is that through these trainings, FAO will be able to establish a network of BEFS RA users who will be ready to support future implementation of the BEFS RA if necessary.

FAO is available to carry out additional technical trainings in the BEFS RA upon request and funding availability from interested parties. For more information please contact: [erika.felix@fao.org](mailto:erika.felix@fao.org)