



FAO'S BEFS BIOENERGY & FOOD SECURITY APPROACH

» *At a glance*



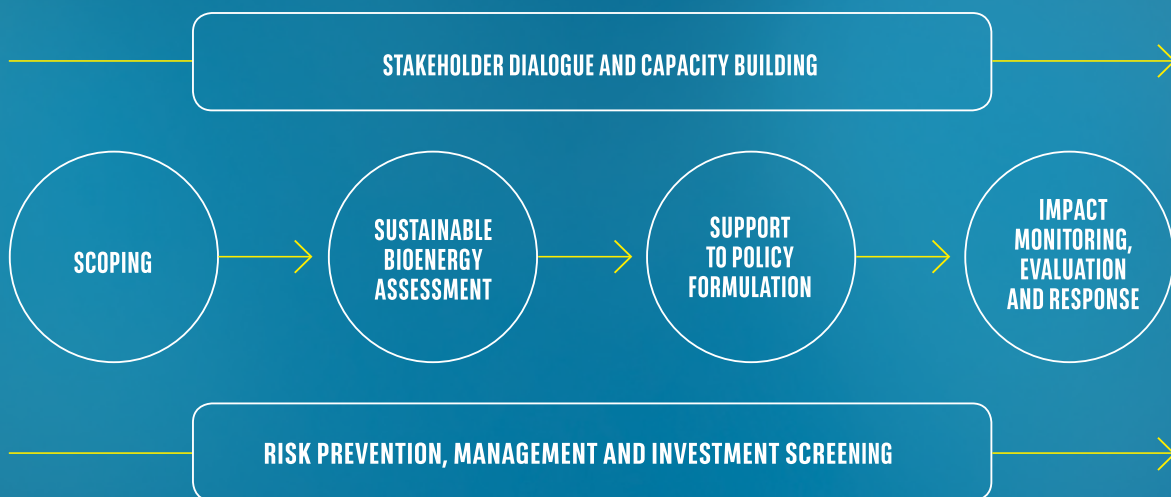
THE BEFS APPROACH

The global demand for modern bioenergy, and especially liquid biofuels, is rapidly growing, driven mainly by climate change mitigation policies and increasing oil prices. This creates both opportunities and risks. On one hand, modern bioenergy development can boost both agricultural and rural development, by raising agricultural productivity, creating new employment and income-generating opportunities, and improving access to modern energy services. On the other hand, if not properly managed, modern bioenergy development can trigger a number of negative environmental and socioeconomic impacts, for instance by putting pressure on key resources such as land and water. The environmental and socio-economic sustainability of modern bioenergy has been highly debated over the

past few years. One of the most controversial issues that has dominated this debate is the relationship between bioenergy and food security.

In order to shed light on this complex issue, FAO has developed the **Bioenergy and Food Security (BEFS) Approach**, which is a key element of FAO's Sustainable Bioenergy Support Package.

The BEFS Approach supports countries in designing and implementing sustainable bioenergy policies and strategies. By doing so, it helps ensure that bioenergy development fosters both food and energy security, and that it contributes to agricultural and rural development in a climate-smart way.



The BEFS Approach comprises six components:

- **Scoping;**
- **Stakeholder Dialogue and Capacity Building;**
- **Sustainable Bioenergy Assessment;**
- **Support to Policy Formulation;**
- **Impact Monitoring, Evaluation and Response; and**
- **Risk Prevention, Management and Investment Screening.**

Depending on the areas of interest, the level of bioenergy development, and the status of bioenergy policy formulation and implementation, countries may decide to use specific components of the BEFS Approach. The BEFS Approach components and the related tools and guidance can be applied at national and sub-national levels (e.g. regional, district, community, etc.) and at project level as well.

SCOPING 🔍

The main objectives of the BEFS Scoping are:

1. To understand the situation of the country and its concerns and priorities, especially in relation to energy, agriculture, food security and the environment;
2. To identify an existing body that could bring together the relevant stakeholders to discuss issues related to bioenergy development



3. To formulate a BEFS Roadmap, and food security, or to form a BEFS Working Group for this purpose; and

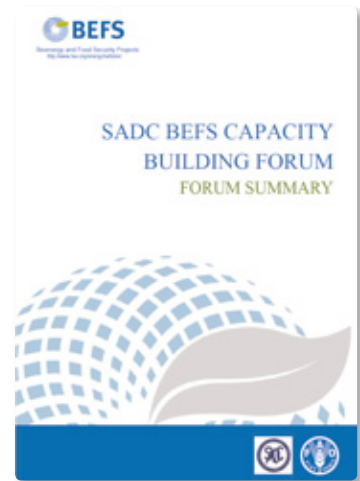
highlighting how the BEFS Approach can assist the country in developing sustainable bioenergy options.

STAKEHOLDER DIALOGUE AND CAPACITY BUILDING ↔

The BEFS Approach includes training modules at both technical and policy levels aimed at:

- Improving the understanding of the relationship between bioenergy, sustainability and food security; and
- Building technical skills to conduct related analysis.

In addition, BEFS can facilitate a multistakeholder dialogue on bioenergy and food security and help strengthen the related institutional framework.



BEFS STAKEHOLDERS

GOVERNMENT

Energy
Agriculture
Food Security
Rural Development
Land Planning
Environment
Forestry
Water Resources
Investment
Trade
Finance
Statistics

PRIVATE SECTOR

Feedstock Producers
Fertilizer Producers and Sellers
Feedstock Transporters
Feedstock Processors
Fuel Transporters and Distributors
Energy Providers
Import/Export Agencies
Research Institutions
Consultancy Firms
Financial Institutions

CIVIL SOCIETY

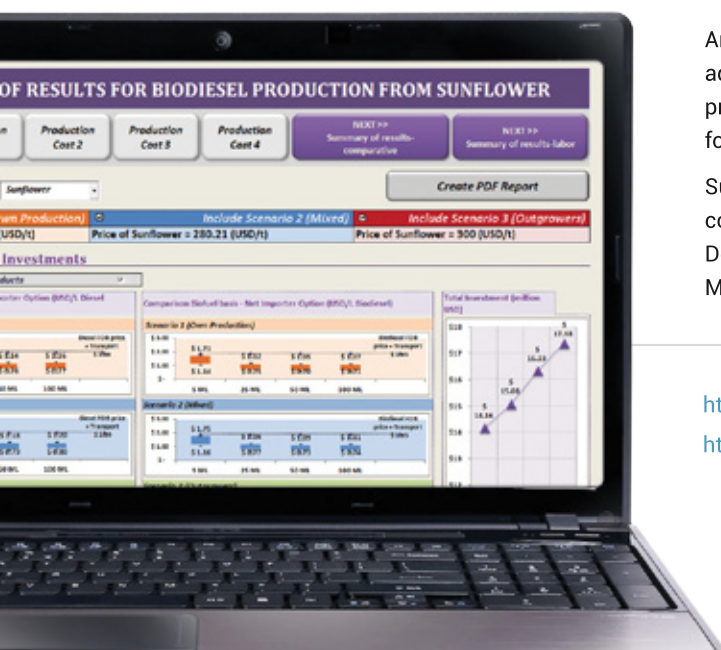
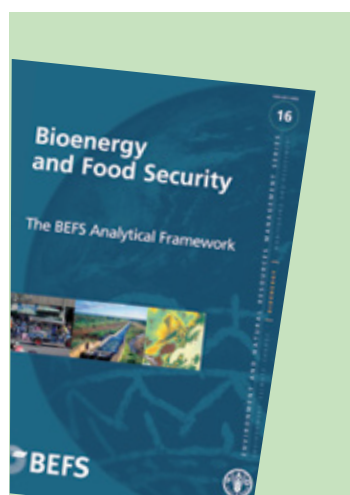
Farmer Organizations
Labour Organizations
Trade Associations
Land Rights Organizations
Environmental NGOs
Development NGOs
Fair Trade Organizations
Community Based Organizations and Groups
Community Members and the Public

SUSTAINABLE BIOENERGY ASSESSMENT

The BEFS Approach comprises two sets of methodologies and tools to conduct a sustainable bioenergy assessment:

- The **BEFS Rapid Appraisal**, which comprises a set of Excel based tools that provide a preliminary indication of the sustainable bioenergy potential of a country; and
- The **BEFS Detailed Analysis**, which provides more accurate results to inform policy making, including an in-depth analysis of the potential environmental and socio-economic impacts of bioenergy development.

Both methodologies cover the whole supply chain of solid, gaseous and liquid biofuels from crops, agriculture residues, fuelwood and wood residues for the following energy end-uses: heating and cooking, electrification and transport. They include a Natural Resources Analysis, a Biomass Potential Assessment, a Techno-economic Analysis and a Socio-economic



Analysis. Sustainability and food security are addressed, for instance through the exclusion of protected areas and the prioritization of biomass use for food.

Sustainable bioenergy assessments have been conducted using the BEFS Rapid Appraisal and Detailed Analysis in a number of countries, including Malawi, Peru, the Philippines, Tanzania and Thailand.

<http://www.fao.org/energy/befs/61325/en/>
<http://www.fao.org/energy/befs/rapid-appraisal/en/>

SUPPORT TO POLICY FORMULATION



The BEFS Approach can support the development and revision of bioenergy policies at three levels:



1. A **review** of the existing **policies** and **legislative framework** is conducted, and possible revisions are identified;

2. The **evidence** generated by the implementation of the BEFS Rapid Appraisal and/or Detailed Analysis **informs** the **decision-making process**; and

3. The Impact Monitoring, Evaluation and Response component of the BEFS Approach can lead to the identification of negative impacts of bioenergy development and **inform** the design of possible **policy responses**.

IMPACT MONITORING, EVALUATION AND RESPONSE



The Global Bioenergy Partnership (GBEP) has developed a set of 24 voluntary **sustainability indicators for bioenergy**, based on inputs from a broad range of partners, including FAO and the BEFS team. A number of these indicators are relevant for food security.

At project level, the web-based BEFS Operator Level Tool could support the monitoring of the

impacts of land-based agricultural/bioenergy operations over time.

The BEFS Approach also includes a compilation of **tools and methodologies** that can be used to assess the sustainability of modern bioenergy at both national and project levels; and a range of possible **responses** to address the impacts of bioenergy and food security.

<http://www.fao.org/energy/befs/78919/en/>

RISK PREVENTION, MANAGEMENT AND INVESTMENT SCREENING

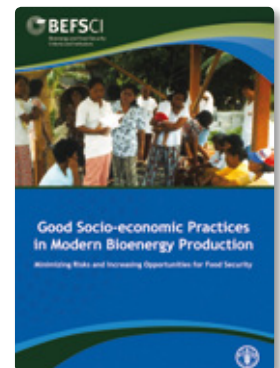
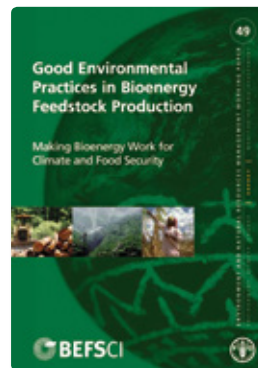
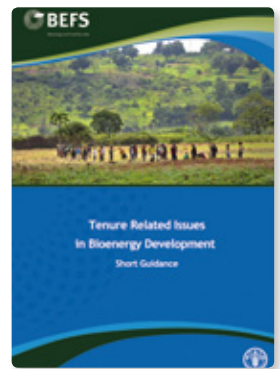


BEFS has compiled a set of **good practices** and **policy instruments** that can be implemented in order to prevent and manage both environmental and socio-economic risks in bioenergy development, including guidance on tenure-related issues.

In addition, the BEFS Approach includes the web-based **BEFS Operator Level Tool**, which can be used to screen land-based agricultural/bioenergy investments.

The tool provides a preliminary indication of potential risks and benefits from these investments, based on a set of environmental and socio-economic indicators and related benchmarks and thresholds.

Building on the aforementioned resources, BEFS can also facilitate and support the development of **Investment Guidelines**, as was done in Sierra Leone, for instance.



<http://www.fao.org/energy/befs/78917/en/>

<http://www.fao.org/energy/befs/operator-tool/en/>

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BEFS IMPLEMENTATION FACILITATION

The BEFS Approach can be implemented directly by governments, civil society organizations and other stakeholders. If necessary, FAO can facilitate the implementation of the BEFS Approach through the BEFS Help Desk.

The Help Desk includes a network of regional Focal Points to ensure that guidance, tools, capacity building strategies, and project formulation methods of the BEFS Approach are accessible and replicable in any country.

Stakeholders interested in FAO support in implementing the BEFS Approach should:

- Explore the materials available on the **BEFS website** for full reports, tools, and further guidance, especially the **BEFS Implementation Guide**
<http://www.fao.org/energy/befs/en/>
- Contact the **Help Desk** at BEFS-Support@fao.org with the following information:
 - o Concept Note with the BEFS Approach components for implementation
 - o Type of support sought from FAO
 - o Key implementing agency
 - o Timeframe for implementation

FAO will respond to Help Desk inquiries with direction on the type of support sought.

In addition, FAO will connect interested parties with regional, sub-regional, and where possible, in country experts to facilitate BEFS implementation.

<http://www.fao.org/energy/befs/helpdesk/en/>

