

UN Energy – renewables cluster Decision Support Tool

Planning Strategically and Managing Risks in Investment Choices

Objective: Assist decision makers in developing countries at national and local level in **planning bioenergy programmes** and **assessing investment options**:

- Provide countries with **step-wise guidance** to build national strategy and assess investments
- Highlight **technical resources** (tools, guidelines etc.) relevant to each of the critical risks and challenges;
- Guidance on identification and inclusion of **stakeholders** and on adopting **transparent processes** for good governance

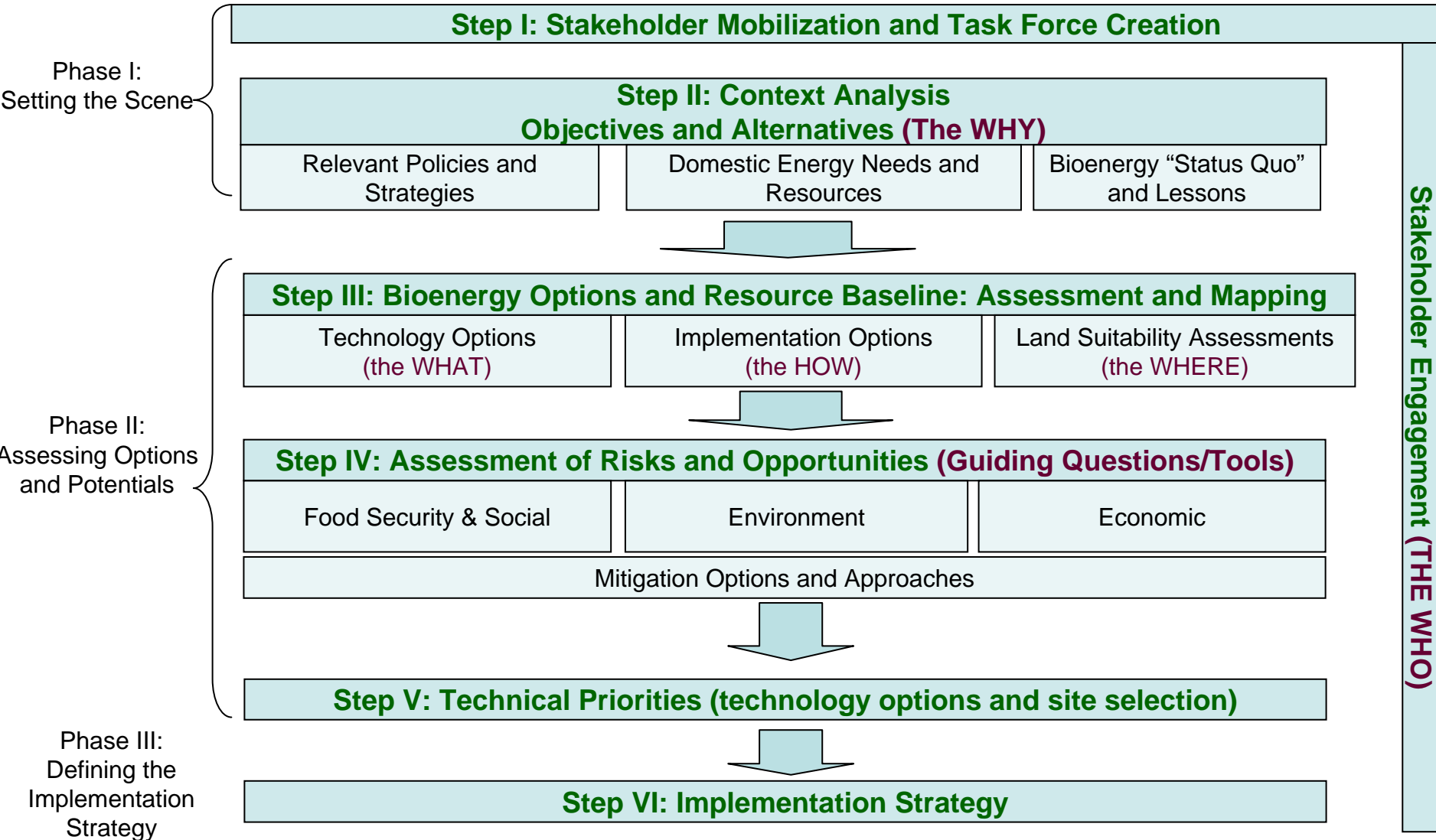
Focus on **national development perspective**, not global issues.

Bioenergy broadly, not limited to liquid biofuels

The document complements the Framework document prepared by UN Energy in 2007 with additional analysis and practical guidance, building upon existing tools.

First draft, prepared by FAO and UNEP has been shared amongst UN Energy and was presented on 12 May in a side-event during CSD. We plan for continue outreach to further refine and complement the tool.

Part I: Decision Tree - National strategy



Part II: Guiding Questions and Tools

Environmental Aspects

- Ecosystems and Biodiversity
- Water Availability and Quality
- Forest Resources and Products
- Productive capacity of the land
- GHG emissions
- Air Quality

Economic Aspects

- Viability and competitiveness
- Economic development
- Resource Availability
- Resource Use Efficiencies
- Access to technology

Food Security and Socio-Economic Aspects

- Food Security -Availability, Access, Utilization and Stability
- Land tenure and displacement risk
- Income generation
- Employment and labour conditions
- Energy access
- Health

good practices for sustainable biofuels

Technical and Institutional

- Sustainable Farming Practices
 - Examples: conservation agriculture, Eco-Agriculture, Good Agricultural Practices, Sustainable Land Management
- Sustainable Forest Management
- Integrated Systems – incl. food-energy systems
- Good Practices – Transport, Storage, Conversion
- Contractual approaches that involve small producers (incl. contract farming)
- Safeguards and safety nets to protect the vulnerable

GEF targeted research project helping to improve the scientific base

‘Global Assessments and Guidelines for Sustainable Liquid Biofuels Production in Developing Countries’

Implementing and lead executing agency: UNEP

Co-executing agencies: FAO and UNIDO together with internationally renowned research institutes from the developed and the developing world, who will contribute to the work of the different project components

Duration: 2 years (April 1st 2009 to March 31st 2011)

Budget: \$2,275,000, including 970,000 GEF grant

Objectives:

- identify and assess sustainable systems for the production of liquid biofuels both for transport and stationary applications worldwide
- enable the GEF to set policies and priorities for future work and investments in biofuel related projects while providing guidance to countries that are keen to engage in this sector
- address Life Cycle Energy and Green House Gas Assessments, Economics, Social/Food Security and Pricing and Environmental Impacts, Fuel and Vehicle Compatibility plus Stationary applications, Scale-up impacts and 2nd Generation of biofuels.

GEF targeted research project state of play : inception phase

- Project Inception Workshop held in Paris on April 16th and 17th
- Finalization of contractual agreements and detailed workplan
- The project will cover about 50 to 80 biofuel settings
- Settings are combinations of: feedstock grown or used, type of fuels produced, agro-ecological zones (AEZ), time frame, agricultural system, etc.
- Project partners have pre-identified the following feedstock/fuels pairs:
 - Cane / ethanol (best current practice)
 - Cane / 2nd generation ethanol
 - Palm oil / FAME (Fatty Acid Methyl Ester)
 - Palm oil / SVO (straight vegetable oil)
 - Soy / FAME
 - Soy / SVO
 - Jatropha / FAME
 - Jatropha / SVO
 - Cassava / ethanol
 - SRC (Short Rotation Coppice) / 2nd generation ethanol
 - SRC (Short Rotation Coppice) / BTL (Biomass to Liquid)
 - Energy grass (e.g. miscanthus) / 2nd generation ethanol
 - Energy grass / BTL
 - Organic waste / 2nd generation ethanol

- provides independent, authoritative scientific assessments of policy relevance on the sustainable use of natural resources
- produces a series of reports, e.g. water, metals, decoupling and biofuels
- **‘Towards sustainable production and use of resources: Assessing Biofuels, an assessment’**
 - Current and potential future use of biofuels
 - Environmental effects of major types of biofuel production and use
 - Macro effects of increased production and use of biofuels, incl. indirect land use change
 - Options for a more efficient and sustainable use of resources
 - Strategies and measures to enhance resource productivity

Peer reviewed draft is being finalised; launch in September 2009 at Davos Resource Forum

GBEP – sustainability task force

Sustainability TF, lead by the UK ‘to provide relevant, practical, science-based, voluntary sustainability criteria & indicators to guide analysis and decision-making’.

Intended use of criteria and indicators:

- to guide any analysis undertaken of bio-energy at the domestic level;
- to be used with a view to informing decision making and facilitating the sustainable development of bio-energy;
- not to be applied so as to limit trade in bio-energy in a manner inconsistent with multilateral trade obligations.

Work is organised in three subgroups, ensuring close interaction:

- Environment, lead by Germany and UNEP plus an additional workstream on iLUC, within the environment sub-group, lead by Germany
- Social, lead by FAO
- Economic and energy security, lead by IEA and UNF

GBEP – sustainability task force

preliminary lists of criteria

Environment

- Greenhouse gas emissions
- Productive capacity of land and ecosystems,
- Land-use change, including indirect effects
- Air quality
- Water availability, use efficiency and quality
- Biological diversity

Economic/energy security

- Resource availability
- Resource use efficiency in production, conversion, distribution and end-use
- Economic development
- Economic viability and competitiveness of bioenergy
- Access to technology and technological
- Capability
- Energy Security

GBEP – sustainability task force sub-group on environment and iLUC

Social

- Food security
- Access to land, water and other natural resources
- Labour conditions
- Rural and social development
- Access to energy
- Human health and safety

Build on work that has been done already, e.g. GHG Task Force and in other fora. UNEP is also engaged in the RSB and monitors other initiatives on sustainability standards and certification, with the aim of achieving synergies and reducing the risk of proliferation of standards.

Next meeting of the Sustainability task force: 8/9/10 July, Paris

UNEP's approach to bioenergy

Bioenergy provides opportunities for energy security, climate change mitigation and development. However, bioenergy comes, just as all energy sources, with its drawbacks. **Planning, design and implementation** will determine whether and in how far risks and opportunities will materialize.

UNEP is working with UN sister agencies, private sector, NGOs and governments on:

- **sustainability assurance**: principles, criteria, indicators
- **research and tools** to provide decision-makers in governments and the private sector with appropriate information and guidance
- **creating markets** and promoting business models that provide development benefits

