Social Indicators of GBEP Work on Sustainable Bioenergy

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SOCIAL INDICATORS

Effects of bioenergy use and domestic production on the price and supply of a food basket, which is a nationally-defined collection of representative foodstuffs, including main staple crops, measured at the national, regional, and/or household level, taking into consideration:

- changes in demand for foodstuffs for food, feed, and fibre;
- changes in the import and export of foodstuffs;

- Net job creation as a result of bioenergy production and use, total and disaggregated (if possible) as follows:
  - skilled/unskilled
  - temporary/indefinite
- Total number of jobs in the bioenergy sector and percentage adhering to nationally recognized labour sta… inciples an…
- Total amount and percentage of increased access to modern energy services gained through modern bioenergy (disaggregated by bioenergy type), measured in terms of energy and numbers of households and businesses
- Total number and percentage of households and businesses using bioenergy, disaggregated into modern bioenergy and traditional use of biomass

Incidences of occupational injury, illness and fatalities in the production of bioenergy in relation to comparable sectors

…lecting biomass as a result …y services

Change in mortality and burden of disease attributable to indoor smoke from solid fuel use, and changes in these as a result of the increased deployment of modern bioenergy services, including improved biomass-based cookstoves

Example – Indicator 10
Title: Price and supply of a national food basket

Description: **Effects of bioenergy** use and domestic production on the **price and supply of a food basket**, which is a nationally-defined collection of **representative foodstuffs**, including main staple crops, **measured at the national, regional, and/or household level, taking into consideration [contextual factors]**:

- changes in demand for foodstuffs for food, feed, and fibre;
- changes in the import and export of foodstuffs;
- changes in agricultural production due to weather conditions;
- changes in agricultural costs from petroleum and other energy prices; and
- the impact of price volatility and price inflation of foodstuffs on the national, regional, and/or household welfare level, as nationally-determined

Example of methodology:
Indicator 10 -Price and supply of a national food basket

- Step 1: Determine the **relevant food basket(s) and its components** (i.e. main staple crops)

- Step 2: Assess the **links between bioenergy use and domestic production and changes in the supply and/or prices of relevant components of food basket(s)** – Different Options /Tiers

- Assessment of the **resulting net welfare impacts at national, regional and household levels**

Step 1: Representative food basket(s) and its components

- Include most important elements of people's diets, based on current food consumption patterns
- Depending on national situations, maybe worth looking at regional, urban/rural, low/high income baskets
- Maybe worth to compare with "nutritious" food basket over time

Step 2: Three tiers with increasingly accurate/complex approaches

- Tier I: Preliminary indication
- Tier II: Causal descriptive assessment
- Tier III: Quantitative assessment

Step 2, tier I: Preliminary indication

- Preliminary indication of changes in the price and/or supply of the food basket(s) and/or of its components in the context of bioenergy developments resulting from collecting data on price and supply

- QUESTIONS ADDRESSED:

    - Has bioenergy production and/or use increased?

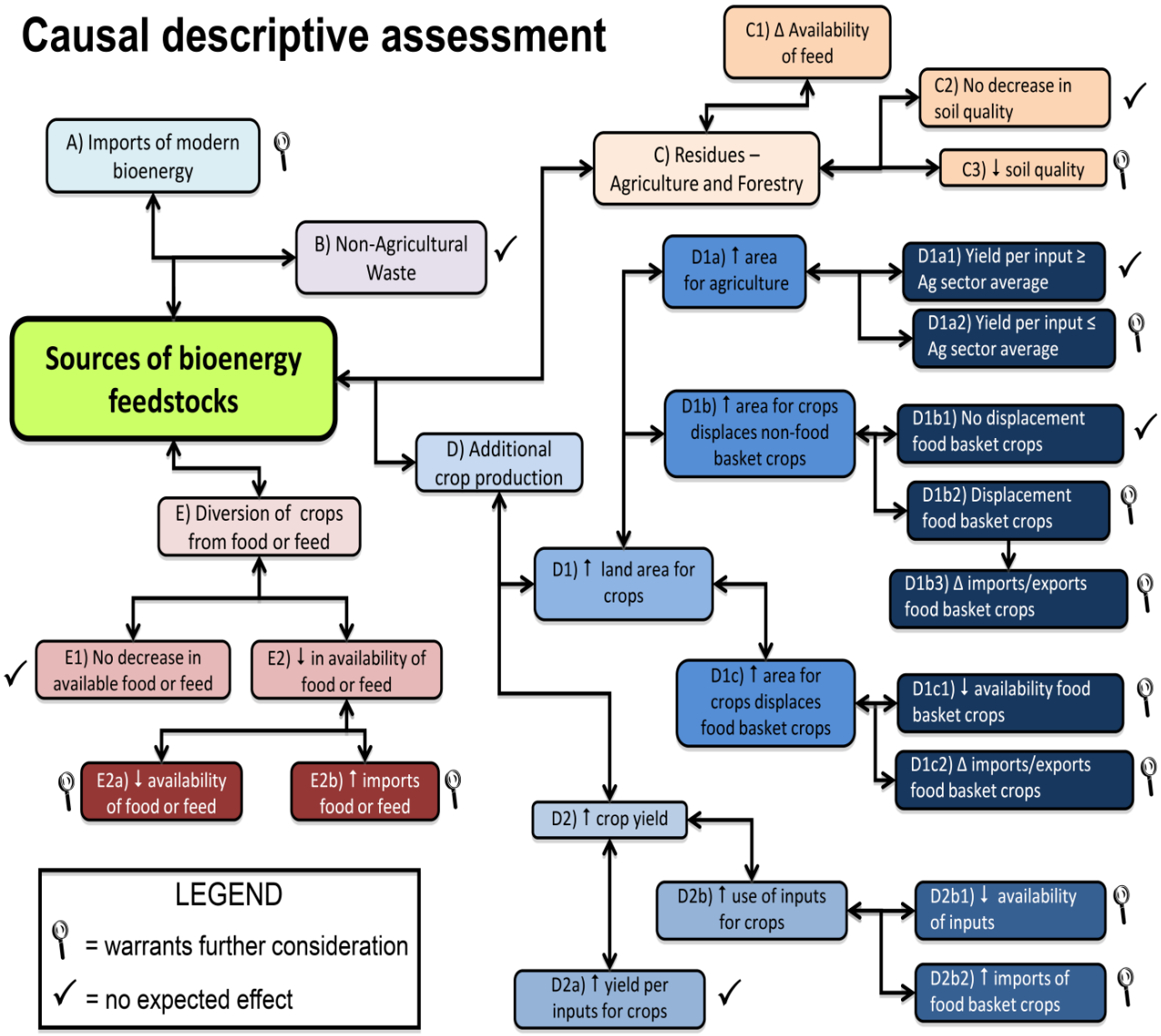
    - If so, has there been at the same time a decrease in the supply and/or an increase in the price of food basket items?

Step 2, tier II: Causal descriptive assessment

- Causal descriptive assessment of the role of bioenergy (in the context of other factors) in the observed changes in price and/or supply

- QUESTIONS ADDRESSED:
    - Which is the origin of bioenergy feedstocks? Additional crop production, diversion of crops (e.g. from food/feed markets), residues from agriculture, forestry and fisheries, and/or non-agricultural waste?
    - In light of this, what is the probability that bioenergy led to a downward pressure on supply and un upward pressure on prices of food basket items?

Step 2, tier II

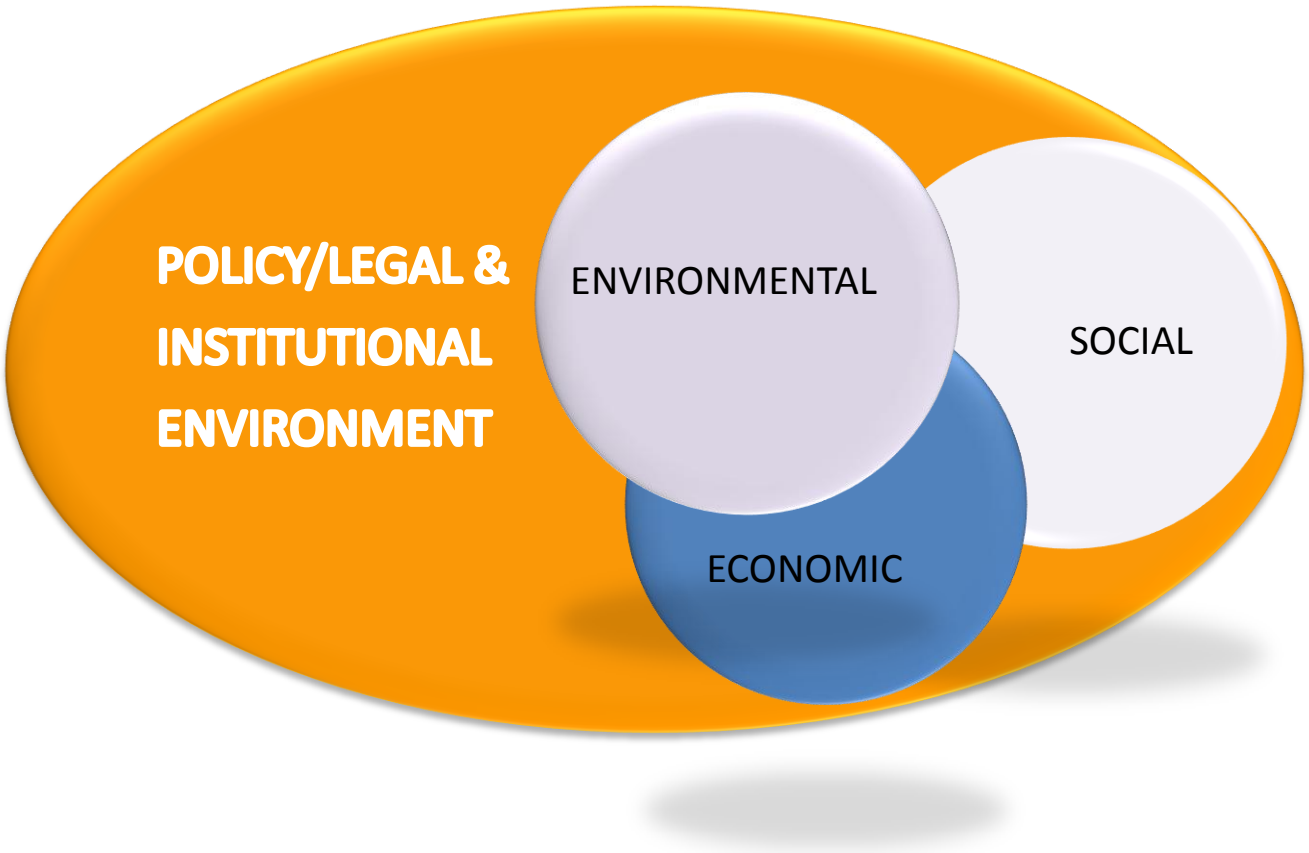


Step 2, tier III: Quantitative assessment

- "Quantitative assessment" using approaches such as time-series techniques and Computable General Equilibrium (CGE) or Partial Equilibrium (PE) modelling

- QUESTIONS ADDRESSED:
    - Which share of the observed supply decrease and/or price increase was due to bioenergy?

POLICY, LEGAL & INSTITUTIONAL ENVIRONMENT MATTER TO INTERPRET BIOENERGY INDICATORS



GBEP AGREED A SERIES OF CROSS-CUTTING ISSUES RELATING TO THE LEGAL, POLICY AND INSTITUTIONAL FRAMEWORK TO BE RELEVANT TO BIOENERGY SUSTAINABILITY, INCLUDING

- **Governance situation**
- **Level of Integrated policymaking**, with the institutional structure to support it
- Quality of policy **monitoring and review** to ensure quality in policy implementation
- **Level of decentralisation and participation** in decision-making processes;
- **Quality of codes of business practice** and responsible investment approaches
- **Extent to physical and land and water use planning and management are integrated**;
- Policies and laws that guarantee **well defined land and water use rights** and promote **legal security of tenure**

Thank you for your attention