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Social Sub-Group of TFS

Considerations on social indicators for *Implementation Guide*

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Indicator 9 : Allocation and tenure of land for new bioenergy production

Challenges

- A lot of informal situations so formal information does not reflect full reality

- Attribution: Distinguish ‘new bioenergy’ from other purposes of the land

- Sensitivity of land tenure issues

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Indicator 9: Allocation and tenure of land for new bioenergy production

Guidance on how to address challenges

- Consider trends in factors closely related to to land tenure (e.g. structure of land ownership, size and distribution of farms, various business models in bioenergy)
- Proxy indications:
  - Extend of use of recognized good land tenure practices. VGGTs and certified bioenergy schemes can give an idea
  - Trends in land claims/disputes
- *Attribution : focus on areas of recent bioenergy expansion, also for surveys (material from Paraguay and Vietnam possible starting point)*
- Capacity building (e.g. on VGGTs/good practice)

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Indicator 10: Price and supply of a national (food) basket

Steps

1. Define food basket – No major problem
2. Influence on food supply/prices through 3 tiers
   - Preliminary indication (bioenergy trend – supply trend – price trend) – No major problem
   - If need be causal descriptive assessment (CDA)
   - If need be partial economic modelling

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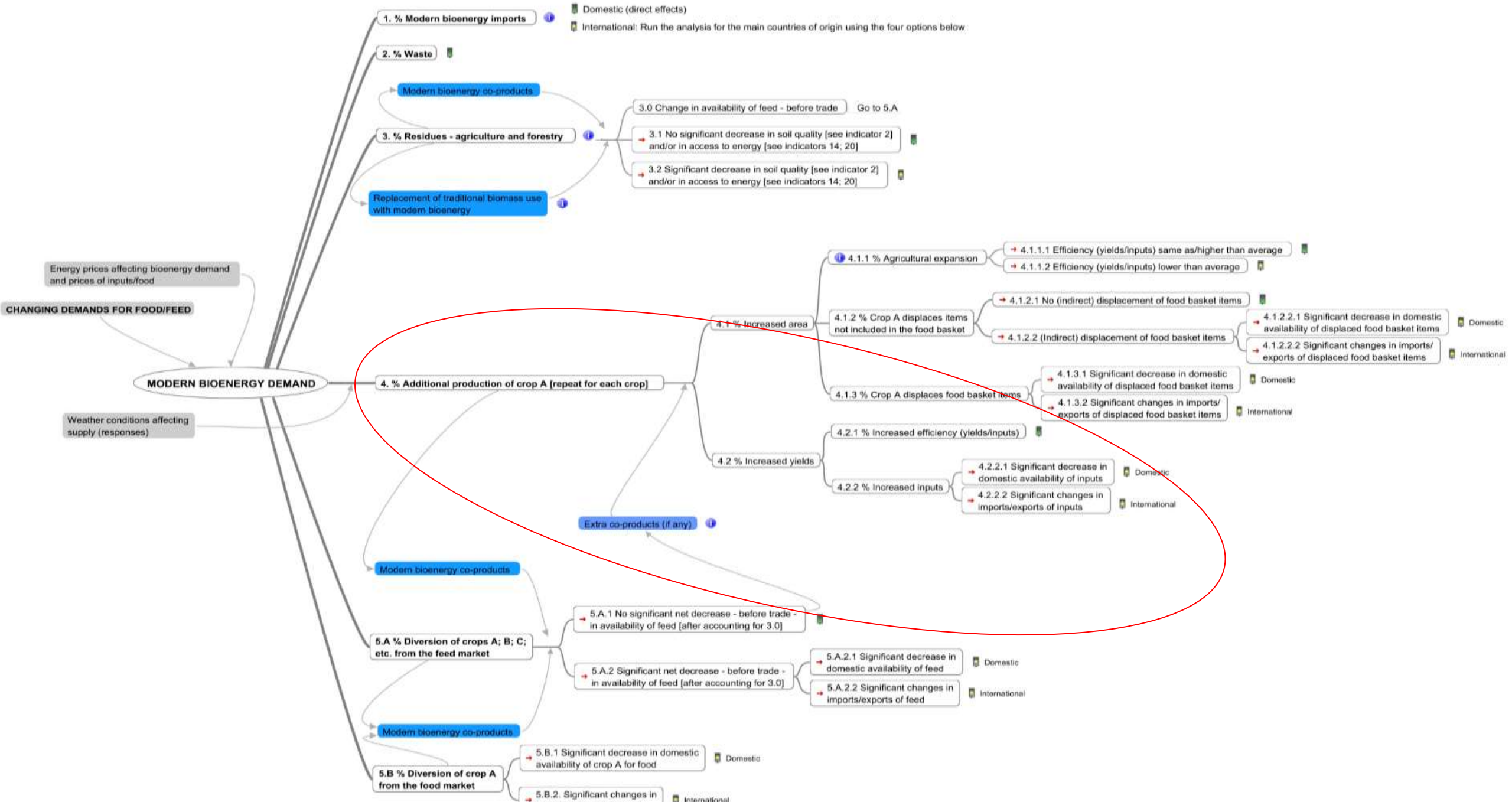
Energy prices affecting bioenergy demand and prices of inputs/food
CHANGING DEMANDS FOR FOOD/FEED
Weather conditions affecting supply (responses)
MODERN BIOENERGY DEMAND
1. % Modern bioenergy imports
Domestic (direct effects)
International: Run the analysis for the main countries of origin using the four options below
2. % Waste
Modern bioenergy co-products
3. % Residues - agriculture and forestry
Replacement of traditional biomass use with modern bioenergy
3.0 Change in availability of feed - before trade
Go to 5.A
3.1 No significant decrease in soil quality [see indicator 2] and/or in access to energy [see indicators 14; 20]
3.2 Significant decrease in soil quality [see indicator 2] and/or in access to energy [see indicators 14; 20]
4. % Additional production of crop A [repeat for each crop]
4.1 % Increased area
4.1.1 % Agricultural expansion
4.1.1.1 Efficiency (yields/inputs) same as/higher than average
4.1.1.2 Efficiency (yields/inputs) lower than average
4.1.2 % Crop A displaces items not included in the food basket
4.1.2.1 No (indirect) displacement of food basket items
4.1.2.2 (Indirect) displacement of food basket items
4.1.2.2.1 Significant decrease in domestic availability of displaced food basket items
Domestic
4.1.2.2.2 Significant changes in imports/ exports of displaced food basket items
International
4.1.3 % Crop A displaces food basket items
4.1.3.1 Significant decrease in domestic availability of displaced food basket items
Domestic
4.1.3.2 Significant changes in imports/ exports of displaced food basket items
International
4.2 % Increased yields
4.2.1 % Increased efficiency (yields/inputs)
4.2.2 % Increased inputs
4.2.2.1 Significant decrease in domestic availability of inputs
Domestic
4.2.2.2 Significant changes in imports/exports of inputs
International
Extra co-products (if any)
Modern bioenergy co-products
5.A % Diversion of crops A; B; C; etc. from the feed market
5.A.1 No significant net decrease - before trade - in availability of feed [after accounting for 3.0]
5.A.2 Significant net decrease - before trade - in availability of feed [after accounting for 3.0]
5.A.2.1 Significant decrease in domestic availability of feed
Domestic
5.A.2.2 Significant changes in imports/exports of feed
International
Modern bioenergy co-products
5.B % Diversion of crop A from the food market
5.B.1 Significant decrease in domestic availability of crop A for food
Domestic
5.B.2. Significant changes in
International

Indicator 10: Price and supply of a national (food) basket

Challenges

- Complex per se because several options and factors to consider (tiers 2 and 3)
- Requires a lot of knowledge/judgement on dynamics of bioenergy and food chains (tiers 2 and 3)
- Requires expert consensus on the above and findings (tiers 2 and 3)
- Partly requires use of modelling (tier 3)

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Indicator 10: Price and supply of a (food) national basket

Guidance on how to overcome challenges

- Use more user-friendly CDA Diagramme
- Use the CDA methodology at the beginning of the whole assessment of the indicators to gain a good understanding on the dynamics and elements of bioenergy chains and foster cross sectoral work. The above will help in particular the FS indicator if required by results of Tier 1
- Maybe use a modeling version of CDA to complement expert opinion only if needed (modeling would still require expert opinion!)
- If Tier 3 needed, consider that support for it is part of FAO's mandate and therefore available and relatively cheap

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Indicator 11: Change in Income

Challenges

- Access to data difficult due to commercially sensitive nature of data
- Attribution: Disaggregation of income + different sources of income/multiple co-products of bioenergy + types of income (including in kind ones)

Guidance on how to overcome challenges

- Cooperatives and workers' associations as possible sources of data
- Include questions on income in surveys as complement to secondary data (done in Vietnam and Paraguay)
- Guidance from attribution paper

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Indicator 12: Jobs in the bioenergy sector

Challenges

- Data: Specific data for bioenergy is scarce (production and processing stages) + Some jobs are informal
- Moving target: Dynamics of bioenergy sector lead to frequent changes in job situation
- Attribution: Information on job creation specific to bioenergy is a problem

Guidance on how to address the challenges

- Include questions on jobs in surveys as complement to secondary data (done in Paraguay and Vietnam)

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Indicator 13: Change in unpaid time spent by women and children collecting biomass

Challenges

Data:

i. Availability: fuelwood is often collected/traded in informal markets.
ii. Given lack of secondary data, this indicator relies heavily on surveys: resource intensive.
iii. For surveys to be representative, large samples are needed over several months where seasonality exists.

Gender neutrality:

Which family members collect biomass depends on culture (Paraguay and Indonesia e.g.), thus it was suggested that the title of indicator be made gender neutral ("Change in unpaid time spent collecting biomass per household")

Gender disaggregation to be carried out during measurement.

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Indicator 13: Change in unpaid time spent by women and children collecting biomass

Challenges (cont.)

Potential extensions of the Indicator:

- Paraguay case: Trend of increasing collection time until a tipping point past which the *time* taken is reduced to zero but the *cost* of biomass increases to substitute this saved time. ➜ Possibility of taking into account this ***opportunity cost*** of traditional biomass (rather than just time).
- This indicator could be extended to include the time saved in cooking and cleaning compared with biomass fuels, which are also important for households.

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Indicator 13: Change in unpaid time spent by women and children collecting biomass

Guidance:

2018 potential areas of work

- Discussion and decision on:
  - ‘Gender neutral’ title for Indicator.
  - Including the ‘opportunity cost’ of traditional biomass under Indicator.
  - Extension to include the time saved in cooking and cleaning.
- Extra guidance on data – UNDP is carrying out surveys in Africa on this matter. It is advisable that GBEP liaises with UNDP in order to find out whether the survey could help in measuring this indicator.
- Develop sample surveys with key questions (for indicators requiring surveys)

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Indicator 14: Bioenergy used to expand access to modern energy services

Challenges

Definition of 'modern bioenergy': This indicator requires distinction between traditional and modern bioenergy.

For different energy pathways, 'modern' may have varying definitions (feedstock, energy efficiency, emissions, technology used).

Very difficult to provide indicative ranges or cut-offs for modern bioenergy for each bioenergy technology. Dependent on the local contexts.

Attribution/Data:

Attributing an increase in access to modern energy services to bioenergy poses challenges both in terms of *methodology* and *data requirements*.

Exception: decentralized energy production from biomass sources.

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Indicator 14: Bioenergy used to expand access to modern energy services

Guidance

Definition of modern bioenergy: Local stakeholders may be charged with deciding the definitions used for the measurement and ensuring that these are made explicit in the project report.

Proxies

If not possible to come up with an exact quantitative measurement, useful to attempt a *semi-quantitative or qualitative estimate* (based on expert judgement, supplemented by qualifying case studies).

2018 Potential areas of work

The definition of what constitutes modern bioenergy could be discussed as a cross - cutting issue and guidance on attribution can be supplemented by information from the attribution paper.

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Indicator 15: Change in mortality and burden of disease attributable to indoor smoke

Challenges

The main implementation challenges relate to the *cross-cutting issues* of data availability and attribution.

Data

In order to measure a change, *reliable statistics* based on *sound epidemiological studies*, *covering an adequate period of time* are needed.

Attribution

Measurement of this Indicator problematic because of the difficulty of attributing health impacts to indoor smoke.

Very resource intensive (need to carry out interviews or studies to quantitatively measure this Indicator).

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Indicator 15: Change in mortality and burden of disease attributable to indoor smoke

Guidance

Proxies

There are a number of potential proxies for this Indicator:

- Number of homes relying on combustion of solid cookfuels + HAPIT
- Risk assessement approach: *CES Evaluation* by EnDev
- Proxy linked with Indicator 1 (GHG emissions at household level) used to indicate quantities of smoke and, by linking with epidemiological studies, the potential health impacts.

Potential areas of work for 2018: Discussion and decision on the title of the Indicator “household air pollution” instead of ’indoor smoke’

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Indicator 16: Incidence of occupational injury, illness and fatalities

Challenges

Data:

Owned by the private sector (agro, agro-industry, insurance companies), having no incentive for reporting/sharing such data.

Level of dissagregation: lack of availability of adequate data with the level of disaggregation required.

Attribution

Dissagregated data not available (see above)

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Indicator 16: Incidence of occupational injury, illness and fatalities

Challenges (cont.)

Capacity

Increased capacity needed:

- to produce and access necessary statistics in order to monitor this indicator, *held primarily by the private sector*.
- to design policies that discourage informal employment, and to require and enforce mandatory insurance regimes.

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Indicator 16: Incidence of occupational injury, illness and fatalities

Guidance

It is fundamental to partner with relevant organizations and strengthen the capacity to produce statistics needed to monitor this indicator. *This is the case for all indicators on which information is held primarily by the private sector.*

It is also important to develop the capacity of national policymakers to design policies that discourage informal employment in bioenergy and require mandatory insurance regimes.

2018 Potential areas of work:

- On attribution: supplementary information from the attribution paper.
- GBEP could act to invite governments to encourage industry organizations to gather data from their members as anonymous statistics.

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General suggestions on data issue

- Tiered approach
  - Start at national level
  - Validate with anonymous data from different sources (chambers of commerce, workers' associations, etc) and secondary literature + 'Ask people' (surveys)

- Data on the informal sector
  - Certification schemes
  - 'Ask people' through surveys, group interviews

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General suggestions on attribution

- Focus on areas of recent bioenergy expansion
- Consider marginal effects - but depends on types of bioenergy and stage in the bioenergy chain!
- Identify trends – but need to contextualize versus global trends

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Other suggestions for consideration

- In many of countries, most social indicators would require a survey.
  - It may be useful to **include in the *Implementation Guide* a set of key questions to be included in potential surveys**, either *by indicator* or *for the pillar* as a whole (as there would be overlap among the indicators). Examples could be provided from the surveys carried out in Indonesia, Paraguay, Viet Nam and Argentina, among others.
- What constitutes modern bioenergy could be discussed as a cross-cutting issue
- In the case of indicators on which information is held primarily by the **private sector, partner with relevant organizations and strengthen the capacity to produce statistics** needed to monitor this indicator, offer guarantees of anonymity and ensure quality.

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