



# GBEP Methodological Framework

Ana Carolina Avzaradel

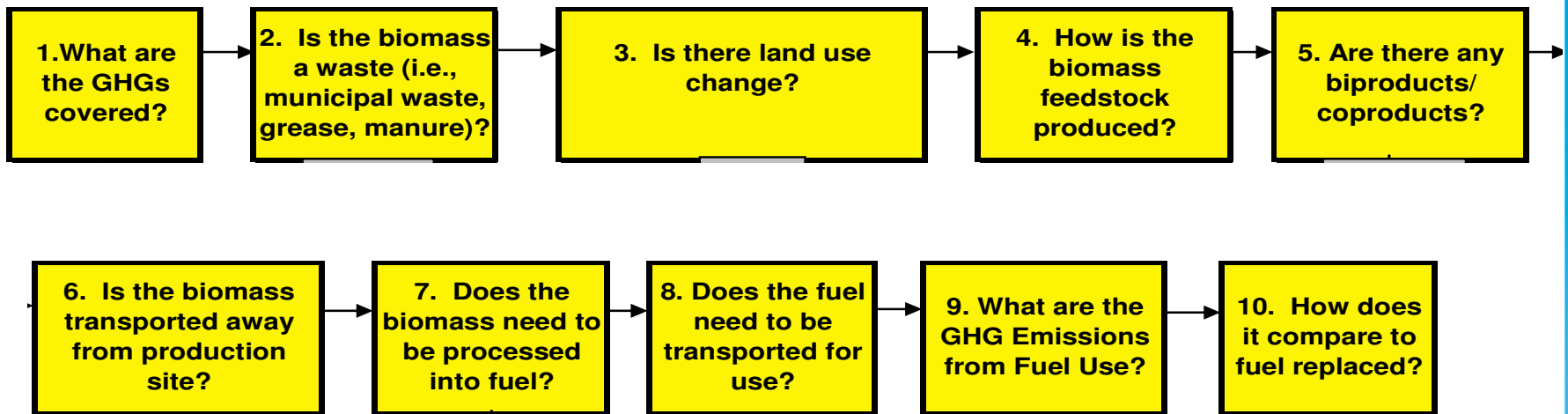
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# GBEP - Original Flowchart

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# GBEP - Comparison with replaced fuel

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- Production processes of fossil fuel and biofuels are intrinsically different.
  - Therefore, some of their stages are not directly comparable. It is important to list every single stage of the production processes and evaluate which of them should be included in the LCA, being comparable to one another or not.
  - One of the main difficulties in setting up a comparison between the fossil fuel LCA and the biofuel LCA is exactly the depth of this analysis, that is, the production stages included and evaluated in both LCAs should present an equivalent level of complexity.
- Rational: The user is asked to perform a LCA for the replaced fossil fuel as similar as possible to LCA performed for the bio-fuel.

# GBEP - Indirect Land Use Change (ILUC)

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- Some account for land use change in a single, holistic assessment while others sub-divide bioenergy-associated land use change into direct and indirect changes.
  - Some further distinguish between indirect land use changes that are domestic versus those that are international.
- Two guiding principles were followed.
  - The first was to avoid promoting or endorsing one methodology or approach over another.
    - Differences regarding the approach to LCA analysis or the choice of LCA methodologies could arise due to differences in national circumstances or legitimate differences of opinion regarding what should be included in lifecycle analysis.
  - The second principle was to promote transparency.