

**GBEP WORKING GROUP ON CAPACITY
BUILDING FOR SUSTAINABLE BIOENERGY
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**ASSESSING AND ENHANCING CAPACITY FOR GBEP
SUSTAINABILITY INDICATOR EVALUATION IN GHANA:**



GHANA GBEP PILOT PROJECT

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PRESENTATION OUTLINE

- Background of Ghana GBEP pilot project
- Objective of project
- Selection of Indicators
- Research assignment
- Scope of Research assignment
- Draft Conclusions of Research Institutes
- Recommendations
- Next Steps

BACKGROUND



OBJECTIVES OF GHANA GBEP PILOT PROJECT

1. Enhance capacity in Ghana using the GBEP sustainability indicators as a tool to:
 - Assess sustainability of bioenergy sector
 - Develop sustainable bioenergy policies
2. Learn lessons on how to use the indicators:
 - Enhance their practicality for policymakers
 - Spread experiences in ECOWAS region and GBEP

ACTORS

Steering Group

- Office of the President: Hamza Tanko, Biofuel Energy Officer
- ECREEE: Bah Saho, Renewable Energy Expert
- NL Min. of Environment: Ralph Brieskorn, International Policy Manager Biofuels
- NL Agency: Bregje van Keulen, Advisor Biobased Economy

Policy Stakeholder Group

- Dr. A.B. Salifu, Director-General, CSIR
- Dr. Hakeem Wemah, Northern Development Forum
- Dr. Agyekum Hene, Africa Biofuel Renewable Energy Company
- Mr. Salifu Abdul-Razak Ziblim, Min. Food and Agri
- Dr. Komla B. Kotatsi, Min. of Environment, Sci. and Tech.
- Mrs. Florence Agyei, Environmental Protection Agency
- Prof. Abeeku Brew-Hammond, Energy Centre, KNUST, Kumasi
- Mr. Kwabena A. Otu-Danquah, Energy Commission
- Dr. Beatrice Mensah, CSIR-Institute of Industrial Research
- Representative, Ministry of Lands and Natural Resources
- Representative, Forestry Commission

PRIORITISED INDICATORS

Environmental		Social		Economic	
1. Life-cycle GHG emissions	3	9. Allocation and tenure of land for new bioenergy production	2	17. Productivity	1
2. Soil quality	4	10. Price and supply of a national food basket	1	18. Net energy balance	4
3. Harvest levels of wood resources	1	11. Change in income		19. Gross value added	
4. Emissions of non-GHG air pollutants, including air toxics	5	12. Jobs in the bioenergy sector	4	20. Change in consumption of fossil fuels and traditional use of biomass	2
5. Water use and efficiency		13. Change in unpaid time spent by women and children collecting biomass		21. Training and re-qualification of the workforce	6
6. Water quality		14. Bioenergy used to expand access to modern energy services	3	22. Energy diversity	5
7. Biological diversity in the landscape		15. Change in mortality and burden of disease attributable to indoor smoke		23. Infrastructure and logistics for distribution of bioenergy	3
8. Land use and land-use change related to bioenergy feedstock production	2	16. Incidence of occupational injury, illness and fatalities		24. Capacity and flexibility of use of bioenergy	

OBJECTIVES OF RESEARCH WORK

1. Assess the status of bioenergy data collection.
2. Understanding the practicalities of implementing the GBEP indicators in Ghana.
3. Learning lessons on ways to move forward with the GBEP indicators in Ghana.

SELECTED RESEARCH INSTITUTES



Council for Scientific & Industrial Research – Forest Research Institute (FORIG):

environmental indicators 1, 2, 3 and 8

Council for Scientific & Industrial Research –Institute of Industrial Research (IIR):

economic indicators 17, 18, 20 and 23



University of Ghana – Institute of Statistical, Social & Economic Research (ISSER):

social indicators 10, 12 and 14

RESEARCH ASSIGNMENTS

Four Tasks:

1. Collect the most appropriate (already available) data.
2. Assess the usefulness, availability and quality of data.
3. Provide recommendations for improved data collection and use.
4. Provide baseline values for the selected indicators

SCOPE OF THE RESEARCH WORK DONE

Environmental pillar	Social pillar	Economic pillar
CSIR-FORIG	UG-ISSER	CSIR-IIR
<p>Indicators 1, 2 and 8:</p> <ul style="list-style-type: none">• Wood resources• Jatropha, sunflower• Agricultural residues <p>Indicator 3:</p> <ul style="list-style-type: none">• Wood resources	<p>Indicator 10:</p> <ul style="list-style-type: none">• Maize and sorghum <p>Indicator 12:</p> <ul style="list-style-type: none">• Wood to charcoal and jatropha to biodiesel <p>Indicator 14:</p> <ul style="list-style-type: none">• baseline year 2010	<p>Indicators 17, 18, 20 and 23:</p> <ul style="list-style-type: none">• Fuel wood to charcoal• Vegetable oil to biodiesel• Waste to biogas

DRAFT CONCLUSIONS

Based on FORIG, IIR and
ISSER WORK

1. The 3 Research Institutes provided

- Structured and good reports for the 11 indicators
- Valuable insight in data availability, data quality, methodological approaches and practicality of GBEP indicators in Ghana context
- Unfortunately not as many indicators and baseline values as hoped for

Providing insights in the status of bioenergy data collection, understanding the practicalities of implementing the GBEP indicators and learning lessons on how to move forward

2. Data, indicators and baseline values are very relevant for Ghana

- PSG selected the 11 indicators as first priority
- Institutes assessed all indicators as (very) relevant as they address key issues / developments
- Ghana is developing fast. It is very important for policymakers to be able:
 - ❑ to assess these developments
 - ❑ to steer developments in the wanted direction
 - ❑ to monitor the progress towards the goals set

3. Lot of data is collected in a structured and systematic manner but do not focus on bioenergy

- e.g.: Agricultural data (MoFA-SRID), GHG (MEST), Energy Statistics (MoE-EC), Living Standards (GSS)
- Less than 50% of the indicator values are filled in
- 36% of collected data do not meet GBEP data requirements
- 54% partly meet GBEP data requirements
- Other data sources used are 1 time studies

4. Most GBEP methodologies do not fit with the current practices in Ghana

- Although all were assessed relevant, the 11 indicators average score for usefulness is 5.1 (out of 10)
- GBEP methodological approach can be used fully for only 1 indicator, partly for 5 indicators and not at all for 5 indicators
- The 11 indicators average score for data quality is 5.0 (out of 10)

5. The institutes consider baseline values as very relevant. But this is a new concept for Ghana

- Relevance of baseline values is assessed as (very) important for 10 of the 11 indicators
- 39% of the baseline values are filled in
- It is only for indicator 3 (wood resources) that a baseline value already exist

RECOMMENDATIONS OF RESEARCH INSTITUTES

- Increased financial resources are needed for improved data availability and quality
- Stepwise approach: starting with a selection of simplified (*) indicators
- Improvement of human and institutional capacities
- Enforcement of data collection and reporting obligations

** Easier methodological approach with less time and resources needed for data collection and also less sub-indicators*

FINALISATION OF PILOT AND NEXT STEPS

1. Final report by international consultant, Partners for Innovation focussing on:
 - Overall conclusions and recommendations
 - Specific recommendations for the 11 indicators
 - Lessons learned for GBEP and other countries that want to work with the indicators

2. Drafting an outline for a follow-up project to:
 - Implement the 24 GBEP Sustainability Indicators in Ghana to the full

THANK YOU

