



# Bioenergy, water and SDG implementation: experiences and linkages

# Introduction to the work of GBEP and the Sustainability Indicators - Links between the SDGs and the GBEP Sustainability Indicators for Bioenergy

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# THE GLOBAL BIOENERGY PARTNERSHIP



- Founded in 2005 as a G8+5 Partnership at the G8 Gleneagles Summit
- **Partners:** 23 countries + 14 international organizations
- **Observers:** 28 countries + 12 international organizations
- GBEP Secretariat is hosted at the FAO in Rome

# The GBEP Sustainability Indicators for Bioenergy (GSI)

Environmental pillar	Social pillar	Economic pillar
1. Life-cycle GHG emissions	9. Allocation and tenure of land for new bioenergy production	17. Productivity
2. Soil quality	10. Price and supply of a national food basket	18. Net energy balance
3. Harvest levels of wood resources	11. Change in income	19. Gross value added
4. Emissions of non-GHG air pollutants, including air toxics	12. Jobs in the bioenergy sector	20. Change in consumption of fossil fuels and traditional use of biomass
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. Water quality	14. Bioenergy used to expand access to modern energy services	22. Energy diversity
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
8. Land use and land-use change related to bioenergy feedstock production	16. Incidence of occupational injury, illness and fatalities	24. Capacity and flexibility of use of bioenergy

# SDGs and GSIs – why bother?

- SDGs are to be **implemented nationally** by all countries – this includes GBEP members
- More GBEP members implement the GSIs as well - are there potential overlaps & benefits?
  - Possibilities to **share data**, and/or to **jointly develop** relevant new data sources
  - SDG **indicator work** continues, GBEP “guidance” to GSIs is under preparation – now is a good time!



# The SDGs and Bioenergy

**15 out of 17** SDGs are directly or indirectly **linked to bioenergy**, especially







- 2 (food & agriculture)
- 4 (water)
- 7 (energy)
- 8 (growth, employment)
- 11 (cities)
- 12 (consumption & prod.)
- 13 (climate change)
- 15 (forests, land)

SDG **indicators now available**









SDG	Key wording	Driver	Safe-guard
<b>1</b> <small>NO POVERTY</small>	End poverty in all its forms everywhere	(✓)	(✓)
<b>2</b> <small>ZERO HUNGER</small>	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	✓	✓
<b>3</b> <small>GOOD HEALTH AND WELL-BEING</small>	Ensure healthy lives and promote well-being for all at all ages	(✓)	(✓)
<b>4</b> <small>QUALITY EDUCATION</small>	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all		
<b>5</b> <small>GENDER EQUALITY</small>	Achieve gender equality and empower all women and girls	(✓)	(✓)
<b>6</b> <small>CLEAN WATER AND SANITATION</small>	Ensure availability and sustainable management of water and sanitation for all	(✓)	(✓)
<b>7</b> <small>AFFORDABLE AND CLEAN ENERGY</small>	Ensure access to affordable, reliable, sustainable and modern energy for all	✓	(✓)
<b>8</b> <small>ECONOMIC GROWTH</small>	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	✓	(✓)
<b>9</b> <small>INDUSTRIALIZATION, INNOVATION AND INFRASTRUCTURE</small>	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	(✓)	
<b>10</b> <small>REDUCED INEQUALITIES</small>	Reduce inequality within and among countries		
<b>11</b> <small>SUSTAINABLE CITIES AND COMMUNITIES</small>	Make cities and human settlements inclusive, safe, resilient and sustainable	✓	(✓)
<b>12</b> <small>RESPONSIBLE CONSUMPTION AND PRODUCTION</small>	Ensure sustainable consumption and production patterns	✓	(✓)
<b>13</b> <small>CLIMATE ACTION</small>	Take urgent action to combat climate change and its impacts	✓	✓
<b>14</b> <small>UNDERSEA OCEANS AND MARINE RESOURCES</small>	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	(✓)	(✓)
<b>15</b> <small>LAND, UNDERSEA OCEANS AND MARINE RESOURCES</small>	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	✓	✓
<b>16</b> <small>PEACE, JUSTICE AND STRONG INSTITUTIONS</small>	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels		(✓)
<b>17</b> <small>PARTNERSHIPS FOR GOAL ACHIEVEMENT</small>	Strengthen the means of implementation and revitalise the global partnership for sustainable development	(✓)	(✓)

Source: own elaboration based on SDKP (2015). **Bold text:** SDG related to energy; (✓) = partially relevant

# SDGs & GSIs: Aggregated Mapping

Sustainable development goals, targets and indicators				GBEB Sustainability Indicators for Bioenergy (GSI)
SDG	Target	Indicators	Tier	GSI
 1 NO POVERTY	1.1	1.1.1	I	10. Price and supply of a national food basket
	1.2	1.2.1	I	11. Change in income
		1.2.2	II	
 2 ZERO HUNGER	1.4	1.4.2	III	9. Allocation and tenure of land for new bioenergy production
	2.1	2.1.1	I	10. Price and supply of a national food basket
		2.1.2		
	2.3	2.3.1	III	9. Allocation and tenure of land for new bioenergy production
		2.3.2		
2.4	2.4.1	III	7. Biological diversity in the landscape + 2. Soil quality	
2.c	2.c.1	II	10. Price and supply of a national food basket	
 3 GOOD HEALTH AND WELL-BEING	3.9	3.9.1	I	15. Change in mortality and burden of disease attributable to indoor smoke
 5 GENDER EQUALITY	5.4	5.4.1	II	13. Change in unpaid time spent by women and children collecting biomass
 6 CLEAN WATER AND SANITATION	6.3	6.3.1	II	6. Water quality
		6.3.2	III	
	6.4	6.4.1	III	5. Water use and efficiency
6.4.2		II		
 7 AFFORDABLE AND CLEAN ENERGY	7.1	7.1.1	I	14. Bioenergy used to expand access to modern energy services
		7.1.2		
	7.2	7.2.1	I	14 (see above) + 22. Energy diversity
	7.3	7.3.1	I	19. Gross value added + 22. Energy diversity
	7.a	7.a.1	III	all GBEP work

# SDGs & GSIs: Aggregated Mapping

Sustainable development goals, targets and indicators				GBEB Sustainability Indicators for Bioenergy (GSI)
SDG	Target	Indicators	Tier	GSI
 8 DECENT WORK AND ECONOMIC GROWTH	8.1	8.1.1	I	19. Gross value added
	8.2	8.2.1	I	12. Jobs in the bioenergy sector
	8.3	8.3.1	II	12. Jobs in the bioenergy sector
	8.5	8.5.1 8.5.2	II I	11. Change in income
	8.8	8.8.1 8.8.2	I III	16. Incidence of occupational injury, illness and fatalities
 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	9.4	9.4.1	I	1 + 19
 10 REDUCED INEQUALITIES	10.1	10.1.1	I	11. Change in income
 11 SUSTAINABLE CITIES AND COMMUNITIES	11.6	11.6.1 11.6.2	II I	4. Emissions of non-GHG air pollutants, including air toxics
 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	12.2	12.2.1 12.2.2	III II	20. Change in the consumption of fossil fuels and traditional use of biomass
 13 CLIMATE ACTION	13.2	13.2.1	III	1. Lifecycle GHG emissions
 15 LIFE ON LAND	15.1	15.1.1 15.1.2	I	8. Land use and land-use change related to bioenergy feedstock production
	15.2	15.2.1	II	3. Harvest levels of wood resources
	15.3	15.3.1	III	2. Soil quality
	15.8	15.8.1	III	7. Biological diversity in the landscape
 17 PARTNERSHIPS FOR THE GOALS			I - III	GBEP work in general



# GSI and SDGs: Some findings

- **Several SDG** indicators could benefit from **GSI** data
- Many GSI ENV are linked to SDG indicators of **Tier III** (7 out of 14): **more work needed!**
- **National SDG implementation** could be option to **initiate** GSI work and **GSI work** could provide (some) data for national SDG implementation
- **GSI Implementation Guide** (expected for 2018) should take up SDG interlinkages, based on Technical Paper

# SDGs and GSIs – next steps

- Draft Technical Paper (available upon request, see contacts)
- **Final draft** before GBEP Task Force on Sustainability meeting, November 2017 (Rome)




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 UND UMWELTFORSCHUNG  
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**Linkages between the Sustainable Development Goals (SDGs)  
 and the GBEP Sustainability Indicators for Bioenergy (GSI)**

**Technical Paper for the GBEP Task Force on Sustainability**

**- DRAFT VERSION -**

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# More Information



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