



WP1: Gaps in Existing EU Sustainability Certification and Standardisation



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Goal and Scope

In order to better understand the current status, as well as the nature of the criteria and indicators currently used in sustainability certification and standardisation, STAR-ProBio WP1 conducted a comprehensive gap assessment. The objective of this exercise was to identify areas of sustainability, that are currently not being reflected appropriately by certification and standardisations. Based on this analysis, WP1 identified existing gaps, in the three sustainability pillars, which represented the basis for the work of technical work packages.

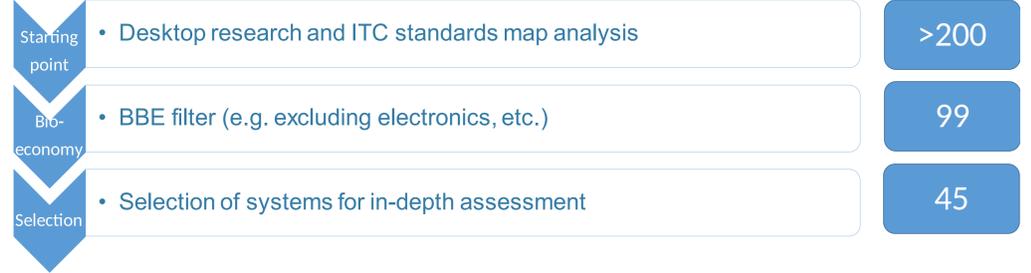


Figure 1. Procedure for the analysis of relevant frameworks currently available for application in the EU Bioeconomy. (ITC=International Trade Centre; BBE=Bio-based economy)

Approach and Methodology

In a stepwise approach, we analysed and filtered certification schemes and standards that are relevant for biobased products. We identified ~50 schemes and various standards, which have been analysed further in an in-depth assessment. In addition, a series of interviews with experts has been conducted, using standardised questionnaires. The interviews revealed additional insights and several general statements regarding trends in certification and issues related to the sustainability of biobased products. We compared the main messages from the expert interviews to the analysis of the criteria and indicators in order to confirm findings and deal with potential biases. Finally, in order to organise an additional review process, the main findings from the GAP assessment have been presented and discussed at several occasions with experts and stakeholders of the bioeconomy.

Sector	Label	Initiative	Certification scheme	Name	geographic	Scope	Supply Chain	Social	Environmental	Economic	Good Governance
Bioenergy	Liquid biofuels	x	x	International Sustainability & Carbon Certification (ISCC)	global	multiple	full	x	x	x	x
				REDcert EU	Europe (+ Ukraine, Belarus)	multiple	full	x	x	x	x
				Roundtable on Sustainable Biomaterials EU RED (RSB EU RED)	global	multiple	full	x	x	x	x
				Red Tractor Farm Assurance Combinable Crops & Sugar Beet (Red Tractor)	global	multiple	full	x	x	x	x
Solid biofuels	x	x	x	Roundtable on Sustainable Palm Oil RED (RSPO)	global	multiple	full	x	x	x	x
				Certification System addressing Indirect Impacts of Biofuels (CIIB)	EU	multiple	farm gate to first processor	x	x	x	x
				Sustainable Biomaterials Partnership (SBP)	global	woody biomass	from cultivation to energy products	x	x	x	x
				DINplus Short rotation coppice sustainably grown according to DIN EN15214-4	Denmark, Finland, Iceland	SRC wood	production process, product	x	x	x	x
Biogas	x	x	x	CI-BioGasDomestic	Italy	multiple	production process, product	x	x	x	x
				Green Gas Certification Scheme (GGCS)	UK	multiple	production to use	x	x	x	x
				Global Bioenergy Partnership (GBEP)	global	multiple	full	x	x	x	x
				insure made star	CH	multiple	energy production and delivery	x	x	x	x
Heat/Power	x	x	x	DI-Power	Germany	multiple	power production	x	x	x	x
				Green-Stream-Label (Green-Power-Label)	Germany	multiple	power production to distribution	x	x	x	x
				Green-e	global	multiple	full	x	x	x	x
				Forest Stewardship Council (FSC) CoC	global	woody biomass	full	x	x	x	x
Forestry	x	x	x	Eco-Certified Composite (ECC) Sustainability Standard	USA	wood fiber	full	x	x	x	x
				DNB System	global	multiple	full	x	x	x	x
				Green Building Rating System BREEAM	global	multiple	full	x	x	x	x
				Assessment System for Sustainable Building (ASB)	Germany	multiple	full	x	x	x	x
Construction	x	x	x	Leadership in Energy and Environmental Design (LEED)	Suitland, Liechtenstein	multiple	full	x	x	x	x
				Fair Trade Certification System	global	multiple	full	x	x	x	x
				Fairtrade Label - Fairtrade Labeling Organizations International (FLO)	global	multiple	full	x	x	x	x
				NATURLAND Tier	global	multiple	full	x	x	x	x
Food	x	x	x	Required Hand in Hand	global	multiple	full	x	x	x	x
				Marine Stewardship Council (MSC)	global	fish	from fisheries to retailers	x	x	x	x
				GlobalGAP crops certification	global	multiple	full	x	x	x	x
				demeter	global	multiple	full	x	x	x	x
Fish Certification Systems	x	x	x	Ecovin	global	multiple	full	x	x	x	x
				Sustainable Agriculture Network / Rainforest Alliance Certified (SAN)	global	multiple	full	x	x	x	x
				Roundtable on sustainable palm oil (RSPO)	global	multiple	full	x	x	x	x
				UTZ certified	global	multiple	full	x	x	x	x
Agricultural Products	x	x	x	GMFA - Feed Responsibility Assurance	global	multiple	full	x	x	x	x
				DIQ certificate sustainable agriculture	Germany	multiple	full	x	x	x	x
				EU Ecolabel - fabrics	EU, CH, NOR, ISL, TUR	multiple	full	x	x	x	x
				Textile Exchange Organic 100% content standard	global	multiple	full	x	x	x	x
Feed	x	x	x	ISCC PLUS	global	multiple	full	x	x	x	x
				Bioactive Feedstock alliance	global	multiple	full	x	x	x	x
				COSMOS Standard - Cosmetics organic and natural standard	global	multiple	full	x	x	x	x
				NATURLAND Textil (nonwovens textile)	global	multiple	full	x	x	x	x
Textiles	x	x	x	EU Ecolabel - fabrics	EU, CH, NOR, ISL, TUR	multiple	full	x	x	x	x
				Textile Exchange Organic 100% content standard	global	multiple	full	x	x	x	x
				ISCC PLUS	global	multiple	full	x	x	x	x
				Bioactive Feedstock alliance	global	multiple	full	x	x	x	x
Pharmaceuticals/Products	x	x	x	COSMOS Standard - Cosmetics organic and natural standard	global	multiple	full	x	x	x	x
				GRADLE TO CRADLE CERTIFIED PRODUCT STANDARD	global	multiple	full	x	x	x	x
				INRO Nachhaltigkeitskriterien für die Stoffliche Biomasseerzeugung (sustainability)	global	multiple	full	x	x	x	x
				Nature Care Products Standard	global	multiple	full	x	x	x	x

Figure 2. Matrix with overview of existing certification frameworks

Main findings from our Gap analysis

The analysis has revealed an impressive amount of existing certification frameworks, criteria, indicators and applicable standards, available in the EU Bioeconomy. From the assessment of ~ 100 certification frameworks (45 detailed in-depth-analysis), 17 interviews with international experts and the analysis of all relevant standards and activities of standardisation committees in the bioeconomy, we identified the following seven areas with gaps in existing schemes and standards, which demand further attention and research:

- **Gaps & weaknesses in criteria & indicator sets:** Although our analysis showed a wide range of criteria and indicators implemented, we identified a number of criteria that are not appropriately reflected by certification frameworks (e.g. land use efficiency, tertiary resource efficiency, functionality, (indirect) land use change, SO₂ equivalents, PM10, impacts on food prices and supply, levelised life-cycle cost, bio-based content and recyclability/biodegradation, etc.).
- **Harmonisation in criteria assessment and operationalisation:** Our results show, that one of the main future challenges might not be the identification of completely new criteria and indicators, but the a) adaptation and more precise communication of the existing ones as well as b) a harmonisation of the actual operationalisation of the existing criteria by the certification schemes and bodies.
- **Legislation & consensus for minimum criteria in all biobased economy (BBE) sectors:** Currently, sustainability certification in the EU bio-based economy is characterised by sectors with and without legally binding sustainability criteria, as a direct consequence, we can observe a number of effects such as leakage, lack of compatibility between the existing frameworks and consequently, missing harmonisation & standardisation.
- **Leakage effects from EU BBE policies:** The existing EU policy framework has led to sectors with binding, mandatory sustainability certification and voluntary markets. Consequently, some sustainability issues are being shifted to sectors with non binding certification (e.g. the issue of indirect land use change, iLUC).
- **New innovative, inter-sectoral products:** Innovation and new products are amongst the major expectations associated with the bioeconomy. With regards to the sustainability certification of these products, a number of, currently unanswered questions do exist. For example, for systems based on algae or cross sectoral systems such as CO₂-capture and utilisation.
- **End-of-Life:** The field of sustainability certification in the EU bioeconomy has, so far, been driven largely by the developments in the bioenergy sector. Consequently, especially end-of-life scenarios for bio-based products are not adequately reflected so far.
- **Traceability of sustainability and certificates along the value chain:** With an extension of sustainability certification to additional sectors of the bioeconomy, additional infrastructures for registries and databases as tools to trace sustainability characteristics in a trustworthy manner are necessary.

WP1 Partners



Published results

Our Result Matrix



Our Results in a Paper



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