

Principle 1. Obey the Law

1.1 Criterion - To comply with relevant applicable laws.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes	WWF Comment
Relevant national laws, <u>ratified national treaties</u> and international conventions complied with			Yes/No	Yes	Relevant legislation includes laws and international conventions, but is not limited to: regulations governing land tenure and land-use rights, labour, agricultural practices, environment, transportation and processing practices, acting with integrity. A list of relevant international conventions is included in Appendix 2. The more strict regulation or ratified convention - national or international - should prevail unless otherwise specified. The other criteria and indicators in this standard provide some guidance for defining the relevant laws.	Should also recognize the UN Declaration of Human Rights (covers non-indigenous people).

1.2 Criterion - To demonstrate clear title to land in accordance with national practice and law.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes	WWF Comment
The right to use the land can be demonstrated and is not legitimately contested by local communities with demonstrable rights.			Yes/No	Yes	Those rights can be related either to legal ownership or lease of the land or to customary rights. Legal ownership shall be the official title in the country (e.g. notary, government agency or other). Guidance for customary rights is provided in ILO conventions 169 and 117. See also Criterion on participation and Criterion on Environmental and Social Impact Assessment 5.7.	

2.1 Criterion - To Comply with ILO labour conventions governing child labour, forced labour, discrimination and freedom of association and the right to collective bargaining.

All ILO conventions listed in Appendix should be listed in the notes and indicators to ensure compliance with the core ILO conventions. Additionally, production of sugarcane in non-signatory should still meet the conventions in order to meet certification - this should be made clear.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes	WWF Comment
Minimum age of workers			Years	18 for hazardous work; 15 for non hazardous work	Definition of Child labour in Appendix 1 & Appendix 2 (Convention 138 and C182). As per ILO Art 3 C 138 and C182, the minimum age for admission to any type of employment or work which by its nature or the circumstances in which it is carried out is likely to jeopardise the health, safety or morals of young persons shall not be less than 18 years (see also art 16, Convention 184 Health and Safety in Agriculture). Work by children on family small holdings is only acceptable under adult supervision and when work does not interfere with the child's schooling and does not put at risk his or her health.	This should also address education in addition to health, safety and morals for large farms in addition to small farms. E.g. all children living on the farm have access to quality primary school education.
Absence of forced or compulsory labour			Yes/No	Yes	Forced or compulsory labour as defined per ILO Convention 29 and ILO 105.	
					The major forms of forced or compulsory labour are defined in Appendix 1. Verification shall address all male and female workers.	
Absence of discrimination			Yes/No	Yes	Discrimination as defined by ILO C111 (see full definition in Appendix 1).	
					Verification to be done by interviewing workers	
Respect the right of all personnel to form and join trade unions and/or to bargain collectively in accordance with the law.			Yes/No	Yes	Employers should respect such rights and should not interfere with workers' own efforts to set up representational mechanisms in accordance with the law.	Should also be verified through record keeping of payroll records and employment applications. Recommend changing "should" to "shall" to ensure compliance. Fine line between prescription and guidance here.

2.2

Criterion - To apply BSI human rights and labour standards to suppliers and contractors.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes	WWF Comment
Percentage of contractors and major suppliers who have demonstrated compliance with human rights and labour standards			%	95	Labour contractors and major suppliers to the mill and to cane growers shall demonstrate compliance with basic human rights (e.g. no forced labour, no child labour, no discrimination, freedom of association and labour standards, etc.). Effective compliance will be verified by auditors by sampling at mill and farm level. Sampling method based on volume provided by supplier to the mill	Management system should be demonstrable by the producers to ensure compliance beyond the one or two day audits. Question here is: are workers getting their social benefits? Are workers actually getting paid? Are workers free to leave? Audit must find a way to demonstrate this. This should go into the guidance document or notes.

2.3

Criterion - To provide a safe and healthy working environment in work place operations.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes	WWF Comment
Lost time accident frequency			Number per million hours worked	Mill <15; Agric < 45	A lost time accident is defined as an incident involving an employee which causes him to be unable to carry on with his/her normal duties on the next day or next shift due to injury. Where a fatal injury occurs, this to be noted separately	This means 15 accidents are permissible per year amongst 480 workers. This is good. However, the producer should have an ability to prevent fake injuries - some type of system to prove accidents occur. Additionally, guidance document or local industry should consider how can the producer change systems to prevent accidents? Need to also find a way to avoid under-reporting.
Assessment of the main health and safety risks and measures implemented for mitigation of risk			Yes/No	Yes	Key health and safety risks to be known and assessment formalized. Assessment to be performed at least once a year. Measures to be taken to either eliminate risk, prevent risk or reduce risk. The recommendations 192 of ILO Convention 184 or national laws if any provide guidance for the list of key potential areas of risks to assess.	Ties in with above indicator.
Appropriate personal protective equipment supplied to and used by all workers.			Yes/No	Yes	Regular maintenance and effective use of personal protective equipment.	Auditor should visibly review actual equipment to ensure quality and quantity for workers depending on the task for which the equipment is intended. Key is to review gear on site.

Training for health and safety.	●	●	%	90	The standard is an average measure, of the % of new employees receiving training, and the % of existing employees getting updated training at least every 5 years (e.g. promotion and participation in health and safety seminars, lectures, campaigns, etc). Employees and workers (including migrant, seasonal and other contract labour) to have basic training in health and safety measures related to their operation upon starting work and then with regular updating. Effective compliance can be verified by sampling.	Is 5 years regular updating for a worker? This needs clarification. Should consider health and safety for employees and workers, so that the notes always say "employees and workers." All employees and workers should receive health and safety training before every new job and once a year.
Availability of sufficient safe drinking water to each worker present on the field and/or mill.	●	●	Yes/No	Yes	Visual check of access to sufficient drinking water especially under high temperature conditions, and of absence of contamination sources near the drinking water source.	Records should be kept to ensure potability of water. Samples should be taken once a year and sent to reputable, independent lab to ensure compliance with this. Visual check does not ensure quality as many harmful organisms are not visible to the naked eye.
Access to first aid and provision for emergency response.	●	●	Yes/No	Yes		The mill and farms should be able to spell out clearly the requirements per person or per task based on international norms. What is the contents list required for first aid kits? Audits should check stocking list against what actually is present. Additional checklists in the mill area should include whether anti-venom available nearby from the mill or local hospital and if it is accessible?

2.4 Criterion - To provide employees and workers (including migrant, seasonal and other contract labour) with at least the national minimum wage.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes	
Ratio of lowest entry level wage including benefits to minimum wage and benefits required by law.	●	●	\$/S	>=1	Minimum wage as fixed by legal requirement and in the absence of same, ILO C131 can serve as a basis for the definition.	Clarify the indicator so that it is greater than or equal to the national minimum wage. However, in an area where workers are well-documented to be malnourished, there should be a documented and proven attempt by the farm or milling operation to ensure that the minimum wage meets the needs for human needs. SAI for SA8000 has a simple formula that can accommodate this issue in a positive direction.

2.5

Criterion - To provide clear, equitable and comprehensive contracts.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Existence of a contract or equivalent document.	●	●	%	100	All workers to be provided with a contract or equivalent document (e.g. national working card), to be aware of their rights, and to be paid in a form and at a frequency convenient to them. If not specified by the law the contract shall include at least the following elements: hours of work, overtime payment, notice, holidays, wages, and mode of payment. Payment of wages in conformity with ILO Convention no. 95 and ILO C110.

National working card is different than a contract. Both should be required in countries where they both exist.

Principle 3.

Manage input, production and processing efficiencies to enhance sustainability

3.1

Criterion - To monitor production and process efficiency; to measure the impacts of production and processing so that improvements are made over time.

This criteria should also be stated that in addition to monitoring, there must be compliance in order to meet the standards. It should not be "with a view to minimising" it should be "a plan to reduce to specific targets." The standard should also be clearly demarcated as a minimum performance level.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Total raw materials used per kg product	●		kg/kg	< 11 if no ethanol produced; <20 for full ethanol production	Sustainability measure includes cane as major raw material as well as material amounts of chemicals, fuels etc. Standard required varies between 2 limits depending on proportions of sugar and ethanol produced. If a mill exports power, any fuels purchased are omitted from raw materials.
Sugarcane yield		●	tc/ha harvested /y	See Appendix 1	Standard values depend on whether rain-fed or irrigated. Value for reporting period or 5 year rolling average can be used.
Working hours lost as percent of total hours worked	●		%	< 5	This represents working hours lost through absence (all unplanned causes - strikes, sickness, absenteeism etc. but not holiday, legal time off such as maternity leave, or training)
Mill overall time efficiency	●		%	75	Processing time as a percentage of total time. Value for reporting period or 5 year rolling average can be used.
Factory Performance Index	●		%	90	Used if sugar and not ethanol is produced. Ratio of actual sugar recovery to theoretical recovery of sugar from cane. In rare cases where high grade molasses is exported for fermentation, industrial efficiency can be used instead.
Industrial Efficiency	●		%	75	Used only if sugar and ethanol are produced in the same mill. It is the ratio of (sugar+equivalent ethanol+eq.sucrose in molasses)/(sucrose in cane+RS in cane converted to sucrose+RS in molasses converted to sucrose+yeast eq to sucrose), expressed as a %.

Need to define "supplementary," but should account for effective rainfall and irrigation use efficiency. In water stressed areas, mills should create a water management plan for their suppliers to aid in irrigation efficiencies and timings to secure environmental flows as well as future production and livelihoods.

This should be clarified to ensure that it is in addition to the accident frequency above, or is it not?

Should increase to 90% to improve logistics and ensure that sucrose recovery improves along with all other resource use efficiencies. 75% is a waste of 25% of all salaries and wages in the mill operating period.

Criterion - To monitor global warming emissions with a view to minimising climate change impacts.

To lead to a substantial reduction in green house gas emissions.

This criteria should also be stated that in addition to monitoring, there must be compliance in order to meet the standards. It should not be "with a view to minimising" it should be a plan to reduce to specific targets" or "lead to substantial reductions." The standard should be clearly demarcated as a minimum performance level.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Global warming burden per unit mass product			t CO2 /t sugar	Total <0.4	Field-to-gate emissions. Environmental Burden is t carbon dioxide equivalent.
			g CO2eq /MJ	Total <29	Only used if ethanol is produced. Environmental Burden is g carbon dioxide equivalent.

Is this low enough to begin to eliminate burning and reduce N2O/CH4 emissions? The indicator should be at a level that will begin to phase out burning, and the math should have the math to back it up. Though eliminating burning is prescriptive, it is a management practice directly attributable to greenhouse gases, particulate emissions, and other noxious gases that have direct, negative impacts on human health and the environment.

The European RES-D states a default value of 24 g CO2eq/MJ for Ethanol from sugarcane. This value already includes 9 g CO2eq/MJ from transport to Europe. How do the 29 g accumulate over the value chain? Are calculation spreadsheets available? The threshold should be in line with RES-D for future compatibility of the standards.

Principle 4. Actively manage biodiversity and ecosystem services

In General: This Criterion is very weak and not in compliance with EU RED. There should be a very clear GHG reduction target e.g 35 % by 2023 and 50 % by 2016

Criterion - To assess impacts of sugarcane enterprises on biodiversity and ecosystems services.

Criteria text should move from just assessing to also comply with and implement management systems to achieve level of performance within the indicators.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Aquatic oxygen demand per unit mass product			kg/t	1 kg COD or 0.5 kg BOD5	Oxygen demand by calculation of quantity and analysis of runoff. Environmental burden can be expressed in terms of either COD or BOD5, depending on routine measurements available.
Percent of areas defined internationally or nationally as legally protected or classified as High Conservation Value areas (interpreted nationally and officially as described in Appendix 1) planted to sugarcane after the cut off date of 1 January 2008.			%	0	To prevent expansion or new sugarcane development into areas of critical biodiversity (including HCVA categories 1-4). National definitions of HCVA to take precedence over international where both exist. In the absence of national HCVA maps or data base, credible documentary evidence required that no HCVA converted after 1 Jan 2008. Also includes soils with a large risk of significant soil stored carbon such as peat lands, mangroves, wetlands and certain grasslands.
Existence and implementation of an environmental management plan (EMP) taking into account endangered species, habitats and ecosystems as well as reference to ecosystem services and alien invader plant and animal control,			%	90	To protect any existing riparian areas, wetlands or other significantly affected natural habitats in a satisfactory state, to provide habitat corridors and to conserve any rare, threatened or endangered species. The EMP should focus on risks, management responses, and implementation.

Should also prohibit direct return of mill effluent into a river, stream, or lake. There should be an adequate wetland or man-made filter system to avoid impacts on freshwater and marine habitats. Who does the routine measurement? This needs clarification and subsequently undertaken by a certified and independent laboratory.

Good. In guidance document, there should be recommendations on how to conduct an HCV assessment. Additionally, the Brazilian eco-zoning maps should be recognized as equivalent, given that the legislation prevents conversion of all natural habitats. Should also include remediation technique agreed upon by the management committee in order to certify sugarcane that has cleared HCVA post 1 January 2008- this would have to require significant protection of biodiversity and restoration.

The indicator could not be used on the farm level, what is the influence of a farmer on the national percentage of protected areas. Principle 4 is very weak and won't help to stop conversion.

This is a mixture between results of HCV and legal requirements, how can a farmer influence the existence and implementation of EMP. In general there is not cut-off date in the standard

Use of co-products does not affect traditional uses (e.g. fodder, natural fertilizer, local fuel) or affect the soil nutrient balance or soil organic matter	●	●	Yes/No	Yes	Use of agricultural co-products as inputs must not jeopardize local uses or adversely affect soil quality
Soil and leaf nutrient status		●	%	>80	% fields fertilized based on soil or leaf analysis
Nitrogen and phosphorus fertilizer (calculated as phosphate equivalent) applied per hectare per year		●	kg/ha/y	<120	Environmental burden is kg phosphate equivalent as defined in Appendix 1 - measuring risk (i.e. amounts applied) rather than level in downstream water. Quantities of nitrogen and phosphorus fertilizer applied calculated as the phosphate equivalent as a measure of potential effects on eutrophication per hectare per year. To minimise losses from over application and consequent ground water or downstream contamination.
Herbicides and pesticides applied per hectare per year		●	kg active ingredient/ha/y	5	To minimise air, soil and water contamination. Quantities of pesticide (including herbicides, insecticides, fungicides, nematocides, ripeners) applied calculated as a measure of potential toxic effects on the environment. Also note the requirement to use only products registered for use and at registered rates and to comply with the Stockholm convention on persistent organic pollutants and requirements in relation to agrochemicals rated as 1a, 1b or 2 under World Health Organisation (WHO) classification.

How is this supposed to be controlled and monitored/measured? Consider combining with probes taken for next criteria. "Jeopardize" should be defined.

How does 5 kg AI stack up against average uses? Recommend setting it at a national level of best performance due to variable production issues and pest outbreaks. Should clarify that not only Stockholm Convention POPs, but also WHO Class 1A, 1b, and 2 should also be banned. Eventually link compliance to herbicides and pesticides banned in Europe.

4.2 Criterion - To implement measures to mitigate adverse impacts where identified.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Documented plan and implementation of mitigation measures	●	●	Yes/No	Yes	Existence of a list of identified adverse impacts such as smoke, fallout from fires, water pollution downstream, drift from agrochemical spraying and noise. Existence of a mitigation plan, and verification of the implementation of mitigation measures, including consultation with affected stakeholders. Programs with objectives developed at the sectorial level can be considered.

Should also include long-term monitoring to ensure that desirable outcomes are being met in relation to downstream impact.

5.1 Criterion - To train employees and other workers in all areas of their work and develop their general skills.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Training expense of worker as percentage of payroll expense.	●	●	%	1	Total training expenses for all personnel, split between factory and basic workers, intermediate management and upper management.

Please clarify as to how this will be calculated. Will workers be paid for undertaking the trainings?

5.2 Criterion - To continuously improve the status of soil and water resources.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Net water consumed per unit mass of product	●	●	kg/kg	Mill, 20 kg/kg sugar or 30 kg/kg ethanol. Agric <50 kg/kg cane	In agriculture, water captured/bought for use in irrigation; in processing, water used less water returned from mill to water courses.
% Ground cover of tops or leaves after harvest		●	%	>20	To ensure the continuous improvement of soil organic carbon
Soil surface mechanically tilled per year (% of area under cane)		●	%	<20	To minimise the opportunity for erosion. Soil surface tilled per year. Hectares tilled as a percentage of area under cane.

Should account for effective rainfall, not just irrigation, so that ecosystems are not hampered to eliminate or reduce hydrologic or environmental flows.

Should be higher, at least 30 or 40% to maintain ground cover as well as eliminate the potential for secondary burning.

Fine

Percent fields with samples showing analyses within acceptable limits for pH.		●	%	>80	To ensure the maintenance of acceptable soil pH. Sampling to be carried out at least once per crop cycle.
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Fine, as long as the un-measured fields are in fallow, but fields planted to cane should all be measured.

5.3 Criterion - To continuously improve the quality of sugarcane and products from the sugar mill.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Theoretical recoverable sugar content of cane	●	●	%	10	The theoretical recovery normalized for juice purity and cane fibre content calculation shown in Appendix 1. Value for reporting period or 5 year rolling average can be used. Used only if ethanol not produced
Fermentable total sugars content of cane, expressed as invert (TSAI).	●	●	kg/t cane	120	Used if ethanol is produced, on its own or in conjunction with sugar production. Based on a 90.5 % utilization of Total Sugars As Invert (TSAI). Known as ATR in Brazil. Value for reporting period or 5 year rolling average can be used.

This should be raised to 11% or at least set a national bar of performance, whereby the top quarter percentile national recovery is the de facto standard with 10% being the global floor.

5.4 Criterion - To promote energy efficiency.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Total Net Primary Energy Usage per kg product	●	●	kJ/kg	Total <2500	Direct and indirect energy inputs. See Appendix 3 for details
Energy used in cane transport per tonne cane transported	●	●	MJ/t cane	<50	See Appendix 3 for details
Primary energy use per tonne of sugarcane		●	MJ/t	<300	See Appendix 3 for details

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5.5 Criterion - To reduce emissions and effluents. To promote recycling of waste streams where practical.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Atmospheric acidification burden per unit mass product	●	●	kg/t	< 5	Environmental Burden is kg sulphur dioxide equivalent.
Non-hazardous solid residues per tonne cane	●	●	t/t cane	<1.0	By-products of processing, namely stillage, compost, filter cake, soil/mud, boiler ash, bagasse.

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5.6 Criterion - To foster effective and focused research, development and extension expertise.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Research and extension costs as a % of sales.	●	●	%	>0.5	Includes levies to research institutes for research and extension.

Is this for farmgate cane price or sugar end use sale? Needs to be clarified. Also, mandating research in a country that has no infrastructure for research puts farms in an unfair position. Need to specify from a cost accounting standpoint what is included in a cost of sales due to variations between accounting methods.

5.7 Criterion - For greenfield expansion or new sugarcane projects, to ensure transparent, consultative and participatory processes that address cumulative and induced effects via an environmental and social impact assessment (ESIA).

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Compliance with a recognized ESIA	●	●	Yes/No	Yes	The ESIA shall cover all aspects related to baseline surveys and assessments, implementation, mitigation, monitoring and evaluation plans as required. Transparency and participatory consultation with all relevant stakeholders required. Where an impact assessment is required by national, regional, and/or local laws, the process shall be integrated to avoid duplication of effort.
High Conservation Value areas (interpreted nationally as described in Appendix 1) used as a % of total land affected by a new project or an expansion	●	●	%	0	Cut-off date 1 January 2008. NB This indicator duplicated in 4.1.2 but here it includes HCV categories 5 and 6. Also includes soils with a large risk of significant soil stored carbon losses such as peat lands, mangroves, wetlands and certain grasslands

Needs to ensure no deleterious impacts on freshwater resources for downstream users, while also taking into account best available climate change science in order to prove future feasibility. Also, if there is displacement of foodcrops, there must be a mitigation. Should be accompanied by a standard ESIA to ensure global consistency. Recommend utilizing an existing one, or developing ESI such as that used by the RSB or ISCC.

Good

5.8 Criterion - To ensure active engagement and transparent, consultative and participatory processes with all relevant stakeholders.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Existence of a recognized grievance and dispute resolution mechanism for all stakeholders	●	●	Yes/No	Yes	Existence of an official dispute resolution mechanism recognized by all stakeholders. Channel of communication (eg ombudsman, dedicated phone line) can be considered if recognized by all stakeholders.

Percentage of meetings of stakeholder engagement where agreement has been reached by consensus driven process			%	90	Establish whether a process exists for consultation where all the stakeholders (gender sensitive and including indigenous people) are provided with information in advance of consultation and which results in consensus-driven negotiated agreements. Evidence of negotiated agreements to be demonstrated.
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90% seems unrealistic in highly contentious issues. Recommend refining to "provide evidence of good faith effort that conflicts are trying to be resolved, as well as that the meetings are had." Not everything can be solved.

5.9 Criterion - To promote economic sustainability.

Indicator	Processing & Milling	Agriculture	Verifier	Standard	Notes
Value added / tonne cane			\$/t cane	Mill >4; agric >2	Value added by the operation is the value of sales less the price of goods, raw materials (including energy) and services purchased.

Needs refining. Mandating profitability is tough. What should be done is that the standard encourages profitability and that over a series of years the mill and farms are profitable. A specific level of value add is unreasonable. An economic indicator is good but this needs to be better formed to account for economic fluctuations like price of sugar, ethanol, oil, and currencies. A management system to monitor financial results is what is needed to ensure long term economic sustainability with accompanying performance against the budget.

Appendix: Definition of "significantly affected" should include all habitats, not just endangered habitats.

General Comment: This standard should be expanded to include certification of biodiesel from sugarcane.