

July 2017

SUSTAINABLE AGRICULTURE STANDARD

For farms' and producer groups' crop and cattle production



Sustainable Agriculture Network

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SAN Mission

To be a global network transforming agriculture into a sustainable activity.

SAN Vision

A world where agriculture contributes to the conservation of biodiversity and sustainable livelihoods.

SAN Theory of Change

The SAN Theory of Change explains the specific objectives and outcomes of SAN/Rainforest Alliance Certification System. The Theory of Change clarifies how the SAN and its members achieve the SAN mission through the implementation of various activities and strategies. It also provides a framework to monitor, evaluate and report on the effects of applying the SAN Standard.

The standard-setting process was based on the Theory of Change to ensure that all aspects of the standard contribute to key outcomes.

Within the Theory of Change, support strategies contribute to improving farming practices, management systems, and farmer knowledge. These, in turn, contribute to improve conservation of biodiversity and natural resources, farm productivity and resilience¹, and the livelihoods of farmers, workers and their families.

When these sustainability benefits are magnified across many farms, in synergy with the activities of other partners and stakeholders, SAN's broader impact of creating and maintaining sustainable, resilient rural landscapes is advanced.

SAN's Sustainable Agriculture Standard recognizes the challenges already being posed by climate change and seeks to address these challenges by actively promoting Climate Smart Agriculture² and improving the resilience of farms and farming communities. This is accomplished by protecting native ecosystems and on-farm biodiversity, avoiding deforestation, maintaining healthy soils, sustaining water resources, and guiding farmers to select and adopt climate-smart planting materials and farming practices.

Additionally, the SAN Standard seeks to reduce the greenhouse gas emissions of agriculture associated with the use of energy, fertilizers, pesticides, and methane emissions – while maintaining or enhancing carbon stocks in soils, forests, and other on-farm vegetation. As such, the SAN Standard promotes all three pillars of Climate Smart Agriculture: 1) sustainably increasing agricultural productivity and incomes; 2) adapting and building resilience to climate change; and 3) reducing or removing greenhouse gas emissions, where possible.

For more details about SAN's Theory of Change, please visit: <http://san.ag/web/theory-of-change/>.

¹ The capacity of systems, communities, households or individuals to prevent, mitigate or cope with risk and recover from shocks. A system is resilient when it is less vulnerable to shocks across time and can recover from them.

² An approach to developing the technical, policy and investment conditions to achieve sustainable agricultural development for food security under climate change. It is composed of three main pillars: 1) sustainably increasing agricultural productivity and incomes; 2) adapting and building resilience to climate change; 3) reducing and/or removing greenhouse gases emissions, where possible (Source: Food and Agriculture Organization of the United Nations).

Scope

The 2017 SAN Sustainable Agriculture Standard is applicable for crop and cattle production systems worldwide. The scope of a SAN certificate includes all crops and cattle products produced on the whole area within the farm's limits with emphasis on the crops and/or products of the production system that are commercialized or intended for commercialization with Rainforest Alliance Certified claims.

The audit scope for farms (including farms certified under a group administrator certificate) covers the whole geographic area within the farms' boundaries and all natural, human and economic resources, infrastructure, and pertinent administrative and management information, including:

- Areas used for crop or cattle production, fallow land, and natural ecosystems;
- Farm infrastructure and other areas of human activity, such as roads, administrative infrastructure, collection points, processing and packing units, storage facilities, and worker housing;
- All workers as well as members of their families who live on the farm temporarily or permanently;
- Documentation relating to social, agronomic and environmental management.

The audit scope of a group administrator includes:

- Infrastructure owned or administered by the group administrator and other areas of human activity that are directly related to the group administrator's certificate management, such as roads, administrative infrastructure, collection points, processing and packing units, storage facilities, and worker housing;
- Documentation relating to the internal management system of the group members.

In addition to its primary focus on the production areas, activities, infrastructure, and persons on the subject farms, the certificate scope also addresses certain activities and potential impacts occurring outside of the farm boundaries, such as relations with local communities, interaction with nearby protected areas, and certain off-farm activities of farms' service providers.

The 2017 SAN Certification Rules include more details about the scope of the SAN Sustainable Agriculture Standard.

Binding Date and Documents for Audits

The 2017 SAN Sustainable Agriculture Standard and 2017 SAN Lists for Pesticide Management are binding for audits that take place on or after July 1, 2017 for operations newly seeking certification and for operations currently certified based on:

- 2010 SAN Sustainable Agriculture Standard
- 2011 SAN List of Prohibited Pesticides
- 2011 SAN Group Certification Standard
- 2010 SAN Standard for Sustainable Cattle Production Systems

In addition to the 2017 SAN Sustainable Agriculture Standard and 2017 SAN Lists for Pesticide Management, the 2017 SAN Certification Rules contain the detailed conditions for certification of crop farms, cattle farms and group administrators.

Standard Structure

The Sustainable Agriculture Standard principles³ are organized into four outcome areas according to the SAN/Rainforest Alliance Theory of Change (<http://san.ag/web/theory-of-change/>) plus a fifth topic area for the cattle certification scope:

- **Principle 1:** Effective Planning and Management System
This principle advances the outcome area “Farm productivity and profitability” and also supports the delivery of all other outcome areas (biodiversity conservation, natural resource conservation, and improved livelihoods and human wellbeing). It includes a section of requirements for Group Administrators’ management of group members.
- **Principle 2:** Biodiversity Conservation
- **Principle 3:** Natural Resource Conservation
- **Principle 4:** Improved Livelihoods and Human Wellbeing
- **Principle 5:** Sustainable Cattle Production (applies for the cattle certification scope only).

Role of Terms and Definitions

Throughout the standard, underlined terms carry a specific SAN definition, which is provided in the Terms and Definitions section of this standard. These definitions are binding elements of criteria.

³ A SAN principle is a set of thematically related criteria designed to achieve a particular set of outcomes. This set of outcomes is explained in the introduction of each principle.

Performance Criteria and Rules

The SAN Standard Performance Criteria include two categories – each with a separate set of rules:

1) Critical Criteria; and 2) Continuous Improvement Criteria.

Critical Criteria Compliance Rules

This standard contains 37 Critical Criteria, out of 119 criteria total for crop farms. Farms and Group Administrators are required to comply with all Critical Criteria as a pre-requisite to certification, and are required to remain in conformance with Critical Criteria to maintain their certification.

There are fewer Critical Criteria for smallholders, six additional Critical Criteria for cattle farms, and two for group administrators.

The Critical Criteria establish the fundamental baseline and guarantee of quality for the certified farms and producer groups. Critical Criteria cover the highest-priority and highest-risk environmental, social and labor issues. All criteria are identified by a numbering sequence of principle and criteria (e.g., Criterion 1.2 is the second criterion pertaining to Principle 1). Critical Criteria are elaborated in a two-column structure: the left column indicates the criterion number and the right column contains the criterion itself. The content of each column is defined in the following table:

Criterion	
Critical Criterion No.	<ul style="list-style-type: none"> • Specific requirements of the provision, applicable to all crops and countries. • Defines the basis for assessing conformance during the audit.

Each Critical Criterion is evaluated as follows:

Conformance Status	Conditions
Conformity	The audited organization meets the criterion’s provisions as stated in the right column.
Non-Conformity (NC)	The audited organization does not meet or only partially meets the provisions of the criterion as stated in the right column.
Not Applicable (N/A)	The subject in the criterion is not present within the audit scope.

List of SAN Critical Criteria

The following list contains all 45 Critical Criteria (37 for agriculture farms + 2 for group administrators + 6 for cattle farms) of the 2017 SAN Sustainable Agriculture Standard:

No.	Critical Criteria
1.1	Farm baseline assessment conducted
1.2	Sold product does not exceed harvest volume
1.3	Mixing of certified product with non-certified products prevented
1.4	Environmental and social impact assessment (ESIA) for major land conversion/major new farm infrastructure
1.5	Service providers are selected and monitored for compliance with applicable SAN Critical Criteria
1.6	Management commitment for SAN Standard implementation and compliance with applicable law
	GROUP ADMINISTRATOR CERTIFICATION ONLY:
1.13	Enrollment of all members recorded
1.14	Members' compliance with the SAN Standard
2.1	No destruction of High Conservation Value areas after November 2005
2.2	No conversion of forests and other natural ecosystems in the past five years or after January 2014
2.3	No negative effects on protected areas
2.4	No hunting
3.1	Wastewater from processing operations meets quality parameters
3.2	Sewage is not discharged into aquatic ecosystems
3.3	Develop and implementation of an Integrated Pest Management (IPM) plan
3.4	No use of SAN prohibited pesticides and application of only legally registered pesticides
3.5	Conditions for aerial fumigation
3.6	SAN certified crops do not contain GMOs
3.7	No use of human sewage in production or processing activities
4.1	No forced labor
4.2	No mistreatment of workers; no sexual harassment

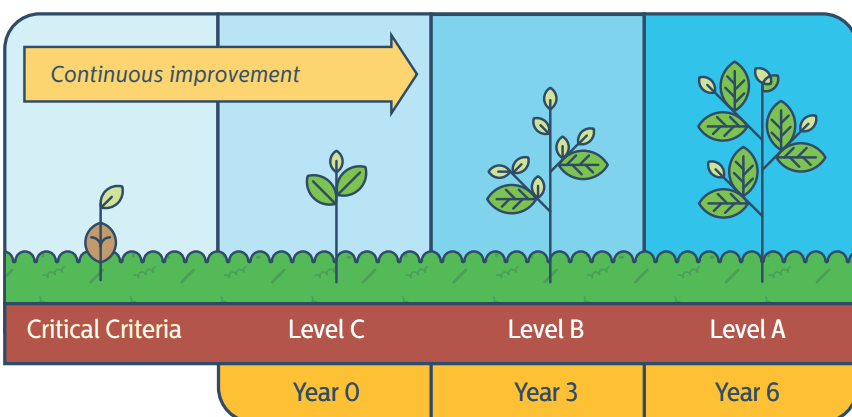
No.	Critical Criteria
4.3	No discrimination
4.4	Freedom of association and collective bargaining
4.5	Payment of minimum wage
4.6	No worst forms of child labor
4.7	Child laborers (under 15 years) not contracted and conditions for young workers (15-17 years)
4.8	No avoidance of benefits
4.9	Grievance mechanisms for workers
4.10	48 regular working hours and one rest day per week
4.11	Regulations on overtime
4.12	Access to drinking water
4.13	Basic conditions for housing
4.14	Develop and implement an Occupational Health and Safety plan
4.15	Use of Personal Protective Equipment (PPE)
4.16	Training on pesticide risks for pesticide handlers
4.17	All pesticide handlers use bathing facilities after application
4.18	Avoiding risk tasks for pregnant or nursing women
4.19	Legitimate land use rights
4.20	Free, Prior and Informed Consent (FPIC)
	CATTLE CERTIFICATION SCOPE ONLY:
5.1	6-month minimum stay of animals on certified farms; conditions for cattle's other portions of life
5.2	Cattle identification record
5.3	Prohibition of cloned animals
5.4	No mistreatment of animals
5.5	No feeding of prohibited substances for cattle
5.6	Prohibited chemical substances for cattle not used

Continuous Improvement System

The SAN Continuous Improvement System defines a sequential progression of sustainability performance over a six-year period beginning with the first certification audit. The new system recognizes that sustainability is a path, a process over time, rather than a final or fixed destination.

In order to remain certified, farms and group administrators have to demonstrate an increasingly higher degree of compliance with the continuous improvement criteria over time.

The new system evaluates farms according to their level of implementation of good sustainability practices, from 'Good' (Level C) to 'Better' (Level B) to 'Best' (Level A):






The SAN Continuous Improvement System ensures that certified operations achieve specific performance levels while providing enough flexibility to promote and support context-sensitive action toward increased sustainability.

The Continuous Improvement System contains criteria oriented around the following areas:

1. Effective planning and management systems
2. Native vegetation
3. Wildlife management
4. Soil conservation and management
5. Water conservation
6. Water quality
7. Integrated pest management
8. Pesticide management
9. Waste management
10. Energy and greenhouse gas emissions
11. Employment conditions and wages
12. Living wage - essential needs for workers and their families
13. Occupational health and safety
14. Community relations

In addition to these fourteen continuous improvement areas for sustainable farms there is one continuous improvement area related to effective group management (Group Administrator Management for Member Support: only group administrator certification scope) and one continuous improvement area related to sustainable cattle production (only cattle certification scope).

Continuous Improvement Criteria are elaborated in a three-column structure. The left column denotes the performance (Level C, Level B, or Level A), the central column indicates the criteria number, and the right column contains the criterion itself. The content of each column is defined in the following table:

Performance Level	No.	Continuous Improvement Criteria
Levels   	1.9 1.10 1.11	<ul style="list-style-type: none"> • Specific requirements (management systems, practices, and/or outcomes) of the provision, applicable to all crops and countries except where noted. • Defines the basis for assessing conformance during the audit.

Each continuous improvement criterion is evaluated as follows:

Conformance Status	Conditions
Conformity	The audited organization meets the provisions of the criterion.
Non-Conformity (NC)	The audited organization does not meet or only partially meets the provisions of the criterion.
Not Applicable (N/A)	The subject of evaluation is not present within the audit scope.

Compliance Rules for Continuous Improvement Criteria

To support farms in achieving continuous improvement, the SAN Continuous Improvement System includes a compliance mechanism of minimum percentages in three steps and an improvement action mechanism where auditors identify any gaps in sustainability performance as a non-conformity and producers know how to remedy these gaps explained in the improvement action:

- The 2017 SAN Sustainable Agriculture Standard defines minimum performance thresholds for each performance Level C or B. The three-step minimum compliance percentages are (see table below for more details):
 - 50% for the first applicable certification audit (Level C by Year 0; Level B by Year 3) and onwards.
 - 90% by the second applicable certification audit (Level C by Year 3; Level B by Year 6) and onwards.
- To assure full compliance with all Level C and Level B continuous improvement criteria over time, improvement actions for non-conformities are defined with a specific compliance timeframe. Auditors evaluate the implementation of these improvement actions during surveillance audits.

The following table defines the performance rules and minimum compliance percentages per performance level and per year for the SAN continuous improvement system in detail.

Year	General Performance Rules	Minimum Compliance Percentage		
		Level C	Level B	Level A
1st Certification Audit (Year 0)	<ul style="list-style-type: none"> • Comply with all Critical Criteria • Achieve significant compliance progress for Level C criteria 	50% of all applicable Level C criteria	x	x
2nd Certification Audit (Year 3)	<ul style="list-style-type: none"> • Comply with all Critical Criteria • Advanced compliance with Level C Criteria • Achieve significant compliance progress for Level B criteria 	90% of all applicable Level C criteria	50% of all applicable Level B criteria	x
3rd Certification Audit (Year 6) and beyond	<ul style="list-style-type: none"> • Comply with all Critical Criteria • Advanced compliance with Level C and Level B Criteria • Achieve significant compliance progress for Level A criteria 	90% of all applicable Level C criteria	90% of all applicable Level B criteria	50% of all applicable Level A criteria

Applicability for Farms, Group Administrators and Smallholders

The 2017 Sustainable Agriculture Standard criteria can be implemented by almost all types and sizes of farms, farms applying for a single certificate or as part of being members of a producer group.

The responsibility of compliance with this standard lies within:

- The farm management as applicant or certified organization of a single farm certificate; or
- The group administrator as responsible entity for the compliance of its group members and their member farms that form part of the SAN certificate scope.

The applicability of this standard's criteria is directed to the following four subjects, according to the organization responsible for the implementation of these criteria:

- **Applicable to all operation types:**

- **Farms:** When a criterion is directed to the subject "farms", it is implemented at the farm level by single certificate farms, group administrators, smallholders and other group members within the farm boundaries for the purpose of implementing practices related to planning items, conserving biodiversity or natural resources or promoting livelihoods and wellbeing of workers and their families.
- **Passive voice:** When a criterion is phrased in passive voice, it indicates that all types of operations implement the provisions of the respective criterion. In this case, the criterion applies to any type of operation that is responsible for a certificate or for the certificate's scope.

Examples include: records, harvested products, High Conservation Value areas, animals, native vegetation, endangered plants species, wildlife, invasive species, wastewater, sewage, pesticide application, fire, irrigation systems, pesticides, committees, containers, waste, infrastructure, labor, workers, working hours, overtime, families, personal protective equipment, bathing facilities, workshops, cattle, medications or water.

- **Farm Management:** When a criterion is directed to the subject "Farm Management", it is implemented by the Farm Management or its representatives and applies both to single certificates and to each member farm of the "**Multiple-sites under one owner**"- group administrator type. This type of criteria may require a high level of technical knowledge and planning skills.
- **Group Administrator:** When a criterion is directed to the subject "Group Administrator", it refers to the entity that signs the certification agreement with the SAN accredited certification body and takes responsibility for the development and implementation of the group's internal management system and all member farms' management systems. The group administrator or its representatives assures member farms' compliance with these criteria.

Within its governance, management and training systems, the group administrator defines the specific responsibilities of the group members in terms of compliance with applicable criteria as defined in the standard section "Group Administrator Management for Member Support".

Responsibilities of group members can include: conducting activities on their farms, filling out templates or other documents, assisting to trainings or other events, or complying with other activities or rules established in the agreement between the group administrator and its members.

The SAN describes different group administrator models. Some criteria do not apply to the specific group administrator type of “Multiple-sites under one owner” referring to a physical person or legal entity that owns or holds more than one farm under the same management system.

These criteria are highlighted in the criterion cells as:

i *Not Applicable to Group Model
“Multiple-sites under one owner”.*

- **Smallholders:** When a criterion is directed to the subject “smallholder”, it is only applicable to smallholders with a distinguished compliance level or simpler set of provisions. A subset of seven SAN criteria is specifically designed for the application by smallholders or smallholder groups only.

The following table summarizes the maximum possible number of Critical Criteria (CC) and Continuous Improvement Criteria (CIC) per principle applicable to the farm management and group administrators:

Criterion Type	Principle 1 Mgmt. Syst.	Principle 2 Biodiversity	Principle 3 Nat. Res.	Principle 4 Livelihoods	TOTAL Ag farms	P 5 Sust. Cattle	P1: Group Adm.
Continuous Improvement Criteria							
CIC Level A	-	4	5	5	14	4	-
CIC Level B	2	-	18	8	28	5	-
CIC Level C	4	6	16	14	40	12	6
TOTAL CIC	6	10	39	27	82	21	6
Critical Criteria	6	4	7	20	37	6	2
Total CC + CIC	12	14	46	47	119	27	8

Fewer criteria are applicable to smallholders. Criteria not applicable to smallholders are indicated as:

i *Not Applicable to Smallholders*

Terms and Definitions

Active ingredient: A pesticide consists of several substances. The active ingredient is the chemical that triggers in the treated organisms (e.g. fungi, insects, and mice) the specific toxic effect. The other substances can assist this effect, directly or indirectly.

Aircraft: Helicopters, planes, drones or other aerodynes that can carry liquids for aerial fumigation.

Applicable law: Includes local, county, province, state or national law and that law which has been integrated into or legally deemed to be superior to national law by a state's signing of an international treaty.

Aquatic ecosystems: *Flowing and still water bodies* and *other wetlands*, as further defined within the definition of *natural ecosystems*.

Areas of human activity: An area within the farm's or group administrator's scope frequented by humans for work, living, travel or education-related reasons, including packaging plants, processing and storage facilities, workshops, offices, schools, clinics, houses, recreation areas and public or private roads.

Basic education: Basic education for workers' children includes reading, writing and basic mathematics (primary education).

Cattle: Domesticated animals of the family *Bovidae*, including the species *Bos taurus* and *B. taurus indicus* (zebu), or crosses of these two, as well as buffalo breeds (*Bubalus bubalis*), that are raised for meat or dairy production.

Child: Person under the age of 18 (ILO Worst Forms of Child Labour Convention, 1999 No. 182).

Child labor: Child engaged in hazardous child labor, or working with an age of less than 15 years on commercial farms or group administrators. Non-hazardous activities of young workers on smallholder farms are excluded.

Climate change: Change in the state of the climate that can be identified by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer (Source: Intergovernmental Panel on Climate Change).

Cloned animals: Individuals born from the same cell; or with absolutely homogeneous cell lineage.

Colostrum: Milk produced by cows during the first days after calving containing carbohydrates, fats, vitamins, minerals, and proteins (antibodies) that help fight disease-causing agents.

Competent professional: An individual with demonstrated professional expertise, skills, experience and credentials in a specific subject area.

Community: People or group of people living in the same place or region affected or impacted by the existence or operation of a farm or group of farms. Rural workers, farm inhabitants, neighbors of farms, traditional and indigenous people⁴, and inhabitants of villages or cities are considered communities affected by a certain farm or group of farms.

Conserved (also Conserve): Natural ecosystems may be conserved through any combination of strict preservation⁵, restoration or sustainable management⁶. A natural ecosystem is conserved if it has been protected against direct or indirect human degradation.

Degradation (also Degrade): Degradation of a natural ecosystem or protected area, resulting in negative impacts, by any of the following:

- Mining or soil removal;
- Dumping solid waste or untreated wastewater;
- Intentional introduction of invasive plant species;
- Harvest of fish, wildlife, or plants in a manner or quantity that exceeds the regenerative capacity of such species;
- Cattle grazing except as specified under sustainable management;
- Construction of impoundments, stream channelization, adding fill, or changing the depth or direction of flow of a water body;
- Drainage or drying of water bodies or wetlands through excessive water withdrawal or other means;
- Pollution of water bodies or wetlands that significantly alters their chemistry or species composition; or
- Application of herbicides, pesticides, or fire, except for the control of invasive plant species or restoration purposes, and then only if governed by a plan developed by a competent professional.

⁴ People native to a particular place, often ethnic minorities who have been marginalized as their historical territories have become part of a state

⁵ Land that is set aside by the farm or group to exclude human activities and facilitate natural ecological succession processes.

⁶ Economic activities that do not significantly alter the long-term composition, structure, or function of natural ecosystems, including harvest of non-endangered species or their parts in a manner and quantity that does not exceed the regenerative capacity of such species; sustainable livestock grazing under traditional or modern non-enclosed grazing systems within woodlands, bushlands, savannas, or other non-forested ecosystems provided that animal stocking densities and management practices do not degrade the ecosystem by significantly affecting species composition, provoking soil erosion, or causing other negative impacts; sustainable fishing or harvest of other aquatic species; or use of natural ecosystems for non-consumptive purposes such as recreation, education, or tourism.

For the purposes of this standard, the following items **are not considered disturbances** to natural ecosystems:

- Activities defined as restoration or sustainable management; unintentional colonization by invasive species; or ecosystem alterations caused by force majeure events, including war, riots, crimes, or natural phenomena such as hurricanes, floods, earthquake, and volcanic eruptions.
- Other situations defined in the 2017 SAN Certification Rules.

Destruction (also Destroyed): Conversion of a *natural ecosystem* (or portion thereof) to a different land use, or other deliberate activity that significantly alters a natural ecosystem's composition, structure, or function, including:

- Conversion to agricultural fields, pastures, tree plantations, or any other land use;
- Large-scale logging or other vegetation harvest that permanently, or over the long term, reduces the ecosystem's aboveground biomass by 75% or more;
- Development of buildings or infrastructure, except for small-scale construction for sustainably managed eco-tourism, education, or research purpose;
- Construction of new permanent dams and draining or drying of *aquatic ecosystems*.

Additional details included in the **2017 SAN Certification Rules** apply.

Discrimination: Distinction, exclusion or preference to invalidate or harm equality of opportunity or treatment in employment including:

- Race, color, sex, sexual orientation, gender, caste, religion, political opinion, national extraction or social origin;
- Nationality or migratory status;
- Civil status;
- Medical condition;
- Family condition, including pregnant women and parents with children, or any other protected status as included in applicable laws;
- Worker organization membership or being an organizer;
- Having filed complaints within the complaints or grievance mechanisms;
- Unequal opportunities for gender when appointing management positions;
- Political, religious, social, sexual or cultural opinions and convictions, views or affiliations of workers.

Dispossession: Action of armed groups, its representatives or related opportunists to achieve the sale, delivery or evacuation of a property by the legitimate owner, holder or occupant taking advantage of the victims' vulnerability. Examples of dispossession are when owners are obliged to sell the property at low prices given the circumstances of social violence or pressure, or when corrupt government officials participate in the property's transfer through the falsification of documents or signatures.

Emasculation: Removal of the testicles (castration) of a male by surgical methods, Burdizzo clamp, elastrator or other method.

Endangered: Species of plants, animals, and fungi designated as threatened or endangered by national laws or classification systems or listed as endangered or critically endangered by the IUCN Red List of Threatened Species™ and/or listed in Appendices I, II, or III of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Euthanasia: Practice to end a life with no or minimal pain in order to avoid prolonged suffering.

Eutrophication: A form of water pollution and occurs when excessive nutrients stemming from fertilizers runoff from the land into aquatic ecosystems. This encourages dense growth of algae (algal bloom) and other aquatic plants and may result in the death of animal life from lack of oxygen.

Farm: SAN farm audits encompass all agriculture and cattle production activities carried out in this defined area. A farm may be composed of several neighboring or geographically separate units of land within one country, provided that they are under a common management body.

Farm infrastructure: Farm roads, irrigation infrastructure (including pumping facilities, channels, ponds, reservoirs, dams, and impoundments), permanently installed machinery, and facilities for washing, processing, or packing.

Farm management: Farm Management refers to the representative of the Farm Manager or Administrator that can implement all criteria that require a high level of technical knowledge and planning skill. Compliance with criteria is assured by the Farm Management or its technical representative and applies both to single certificate farms or multi-sites under one owner.

Fertilizer: Natural materials and synthetic compounds, including nitrogen, phosphorus, and potassium compounds, spread on or worked into soil or on leaves to increase their capacity to support plant growth.

Forced abandonment: Situation in which the victim is obliged to leave its property to protect its family's life, freedom and integrity and results in the impossibility to use the property.

Forced, compulsory, or slave labor: All work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered herself or himself voluntarily. This includes:

- Forcing workers to work or stay at the workplace;
- Control of worker access to food, water, toilets, canteens, medical care or health clinics as a means to discipline or reward workers;
- Withholding workers' salaries, documents, IDs, benefits, property or any rights acquired in the course or due to the status of work or stipulated by law;
- Restricting the workers' freedom of movement to and from their employer-provided housing, unless such movement would compromise the residents' security;
- Bonded labor that forces workers to work due to debt owed to a recruiter, farm or group administrator representative;
- Labor by prisoners or those working under the regimen of imprisonment, even when permitted by local regulations or other laws.

Forest: See definition under *natural ecosystems*, below.

Free, Prior and Informed Consent (FPIC): The right of indigenous peoples and other local communities to make free and informed choices about the use or development of their lands and resources. FPIC is implemented through a participatory process involving all affected groups that is carried out prior to the finalization or implementation of any development plans. An FPIC process ensures that communities are not coerced or intimidated; that decisions are reached through communities' own chosen institutions or representatives; that communities' consent is sought and freely given prior to the authorization or start of any activities; that communities have full information about the scope of any proposed development and its likely impacts on their lands, livelihoods and environment; and that ultimately their choices to give or withhold consent are respected.

Genetically Modified Organism (GMO): An organism whose genetic material has been altered using genetic engineering techniques, i.e., the direct manipulation of an organism's genome using biotechnology or genome-editing techniques.

Greywater: Wastewater generated from housing or other infrastructure that is free from fecal contamination from toilets. Sources of greywater include sinks, showers, baths, clothes washing or dish washing. Wastewater from agricultural processing operations is not considered greywater for the purpose of this standard.

Group administrator: The entity that signs the certification agreement with the SAN accredited certification body and takes responsibility for the development and implementation of the group's internal management system⁷ and all member farms' management systems. The group administrator assures member farms' compliance with the SAN Standard.

Group member: The owner or responsible person of one or more member farms of a producer group.

Hazardous materials: Used lead acid batteries, asbestos, energy saving mercury lamps, E-waste, electric transformers with POPs (PCBs), medical equipment, radioactive material, pesticides, expired human and veterinary medicines, used oils, bio infectious waste, disinfectants, animal parts and carcasses, and particles (ashes, dust, pesticide drifts).

Health care: Access to medical attention for basic and severe conditions, transport to state or other specialized facilities.

High Conservation Value area: HCVs are biological, ecological, social or cultural values which are considered outstandingly significant or critically important, at the national, regional or global level:

- HCV1: Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels;
- HCV2: Intact forest landscapes and large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance;
- HCV3: Rare, threatened, or endangered ecosystems, habitats or refugia;
- HCV4: Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes;
- HCV5: Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (for livelihoods, health, nutrition, water, etc.), identified through engagement with these communities or indigenous peoples; or
- HCV6: Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples.

A specific SAN guidance document for the conservation of HCV areas and Natural Ecosystems includes more detailed definitions and instructions for identifying HCV areas and auditing criterion 2.1 related to the protection of HCV areas.

⁷ A documented set of procedures and processes that a group implements to comply with SAN standard and policy requirements. The existence of an Internal Management System allows the SAN accredited certification body to delegate inspection of all individual group members to the group administrator's internal inspectors.

Hot iron process: Process to impede the growth of the bovine's horn's button (extremity that finishes in round tip) when beginning to develop. The hot iron dehorning is carried out in order to avoid animals injuring each other and to facilitate herd management.

Hunting (also Hunted): The act of pursuing or killing a terrestrial wild animal by means of any weapon, trap, poison or use of dogs.

Integrated Pest Management (IPM): The careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of healthy crops and cattle with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms⁸. Application of pesticides is based on documented thresholds for disease or pest infestations.

⁸ FAO definition:
<http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/ipm/en/>

Internal inspection: First or second party audit conducted by a person designated by a group administrator that checks compliance of member farms with applicable SAN standards.

Invasive species: A species or subspecies that is not native to a given place, and whose presence or introduction in that place causes or is likely to cause economic harm, environmental harm, or harm to human health. For the purpose of this standard, invasive species are the ones referenced by IUCN/SSC Invasive Species Specialist Group (ISSG) as 100 of the World's Worst Invasive Alien Species (http://www.issg.org/worst100_species.html) and crop or cattle species are not considered invasive species.

Irritating substance: Substance that can cause physical discomfort or pain.

Labor agreement: Written contract or verbal agreement between the farm management or group administrator and the worker that covers: job description, working hours, pay rate, overtime regulation, benefits and deductions, annual paid vacation leave, protection from loss of pay in the case of illness, disability or accident, and the notice period for contract termination.

Land conversion: A change in land use from non-cropped areas to annual or perennial crop agriculture or cattle production areas. A change in land use from one crop to another crop, from pasture to cropland, or from cropland to pasture is not considered a land conversion unless it also entails land consolidation.

Large native tree: A living or dead native tree taller than 15 meters and wider than 60 cm diameter at breast height.

Live fence: Line of closely spaced shrubs and trees planted in such a manner as

to separate crop and pasture areas or to define property boundaries supporting barb or plain wire fencing. Live fences cannot consist of dead fence posts only. Also known as a “hedge” in some parts of the world.

Living wage: Remuneration received for a standard 48 hours workweek by a worker in a particular place sufficient to afford a decent standard of living for the worker and her or his family. Elements of a decent standard of living include food, housing, education, health care, water, transport, clothing, other essential needs including provision for emergencies and unexpected events (Global Living Wage Coalition, www.globallivingwage.org).

Living wage benchmark: The living wage level defined for a specific country or region based on work of the Global Living Wage Coalition (www.globallivingwage.org).

Member farm: Farm owned or managed by a group member that signed or marked an agreement with the group administrator.

Multiple sites under one owner: A physical person or legal entity that owns or holds more than one farm under the same management system.

Native species: Species, subspecies, or lower taxon occurring within its current natural range, i.e., the range it occupies without direct or indirect introduction or care by humans.

Natural ecosystem: Ecosystems that resemble – in terms of species composition, structure, and function – those that are or would be found in a given area in the absence of significant human management impacts, including:

- **Aquatic ecosystems:**

- **Flowing and still water bodies:** All naturally occurring streams, rivers, pools, ponds, lakes, and lagoons, as well as seasonal streams that flow continuously for at least two months in most years or flow intermittently and are at least one meter wide. Streams and rivers that have been altered by sedimentation, polluted runoff, bank erosion, thermal pollution, or impoundments less than one meter high are still SAN natural ecosystems.

Artificial pools, water treatment lagoons, and irrigation ponds, are not considered SAN natural ecosystems, unless: a) these water bodies have been colonized by an endangered species; and/or b) the water body was constructed to provide fish or wildlife habitat.

- **Other wetlands:** All naturally occurring wetlands, where the natural hydrological conditions result in either or both of the following conditions:
 - Soils are waterlogged for the majority of the year;
 - The land is periodically or permanently inundated by shallow water, including: floodplains; wet areas bordering ponds, streams, or the ocean.

For the purposes of this standard, the following types of aquatic ecosystems are not considered SAN natural ecosystems:

- Areas that have been made seasonally or perennially wet due to human activity (such as drainage ditches, irrigation ponds, reservoirs, effluent holding ponds, aquaculture ponds, rice paddies, or gravel pits), unless: a) these water bodies have been colonized by an endangered species; and/or b) the wetland was created by humans to provide wetland habitat.
- **Forests:** Forests include both humid forests (rainforest) and drier forests; lowland, montane, and cloud forests; and forests consisting of any combination of broadleaf, needle leaf, evergreen, and deciduous vegetation. Forests are defined as tree-covered areas that:
 - Are not occupied by agriculture or other specific non-forest land uses; and,
 - Consist primarily of native plant species; and,
 - Contain a vegetation structure that generally resembles that of a natural forest of the same age in the same area; or
 - Are classified as High Carbon Stock (HCS) forests according to the HCS approach (www.highcarbonstock.org) or, in regions where HCS parameters have not yet been defined, have been regenerating for at least 10 years with minimal human disturbance.

For the purposes of this standard, the following types of tree-covered areas are not considered SAN natural ecosystems:

- Forestry or fruit tree plantations;
- Tree-covered areas that are managed as diversified food production systems, including traditional and modern management systems such as home gardens, agroforestry systems, and mixed tree-cattle systems; or
- Areas that are managed as long-rotation swidden (shifting cultivation) systems under traditional, indigenous people, community, or smallholder land-use systems (even if they otherwise meet the definitions of natural ecosystems) and fallow lands for soil fertility recovery purposes.
- **Other native terrestrial ecosystems:**
 - Woodlands, shrublands, savannahs, grasslands, peatlands and páramo.
 - Localized areas of non-forest natural vegetation within forest biomes⁹ that are not covered in any of the preceding categories, regardless of their size.

A specific SAN guidance document for the conservation of HCV areas and Natural Ecosystems includes more detailed definitions and instructions for identifying natural ecosystems and auditing criterion 2.2 related to the conservation of natural ecosystems.

⁹ A region where the dominant native vegetation type (i.e., the vegetation that is, was, or would be present without intensive human disturbance) is closed-canopy forest.

Natural pest control substances: Chemicals with non-toxic modes of action such as insect pheromones, and insect attractants derived from plant extracts; mineral substances that irritate or cause mechanical disruption to pests; and microbial pesticides, including bacteria, fungi, viruses and protozoa.

Pasture: A type of grazing unit enclosed and separated from other areas by fencing or other barriers and devoted to the production of forage.

Pest: An organism that is detrimental to humans or their crops, cattle, or property, typically by causing economic damage.

Pesticide: Any substance or mixture of substances intended for preventing, destroying or controlling any pest, including vectors of human or animal disease, and including unwanted species of plants or animals causing harm during or otherwise interfering with the production, processing, storage, transport or marketing of food, agricultural commodities, wood and wood products or animal feedstuffs, and also include substances administered to animals for the control of insects, arachnids or other pests on their bodies.

The term includes substances intended for use as a plant growth regulator, defoliant, desiccant or agent for thinning fruit or preventing the premature fall of fruit. Pesticides are also used for application on crops either before or after harvest to protect the commodity from deterioration during storage and transport.

Plan: A document or a set of documents, including a diagram or a list of intended actions, used to define and achieve an objective or goal. For the purposes of this standard, a plan contains objectives, quantitative targets and parameters, time-bound management actions, resources and responsible personnel.

Product quality: The product's ability – as defined by the farm or group administrator – to fulfill the expectations and needs of the end user, considering food safety parameters and pesticide residues, such as conformance with Maximum Residue Limits (MRLs) and tolerances established by the importing country.

Production plot: A contiguous area of a farm dedicated to the production of crops or cattle of any sort.

Productivity: A measure of production efficiency based on the ratio of production output to production inputs of land, capital, water, other natural resources, labor, energy, or other materials.

Protected area: An area of land declared or designated by local authorities as protected because of its recognized natural, ecological and/or cultural values to achieve the long-term conservation of nature with associated ecosystem assets and cultural values. Examples include national parks, wildlife refuges, biologic, forestry or private reserves, and areas within UNESCO Biosphere reserves or World Heritage Sites.

Remuneration: Cash wage plus in-kind benefits.

Restoration: Assisting the recovery of natural ecosystems that previously experienced destruction or degradation. Restoration may include activities such as planting of native species, removal of non-native species, and active or passive facilitation of natural ecological succession.

Restricted entry interval (REI): Minimum amount of time that shall pass between pesticide application to an area or crop and the moment that people can enter that area without personal protective equipment.

Risk to the woman's, fetus's and infant's health: The following activities pose risks to the woman's, fetus's or infant's health: manual handling of loads; activities subject to shocks, vibrations or movement; work environment exposed to extremes of heat or cold or to hazardous materials.

SAN canopy cover and species diversity parameters: Conformance with minimum canopy cover (% total aerial coverage of tree canopies excluding crop trees) is based on estimations during the time of the year when tree foliage is most dense. SAN minimum regional canopy cover and tree species diversity parameters per crop are:

Shade Tolerant Crop	Regions	Minimum canopy cover (%)	Minimum No. of native tree species per hectare
Coffee	Africa, Asia, Latin America and the Caribbean	40	12
Cocoa	West Africa, East Africa, South East Asia, Latin America and the Caribbean	30	5
Clove, Vanilla	East Africa	40	12
Pepper	South East Asia	20	12

SAN ESIA parameters: Parameters that require an independent ESIA if exceeded:

- Land conversion of 500 hectares.
- New water withdrawal of 500,000 m³/year for irrigation or processing.
- New or additional industrial wastewater discharge of 10,000 m³/year.

The ESIA addresses the following topics: biodiversity; High Conservation Value areas; water quantity and quality; soils; air; waste; employment and labor rights; land and natural resource use rights, tenure and conflicts; climate change; and other possible impacts on local communities.

SAN industrial wastewater parameters:

Water Quality Parameter	Value
Biochemical Oxygen Demand (DBO ₅)	Less than 150 mg/l
Total suspended solids	Less than 50 mg/l
Grease and oils	
pH	Between 5.5 – 9.0

SAN industrial wastewater parameters for irrigation:

Water Quality Parameter	Value
Intestinal nematodes (arithmetic mean No. or eggs per liter)	≤ 1
Fecal coli forms (geometric mean No. per 100 ml)	≤ 1000

SAN non-application zones: The distance in meters indicates the width of the non-application zone between pesticide applied crops and areas of human activity, or aquatic and terrestrial natural ecosystems:

- 5 meters, if applied by mechanical, hand-assisted and targeted application methods, such as for example knapsack sprayers, banding, baiting, specific granule placement, soil or plant injection, seed treatments and weed wiping;
- 10 meters, if applied by broadcast or pressurized spray application methods, such as for example motorized sprayers or spray booms¹⁰, air blast sprayers, foggers (Ultra Low Volume fogging machines) depending on the equipment's technical specifications.

¹⁰ Structure mobilized by a tractor to apply pesticides or fertilizers consisting of two arms suspended over the crop and which apply pesticides or fertilizers through their nozzles in atomized or dusty form.

SAN parameters for vegetative barriers:

- Barriers are as high as the crop height or the height of the equipment's application valves over the ground, whichever is higher.
- Barriers are composed of plants that maintain their foliage all year, but which are permeable to airflow, allowing the barrier to capture pesticide drops.
- Preference is given to native species.

SAN requirements for aerial fumigation:

- Aerial fumigations are recommended by a competent professional;
- Spray drift next to natural ecosystems and areas of human activity is reduced through non-application zones or vegetative barriers:
 - Non-application zones are at minimum:
 - 30 meter wide next to public roads and housing areas if application is parallel to the non-application zone with half wing applications (outer boom off) to minimize drift to high risk areas.
 - In the case of rivers, a 15 m non-application zone for each river bank.
 - Vegetative barriers are reforested with non-crop trees whose canopy is higher than the crop height but not higher than 6 meters.
- Aircraft:
 - Are equipped with Geographic Positioning Systems (GPS) with automatic shut-off valves connected to the GPS system;
 - The flight altitude is maximum 5 meter above the crop canopy; and
 - The length of the application boom is at maximum 80% of the aircraft's wingspan.
- Nozzle type and number of drops are calibrated every six months and the application doses are calibrated before each application;
- Hoses, nozzles, valves, GPS system and automatic flow meter are checked before and after each flight;
- Weather conditions are:
 - Wind speeds are less than 10 kilometers per hour (km/h);
 - Inversion conditions are avoided; and
 - Maximum temperature is 29 °C.

- Each aerial fumigation is documented with an operational report, including:
 - Location of the property;
 - Type of service performed;
 - Treated crop and area (in hectare) with sketch of the area indicating its boundaries, barriers, roads, power grids, watery, buildings, magnetic north and geographic coordinates at least one point);
 - Pesticide applications, including all receipts for purchases, label names of products applied, active ingredient (AI) name, and concentration (volume per liter, mass per kg, or %AI) in each product, quantity of each formulated product applied, and the application dates, location, and land area over which each product is applied, type of application equipment, name of pesticide handlers;
 - Flight and application parameters: height of the flight, width of the effective deposition range, temperature range, wind speed and direction; model, prefix, type and angle of used *aircraft*;
 - Date and time of application (beginning and end of application); and
 - Direction of application ranges (shots); location of the flight track through geo-referencing, specifying whether the application was performed with the Differential Global Positioning System (DGPS).

SAN restoration parameters: Restoration parameters for adjacent zones of aquatic ecosystems are:

- Remnant or restored vegetation is primarily native, e.g. agroforestry systems that comply with SAN canopy cover and species diversity parameters; and
- Minimum widths of restored areas adjacent to aquatic ecosystems (water course width is defined as the width of the normal flow during the rainy season but not during flood conditions) are:
 - 5 m horizontal width along both sides of water courses less than 5 meters wide;
 - 8 m horizontal width along both sides of water courses 5-10 meters wide, and around springs, wetlands, and other water bodies; and
 - 15 m horizontal width along both sides of rivers wider than 10 m.

SAN rodenticide risk management requirements:

- Only formulated rodenticides baited traps classified as moderately toxic (blue label) or slightly toxic (green label) are used;
- Rodenticide traps are only used, if rodent monitoring demonstrates that mechanic control methods are not effective;
- Signs of rodent activity (droppings, tracks, gnaw marks, burrows) are monitored and the results recorded. Traps are inspected daily and bait stations and installations weekly;

- Bait stations are tamper-resistant, anchored, and constructed in such a manner and size as to permit only the entrance of rodents;
- Food sources attracting rodents and debris are eliminated;
- Rodent carcasses are handled with gloves and buried in locations that do not pose risk to human health or water contamination; and
- Bait stations are removed and the amount of stations diminished when there are no longer signs of rodent feeding or there is evidence of use by non-target wildlife.

SAN safe drinking water parameters: SAN safe drinking water parameters are based on WHO parameters as follows:

Parameter	Value
E. coli or thermo-tolerant coliform bacteria	Not detectable in any 100-ml sample
Chlorine residue or residue from other treatment disinfectants	Maximum 0.5 mg/L
pH	6.5 to 8.5
Sodium	Maximum 20 mg/L
Nitrates	Maximum 10 mg/L as nitrates
Sulphates	Maximum 250 mg/L
Turbidity ¹¹	Less than or equal to 5 NTU (Nephelometric Turbidity Unit)

Service provider: Organizations, businesses, individuals or their subcontractors who carry out activities on behalf of the farm or group administrator, whether these activities take place on or off the subject farm(s), such as hiring of workers on the farm, pesticide application, waste treatment or disposal, transport of products or workers, and providing worker housing in the name of the farm or group administrator. Service providers include those providers furnishing the farm or group administrator with fuelwood, timber, or any product originating from local natural ecosystems. However, providers of other types of goods or inputs to the farm are not considered service providers.

¹¹ The lack of transparency of a liquid due to the presence of particles in suspension. The measurement of turbidity is a key test of water quality. With more solids in suspension in a liquid, the liquid will appear dirtier and its turbidity will be higher.

Sewage: Wastewater and waste solids that contain fecal matter. Any wastewater stream that includes discharge from toilets is considered as sewage, whether or not it is mixed with greywater.

Shade-tolerant crop: A crop species that is adapted to live under full or partial shade. This includes, but is not necessarily limited to, cardamom, cinnamon, cocoa, coffee, macadamia, nutmeg, and vanilla.

Smallholder: A producer who primarily relies on family or household labor, or reciprocal workforce exchange with other members of the community.

Spray drift: The quantity of applied product –representing an active ingredient of a pesticide – which is deflected from the treated area by the action of air currents during the application process.

Temporary Worker: Employees who are not permanently hired but contracted just for limited periods of time. The relevant labor contract is of limited or unspecified duration with no guarantee of continuation.

Workers that conduct short-term harvest work on a farm and voluntarily move to other farms are not subject to contracts between the farm or group administrator and the temporary worker.

The designation of "short term workers" may not be made for the purpose of avoiding legal minimum wage or legal benefit schemes that include these workers.

Waste: Waste is an unwanted or undesired material or substance. It is also referred to as rubbish, trash, garbage, or junk depending upon the type of material and the regional terminology. Most waste is comprised of paper, plastic, metals, glass, food waste, organic material, feces and wood. Includes hazardous materials. It covers domestic or industrial waste, rejected products, construction debris or rubble, soil and stones from excavations, rubbish and soil from cleaning or preparing land.

Wastewater from processing operations: Water that has been adversely affected in quality by industrial processes and originating from processing operations such as mills (such as coffee wet mills, palm oil mills, sugar cane mills), washing operations (such as fruit or vegetable or milking facilities), packing plants or factories (such as juice or puree factories).

Water contamination risk: Alteration of water treatment systems and associated pipes, or natural catastrophes such as earthquakes, tremors or landslides.

Water for cattle: Drinkable and safe water is of a pH between 5.5 to 8.5 and contains less than 3,500 ppm (mg/L) of Total Dissolved Solids. Coliforms counts are below 50 per millimeter of water; chloride content is of less than 1,600 mg/l for dairy cattle and less than 4,000 mg/l for beef cattle; and temperature is below 30°C.

Wildlife: All terrestrial non-domesticated vertebrates.

Worker: Any person who works on a farm or for a group administrator and is paid for his or her work. Encompasses all types of workers, including permanent, temporary, documented, undocumented, migrant, and transitory, and also persons temporarily absent from a job or enterprise at which they recently worked for illness, parental leave, holiday, training, or industrial dispute.

Worker organization: A voluntary association of workers recognized and duly registered by the government, independent from the farm management or group administrator and organized for occupational purposes with the aim of furthering and defending the interests and labor rights of workers or collective bargaining. (Adapted from ILO Convention 87 concerning Freedom of Association and Protection of the Right to Organize).

Work harmful to children: Work that may harm children's health, safety or morals, including:

- Handling of pesticides, hazardous substances or residues;
- Operating, assisting to operate, or cleaning power machinery or tools;
- Activities requiring physical exertion beyond the child's safe capacity, such as heavy lifting of loads greater than 20% of a minor's body weight;
- Work on steep slopes of more than 50%, near cliffs or drop-offs, or on roofs or ladders;
- Work in storage areas, silos and construction sites; and
- f) Night work.

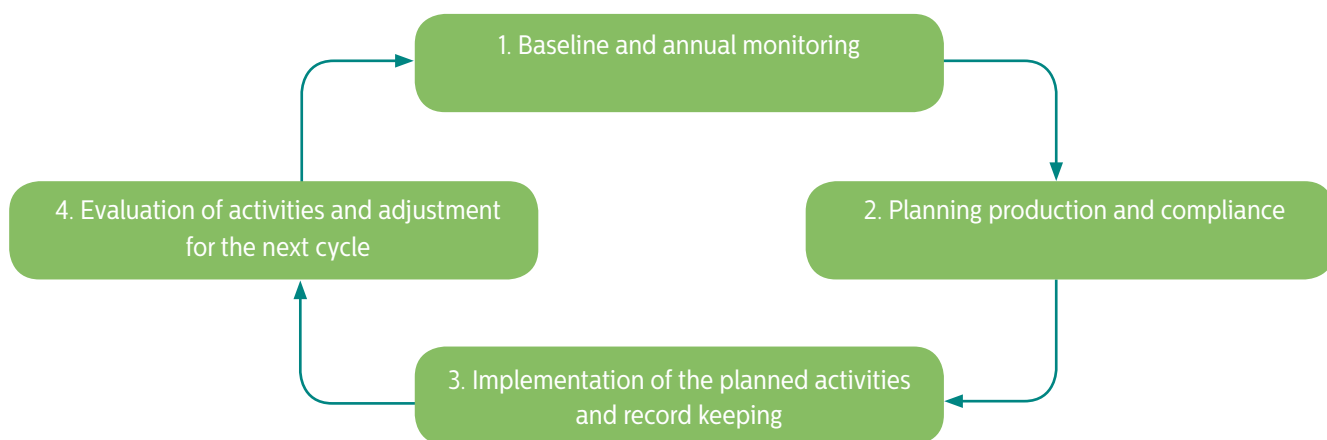
Young worker: The minimum age of a young worker shall not be less than 15 years. For the purposes of this standard the term refers to workers between the ages of 15 and 17 years. (ILO Minimum Age Convention, 1973 (No. 138); Convention concerning Minimum Age for Admission to Employment; Geneva, 58th ILC session).

PRINCIPLE 1 EFFECTIVE PLANNING AND MANAGEMENT SYSTEM

Objectives and outcomes:

The overall goal of this principle is to help farmers become more productive, by better managing the many social, environmental and agronomics aspects of their farms. To achieve that, the certified operation implements an integrated farm planning and management system, establishing procedures and systems for ensuring continuous improvement on its path towards sustainable agriculture.

As a result, this planning and management system supports increased farm productivity and efficiency, reduced environmental impact, and an increased capacity to adapt to climate change. Further, it results in Climate Smart Agriculture through augmented efficiencies in the use of land, water, fertilizers, and pesticides thereby supporting climate change adaptation¹² and mitigation. The planning process includes four components as shown in the diagram below.



Group administrators play a key role in assisting and facilitating the planning process for member farms. Adoption of this farm planning approach supports producers in assessing local conditions and key risks that affect a farm’s productivity and sustainability. This allows for the selection of best management practices that are suited to the farm’s crop(s) and local context.

¹² Adjustments to farming practices and management to reduce the negative impacts that current or expected climate change has on crops, farming systems, ecosystems, and livelihoods.

Critical Criteria

No.	Criteria
1.1	<p>A <i>farm</i> baseline assessment is conducted and documented. The assessment is reviewed and updated at least once per year. The assessment includes:</p> <ul style="list-style-type: none"> • A farm map indicating the location of each <i>production plot</i>, roads, buildings, other infrastructure, <i>natural ecosystems</i>, and abutting land uses including <i>protected areas</i>. • A boundary delineation of the certificate's geographic extent; • Information on each production plot, including type of crop or <i>pasture</i>, crop or pasture varieties and crop or herd density, crop age or renovation stage for perennial crops and rotation cycle for annual crops; and production level. • A tabulation of the total farm area, total production area, and total area of natural ecosystems.
1.2	<p>Records are maintained and calculation methods are described that demonstrate that the total volume of certified product sold does not exceed the volume harvested from the farm or received from other certified farms. Records are maintained to demonstrate that only products from certified farms are claimed as certified.</p>
1.3	<p>The products harvested, received, processed, mixed, stored, packed, labeled or handled in the <i>farm's</i> or <i>group administrator's</i> facilities preserve the products' integrity in accordance with their claim. Product receipt from certified, multi-certified and non-certified farms is registered with its origin, date, and product type and volume. If certified, multi-certified and non-certified products are handled together, all products with certified claims can be identified.</p>
1.4	<p>An independent environmental and social impact assessment (ESIA) is conducted <i>prior to land conversion</i> or the development or expansion of <i>farm infrastructure</i> when required by <i>applicable law</i> or when these proposed changes will exceed <i>SAN ESIA parameters</i>. The ESIA includes written <i>plans</i> and procedures for minimizing and mitigating any negative impacts and enhancing positive impacts. The <i>farm management</i> and <i>group administrator</i> implements and monitors ESIA plans during the installation and operation phases of the new development.</p>
1.5	<p>The <i>farm management</i> and <i>group administrator</i> document and implement mechanisms for the selection, monitoring, and management of <i>service providers</i> to ensure that service providers comply with applicable critical criteria of this standard for work conducted within the certification scope. When the service provider processes, stores, packages, and/or labels products on behalf of a farm or group administrator, the service provider holds an active SAN Chain of Custody Certificate.</p>
1.6	<p>The <i>farm management</i> and <i>group administrator</i> demonstrate commitment to certification and to complying with this standard:</p> <ul style="list-style-type: none"> • Resources are dedicated and responsible personnel is designated to the development and implementation of social and environmental management <i>plans</i>; • <i>Applicable laws</i> are identified within the scope of this standard, systems for compliance are maintained and written affirmations of this compliance are provided; • Regular assessments are conducted to measure compliance with this standard; • Social and environmental management plans are adjusted accordingly.

Continuous Improvement Area: **Effective Planning and Management System**

Level	No.	Criteria
C	1.7	<p>The <i>farm management</i> and <i>group administrator</i> develop and update regularly a farm management <i>plan</i> to optimize <i>productivity</i>, input use efficiency, and comply with this standard. The plan includes:</p> <ul style="list-style-type: none"> • Soil health and erosion; • Water management (including estimated use of irrigation water); • Pests and diseases; • Management of inputs (including estimated use of <i>fertilizer</i> and <i>pesticide</i>); • Planting materials; • <i>Climate change</i>; • Extreme weather events • Estimated production volumes and desired <i>product quality</i> of crops or cattle production covered by the SAN certificate scope and for the next production cycle; • Labor; and • Identification of agricultural practices to optimize productivity and input use efficiency.
C	1.8	<p>The <i>farm management</i> and <i>group administrator</i> develop and implement a training <i>plan</i> to train workers on the competencies required to carry out their work and to comply with this standard.</p>
C	1.9	<p>The <i>farm management</i> and <i>group administrator</i> analyze at least annually records on farm inputs and production to evaluate the achievement of the farm management <i>plan</i> and adjust the plan for the following year.</p>
B	1.10	<p>The <i>farm management</i> and <i>group administrator</i> keep up-to-date records of inputs and production data for at least the crops or cattle production system covered by the SAN certificate scope. These records include:</p> <ul style="list-style-type: none"> • Quantity produced and sold as certified during each twelve-month period; • <i>Pesticide</i> applications, including all receipts for purchases, label names of products applied, <i>active ingredient</i> (AI) name, quantity of each formulated product applied, application dates, location (the <i>production plot</i> –see criterion 1.1-), land area over which each product is applied, type of application equipment, and names of pesticide handlers; • Organic <i>fertilizers</i> (types, amount and costs) or mineral fertilizers (amount and costs); • Quantity of water used for irrigation, processing, or cattle production; and • For cattle production systems, the quantity, type, and origin of feed produced outside the farm.
B	1.11	<p>The <i>farm management</i> and <i>group administrator</i> document all training according to training topic, name, organization and title of the trainer, focal crop, number of women and men trained, and an attestation of each worker or group member that s/he participated in the training.</p>
B	1.12	<p>The <i>farm management</i> and <i>group administrator</i> support equality and empowerment of women, including participation in training and education and equal access to products and services.</p>

Group Administrator Management for Member Support (for group administrator certification scope only)

Objectives and outcomes:



The overall goal of this set of specific criteria is help group administrators to support members on their path towards sustainability. Group administrators have to support members, especially smallholders, in improving their knowledge and capacity for conducting sustainable agriculture. Specifically, the function of group administrators is to help members increase productivity, increase crop income, strengthen trading relationships, and increase leverage in the value chain.

The SAN Standard requires group administrators to facilitate the democratic processes by which smallholder members participate in decision-making. Additionally, group administrators create and maintain a management system that provides documentation for SAN authorized auditors as to members' level of achievement with this standard.

Group administrators work on behalf of their members to help them attain a living income that fulfills all essential needs for smallholder farmers and their families. This includes the provision of access to health care and education for smallholders and their families. Group administrators and smallholders democratically agree together how to provide access to health care and education for them and their families.

Critical Criteria	
No.	Criteria
1.13	The <i>group administrator</i> keeps enrollment records of all members, including name, contact information, gender, age, location, crops, and production areas.
1.14	The <i>group administrator</i> evaluates members' conformance with this SAN standard through <i>internal inspections</i> . The group administrator inspects all new farms before they are included as <i>member farms</i> . All other member farms are inspected frequently enough to monitor the implementation of required improvement actions and to ensure that the entire scope of the standard is evaluated for each member at least once every three years. Member farm visits are scheduled at different times of the year to assess harvesting, farming practices and pesticide applications.

Continuous Improvement Area: **Group Administrator Management for Member Support**

Level	No.	Criteria
C	1.15	<p>The <i>group administrator</i> documents and implements a group governance structure including decision-making procedures, <i>group member</i> selection criteria, and membership rules. The group governance structure, member selection, and membership rules avoid all forms of <i>discrimination</i>. The group administrator does not restrict its members from associating or affiliating.</p> <p> <i>Not Applicable to Group Model</i> "Multiple-sites under one owner".</p>
C	1.16	<p>The <i>group administrator</i> signs or marks agreements with all <i>group members</i> that include their obligations to conform to this standard and rights to resign or to appeal findings of non-compliance and its resulting sanctions with the group administrator. The group administrator implements sanctions and appeals procedures for non-compliance of group members with applicable criteria of this standard and with the group administrator's internal requirements.</p>
C	1.17	<p>The <i>group administrator</i> develops and implements a <i>plan</i> for training and other support activities based on <i>group members'</i> needs identified through the group governance structure and through the farm planning process. Training activities are appropriate to members' education levels and to the cultural context and are offered to all members. Support activities include facilitating members' access to farm inputs, high quality planting materials, or financial services. The group administrator makes particular efforts to offer training to potentially less-advantaged group members, those in remote areas, and those with limited literacy. Progress, opportunities, and challenges of the group's training plan are analyzed by the group administrator, and results are shared with group members and used to improve training design and implementation.</p>
C	1.18	<p>The <i>group administrator</i> develops, documents, and implements a mechanism for non-discriminatory calculation and distribution of revenues to its <i>group members</i>. The group administrator communicates transparently about the distribution of revenues to its group members.</p> <p> <i>Not Applicable to Group Model</i> "Multiple-sites under one owner".</p>
C	1.19	<p>Where public health or education services are not available, the <i>group administrator</i> develops and implements a <i>plan</i> to provide access to <i>health care</i> and <i>basic education</i> to its members.</p>
C	1.20	<p>The <i>group administrator</i> facilitates the planning process for its members through training, standardized formats for data collection and analysis, and support to analyze progress and revise farm <i>plans</i> accordingly.</p>

PRINCIPLE 2

BIODIVERSITY CONSERVATION

Objectives and outcomes:

Forests are the best defense against climate change, yet conventional agriculture is one of the leading causes of deforestation and greenhouse gases emissions. This principle aims to help prevent deforestation and to protect biodiversity¹³, natural ecosystems, and High Conservation Value areas in and around certified farms.

Through implementation of the criteria in this principle, farms protect on-farm natural ecosystems and do not contribute to deforestation. In addition, diverse native shade canopies required for shade-tolerant crops (such as coffee and cocoa) help conserve biodiversity and increase farm resilience.

For all crop and cattle production systems, the SAN Standard requires farms to conserve or restore trees and other native vegetation. Certified farms also maintain and increase the amount and diversity of native vegetation to help diversify production systems, conserve native habitats and their biodiversity, and support critical ecosystem services such as pollination, pest control, and water cycles.

In addition, farms contribute to conservation in the broader landscape by maintaining wildlife corridors and aquatic ecosystems, and by avoiding negative impacts to surrounding protected areas. Certified farms support the protection of endangered species and other native flora and fauna by prohibiting hunting, minimizing the spread of invasive species, and taking steps to minimize human-wildlife conflict.

Implementation of the SAN Sustainable Agriculture Standard helps producers and companies demonstrate adherence to “deforestation-free” production and sourcing commitments, and helps consumers identify deforestation-free products in the marketplace.

The negative effects of climate change are already apparent through changes to global temperatures and weather systems, and these trends are not expected to reverse in the near future. By protecting biodiversity, natural ecosystems, and their carbon stocks, certified farms apply key principles of Climate Smart Agriculture and contribute to climate change adaptation and mitigation, thereby lessening the effects to the farm from climate change and not contributing further to key climate change drivers. In this way, implementation of the SAN Standard helps to transform agriculture in a manner that leads to prosperity for both people and planet.

¹³ The variability among living organisms from all sources including, amongst others, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

Critical Criteria

No.	Criteria
2.1	<i>High Conservation Value (HCV) areas</i> have not been <u>destroyed</u> from November 1, 2005 onward.
2.2	Farms <u>conserve</u> all <u>natural ecosystems</u> and have not <u>destroyed forest</u> or other natural ecosystems in the five-year period prior to the date of initial application for SAN certification or after January 1, 2014, whichever date is earlier.
2.3	Production activities do not <u>degrade any protected area</u> .
2.4	<p>Animals that are <u>endangered</u> or protected are never <u>hunted</u> or killed. Animals are not hunted on the farm, with the following exceptions:</p> <ul style="list-style-type: none"> • <u>Smallholders</u> may hunt non-endangered species for non-commercial use only; and • Vertebrate <u>pest wildlife</u> may be hunted only in accordance with the farm's <u>integrated pest management (IPM) plan</u>, and only as a measure of last resort. <p>Explosives or toxic substances are never used for hunting, fishing, or control of wildlife pests. Control of rodents follows <u>SAN rodenticide risk management requirements</u>.</p>

Continuous Improvement Area: Native Vegetation

Level	No.	Criteria
C	2.5	<p>Existing native vegetation outside <u>natural ecosystems</u> is maintained, including:</p> <ul style="list-style-type: none"> • Existing agroforestry shade tree cover; • Existing vegetated zones adjacent to <u>aquatic ecosystems</u>; and • <u>Large native trees</u>, except when these pose hazards to people or infrastructure.
C	2.6	<p>The <u>farm management</u> and <u>group administrator</u> develop a map that includes <u>natural ecosystems</u> and agroforestry canopy cover or border plantings with estimated vegetation coverage and estimated percentage of <u>native species</u> composition. If the farm or group of <u>member farms</u> have less than 10% total native vegetation cover or less than 15% total native vegetation cover for farms growing <u>shade-tolerant crops</u>, the farm management and group administrator develop and implement a <u>plan</u> to progressively increase or restore native vegetation, including:</p> <ul style="list-style-type: none"> • <u>Restoration</u> of zones adjacent to <u>aquatic ecosystems</u>; • Restoration of farmed areas of marginal productivity to natural ecosystem; or • Incorporation of native trees as border plantings and barriers around housing and infrastructure, <u>live fences</u>, shade trees, and permanent agroforestry systems.
C	2.7	<p>If zones adjacent to <u>aquatic ecosystems</u> are not protected according to <u>SAN restoration parameters</u>, a <u>plan</u> is developed and implemented to restore these zones.</p>

Continuous Improvement Area: **Native Vegetation**

Level	No.	Criteria
A	2.8	<i>SAN restoration parameters</i> are implemented for all <i>aquatic ecosystems</i> .
A	2.9	Farms with <i>shade-tolerant crops</i> have at least 15% total native vegetation coverage across the farm or group of farms or a shade canopy fulfilling the <i>SAN canopy cover and species diversity parameters</i> . Farms or groups of farms with non shade-tolerant crops have at least 10% total native vegetation coverage across the farm or group of farms.

Continuous Improvement Area: **Wildlife Management**

Level	No.	Criteria
C	2.10	<i>Endangered</i> species of plants are not collected, except for: <ul style="list-style-type: none"> • Non-commercial collection for traditional medicinal use; or • Conservation or scientific research purposes, and only with prior permission from local authorities.
C	2.11	<i>Wildlife</i> is not held in captivity. Captive animals that were present on the farm before the earliest certification date may be held only for non-commercial purposes for the remainder of their lives if not mistreated.
C	2.12	<i>Invasive species</i> are not intentionally introduced or released. Existing invasive plant species or their parts are not disposed in <i>aquatic ecosystems</i> .
A	2.13	Farms minimize human-wildlife conflicts affecting <i>workers</i> , <i>wildlife</i> , crops, or farm assets through the siting and design of <i>farm infrastructure</i> and fencing; maintenance or establishment of wildlife corridors to facilitate wildlife movement while minimizing conflict; and training workers in procedures and emergency responses for addressing crop damage or wildlife attacks.
A	2.14	Efforts are implemented to contain and reduce <i>invasive plants</i> already present on the farm.

PRINCIPLE 3

NATURAL RESOURCE CONSERVATION

Objectives and outcomes:

The careful conservation of natural resources is a foundational basis for sustainable farming. Minimizing environmental pollution benefits people, pollinators, animals and much more. This principle aims to ensure the health of soil and water, as well as reduce pesticide and fossil fuel use.

Good farming practices included in this principle minimize soil erosion and compaction, and maintain or improve soil health, including stocks of soil organic matter. Soil fertility is managed in a way that promotes crop and soil health. Improvements in soil organic matter, water, soil health, and pest management increase a farm's resilience to climate change.

Farm-related water pollution is minimized through reduced pesticide use and the avoidance of fertilizer run-off to natural water bodies. Water consumption is optimized for crop production and processing, and avoids negative impacts to local communities and ecosystems. Wastewater is managed to avoid sanitation risks and negative impacts to aquatic ecosystems.

Farm waste is reduced, re-used, and recycled, and waste is managed in such a way as to avoid environmental contamination.

Highly hazardous pesticides are prohibited and pesticide risks to people, wildlife, aquatic ecosystems, and pollinators are minimized through targeted risk mitigation practices. Producers apply integrated pest management (IPM) to minimize pest-related production losses. Reducing pesticide use and preventing negative effects of pest control activities benefits farmers, workers, bystanders, and natural ecosystems.

Certified crops and products never contain genetically-modified organisms (GMOs). Farms increase energy efficiency, reduce greenhouse gas emissions, reduce the proportion of energy use from fossil fuel sources, and ensure that renewable energy sources do not harm natural ecosystems.

Implementation of criteria in this principle support farms in conserving natural resources so positive impacts, in time, are visible at landscape level.

Critical Criteria

No.	Criteria
3.1	<p><u>Wastewater from processing operations</u> is not discharged into <u>aquatic ecosystems</u> unless it has undergone treatment to meet <u>SAN industrial wastewater parameters</u>. Wastewater from processing operations is not applied to land with very sandy or highly permeable soils, where slopes exceed 8%, or where the water table is seasonally or permanently high. Wastewater from processing operations may not be applied to soil unless it has undergone treatment to remove particulates and toxins and to reduce acidity and complies with additional <u>SAN industrial wastewater parameters for irrigation</u>. Wastewater from processing operations may not be mixed with clean water for the purpose of meeting SAN industrial wastewater parameters.</p>
3.2	<p>Untreated <u>sewage</u> is not discharged into <u>aquatic ecosystems</u>.</p>
3.3	<p>The <u>farm management</u> develops and implements an <u>integrated pest management (IPM) plan</u> that is based upon the prevention and monitoring of pests and aims to avoid economically significant crop losses while reducing pesticide risks. The farm management determines pest management steps based on the analysis of pest monitoring records. Pests are managed using biological controls or other non-chemical methods where feasible. When <u>pesticides</u> are used, preference is given to non-restricted low toxicity pesticides, and pesticides are applied only to the parts of the crop affected by pests. All workers involved in pest management activities are trained about the contents of the IPM plan.</p>
3.4	<p>The use of substances included in the SAN List of Prohibited Pesticides is prohibited. Only <u>pesticides</u> that are legally registered in the production country are used. The use of agriculture mineral oils is only allowed, if these contain less than 3% of Dimethyl Sulfoxide (DMSO) residues.</p>
3.5	<p><u>Pesticide</u> application by <u>aircraft</u> complies with <u>SAN requirements for aerial fumigation</u>. Workers are not present in areas during aerial fumigation with pesticides. In the case of primary and secondary drainage canals with permanent water, a <u>plan</u> is developed and implemented to cover these water bodies with vegetation or other effective physical means.</p>
3.6	<p>Crops covered by the SAN certificate scope do not consist of <u>genetically modified organisms (GMOs)</u> and are not repackaged or processed with GMO products.</p>
3.7	<p>Farms do not use human <u>sewage</u> in production or processing activities.</p>


Continuous Improvement Area: Soil Conservation and Management

Level	No.	Criteria
C	3.8	Farms reduce water and wind erosion through practices such as ground covers, mulches, re-vegetation of steep areas, terracing, filter strips, or minimization of herbicide use.
C	3.9	Fire may be used only for pest control, only as prescribed by the IPM <i>plan</i> and only if it creates less negative environmental impact than other pest control measures. To protect nearby <i>natural ecosystems</i> , infrastructure, and <i>communities</i> , fire is applied only by trained workers with fire suppression tools, personal protective equipment, and access to water for firefighting, and only when wind speed and direction create minimal risk of uncontrolled burning. If fire is used, fire use areas and history are indicated on updated farm maps.
B	3.10	Farms implement practices such as crop rotation, planting of nitrogen-fixing ground covers or cover crops, or application of compost or mulch to maintain or enhance soil health.
B	3.11	Nutrient management practices are implemented based on assessment of crop needs, regular monitoring of soil fertility and crop nutrient status, or recommendations from local agronomic experts. Organic fertilizers are preferentially used where locally available.
B	3.12	Farms apply fertilizers precisely to make nutrients available when and where crops need them and to minimize loss to or contamination of the environment. Equipment for mixing and applying fertilizer is calibrated annually, after maintenance, or whenever the product type is changed.
B	3.13	Farms reduce soil compaction through no-till or reduced-tillage farming, low pressure tires, or restrictions on vehicle size and access times.
A	3.14	Based on record-keeping (see 1.10), the <i>farm management</i> and <i>group administrator</i> demonstrate that nutrient inputs to crops and soils are sufficient to compensate for production-related uptake and losses, but do not contribute to <i>eutrophication</i> through excessive application.

Continuous Improvement Area: **Water Conservation**

Level	No.	Criteria
C	3.15	Farms comply with <u>applicable law</u> for the withdrawal of surface or groundwater for agricultural, domestic or processing purposes.
C	3.16	Any new irrigation system is designed to optimize crop or pasture <u>productivity</u> while minimizing water waste, erosion and salinization.
B	3.17	For operations that irrigate or that use water for processing or cattle production, the <u>farm management</u> and <u>group administrator</u> develop and implement a water conservation <u>plan</u> to reduce water use per unit of product produced or processed. The plan documents current water consumption, evaluates future water needs and water availability, and establishes targets for improving water use efficiency.
B	3.18	Existing irrigation and water distribution systems are managed and maintained to optimize crop or pasture <u>productivity</u> and minimize water waste, erosion and salinization.
A	3.19	Based on record-keeping (see 1.10), the farm demonstrates reductions in water used for irrigation, processing, or cattle production per unit of product produced or processed.

Continuous Improvement Area: **Water Quality**

Level	No.	Criteria
C	3.20	<u>Greywater</u> is collected and managed through treatment or drainage systems, and is not discharged into <u>aquatic ecosystems</u> .
B	3.21	Farms map all pit latrines and <u>sewage</u> disposal sites and their drainage systems. These systems are sited, designed and managed to minimize risks to <u>aquatic ecosystems</u> and drinking water supplies.
B	3.22	Treated <u>sewage</u> meets the water quality parameters as defined by <u>applicable law</u> prior to discharge.  <i>Not Applicable to Smallholders</i>

Continuous Improvement Area: **Integrated Pest Management**

Level	No.	Criteria
C	3.23	In the case of groups, the <i>group administrator</i> develops an <i>integrated pest management (IPM) plan</i> for the group, according to the contents of Critical Criterion 3.3. The group administrator trains and supports its members to implement this plan on the <i>member farms</i> .
C	3.24	The <i>farm management</i> and <i>group administrator</i> record pest infestations with the following parameters: <ul style="list-style-type: none"> • Pest type; • Infestation dates, area and location, and degree of damage; and • Weather during the infestation.
B	3.25	<i>Smallholders</i> record pest infestations with the following parameters: <ul style="list-style-type: none"> • Pest type; • Infestation dates, area and location, and degree of damage; and • Weather during the infestation.
B	3.26	The <i>farm management</i> and <i>group administrator</i> analyze <i>pesticide</i> application and pest monitoring records, document any significant reductions or increases in pest severity and pesticide use, and update the IPM <i>plan</i> annually considering the effectiveness of past pest management approaches and any new pest control challenges or opportunities.

Continuous Improvement Area: **Pesticide Management**

Level	No.	Criteria
C	3.27	Farms apply substances listed in the SAN List of Pesticides for Use with Risk Mitigation as having risk to aquatic life only if <i>SAN non-application zones</i> around aquatic <i>natural ecosystems</i> are enforced <i>or</i> vegetative barriers are established compliant with <i>SAN parameters for vegetative barriers</i> or other effective mechanisms to reduce <i>spray drift</i> . Farms apply substances listed in the SAN List of Pesticides for Use with Risk Mitigation as having risk to wildlife only if SAN non-application zones around natural ecosystems are enforced or vegetative barriers are established compliant with SAN parameters for vegetative barriers or other effective mechanisms to reduce spray drift.
C	3.28	Farms establish and maintain non-crop vegetative barriers compliant with <i>SAN parameters for vegetative barriers</i> or <i>SAN non-application zones</i> between pesticides applied crops and <i>areas of human activity</i> .

Continuous Improvement Area: **Pesticide Management**

Level	No.	Criteria
C	3.29	<p>Farms apply substances listed in the SAN List of Pesticides for Use with Risk Mitigation as having risks for pollinators only if:</p> <ul style="list-style-type: none"> • Less toxic, efficacious pesticides are not available; • Exposure to <i>natural ecosystems</i> is minimized by complying with <i>SAN non-application zones</i> or by establishing vegetative barriers compliant with <i>SAN parameters for vegetative barriers</i> or by implementing other effective mechanisms to reduce <i>spray drift</i>; and • Contact of pollinators with these substances is further reduced through: <ul style="list-style-type: none"> • Substances are applied only when pollinators are not active; or • Substances are not applied to flowering weeds or flowering weeds are removed; and • Substances are applied while the crop is not in peak flowering period. Not applicable to banana, cocoa, grapes, lemon grass, pineapple, psyllium, sugar cane, and tea. • If bee hives are used, they are temporarily covered during application, and hive bees are provided with a clean water source outside the treated area.
C	3.30	All <i>pesticides</i> are stored in a safely locked storage facility. Only people trained in pesticide risks and management have access to the pesticide storage facility.
C	3.31	<i>Pesticides</i> listed in the SAN Prohibited Pesticides List and expired products that were in use before farms applied for certification are returned to the supplier or, if the supplier does not accept these products, these are labeled and stored separately from other products until disposed of safely.
C	3.32	Potentially affected persons or <i>communities</i> are identified, alerted, and warned in advance about pesticide applications and prevented from access to pesticide application areas.
C	3.33	Empty <i>pesticide</i> containers and application equipment are triple washed, and the rinse water is returned back to the application mix for re-application. Empty pesticide containers are kept in a locked storage area until safely returned to the supplier or, if the supplier does not accept empty containers, they are cut or perforated to prevent other uses. Containers may be re-used only for the original contents and only when labeled accordingly.
B	3.34	Farms select the optimum <i>pesticide</i> application equipment and techniques for the crop and pesticide type to reduce <i>spray drift</i> .
B	3.35	Pre-harvest intervals of pesticides as stipulated in the product's Material Safety Data Sheet (MSDS), label or security tag are complied with when applying pesticides. When two or more products with different pre-harvest intervals are used at the same time, the longest interval is applied.
B	3.36	The <i>farm management</i> and <i>group administrator</i> calibrate equipment for mixing and applying <i>pesticides</i> , at least annually, after maintenance, and whenever the type of product is changed.

Continuous Improvement Area: **Waste Management**

Level	No.	Criteria
C	3.37	<u>Waste</u> storage, treatment and disposal practices do not pose health or safety risks to farmers, workers, other people, or <u>natural ecosystems</u> .
C	3.38	The <u>farm management</u> and <u>group administrator</u> develop and implement a waste management <u>plan</u> including: <ul style="list-style-type: none"> • Documentation of the origin, approximate volume, and current means of disposal for all <u>waste</u> streams; and • Activities to segregate different waste types to facilitate re-use, recycling or composting.
B	3.39	<u>Waste</u> is not burned, except in incinerators technically designed for the specific waste type.
B	3.40	<u>Waste</u> is segregated based on available waste management and disposal options. Recyclable wastes are separated and recycled. Organic waste is composted or otherwise processed for use as organic fertilizer. Scrap materials that can feasibly be reused are stored in designated areas away from processing plants and housing.
B	3.41	Farms and infrastructure are kept clean and free of <u>waste</u> accumulations outside of designated storage and disposal sites.
A	3.42	The <u>farm management</u> and <u>group administrator</u> give priority to product suppliers that minimize the waste associated with their products, and that accept used packaging and containers for recycling.
A	3.43	The <u>farm management</u> and <u>group administrator</u> check <u>service providers</u> who remove oil, plastic and <u>sewage</u> waste and ensure that the contractors' disposal and recycling methods do not pose risks to <u>natural ecosystems</u> , drinking water supplies, or the health and safety of people living near the disposal sites.

Continuous Improvement Area: **Energy and Greenhouse Gas Emissions¹⁴**

Level	No.	Criteria
B	3.44	The <u>farm management</u> and <u>group administrator</u> develop and implement an energy efficiency <u>plan</u> including: <ul style="list-style-type: none"> • Quantity and type of energy sources and associated machinery used for production, processing, and domestic use; and • Targets for increasing energy efficiency and for reducing dependency on non-renewable energy sources.

¹⁴ In addition to the criteria below, the objective of reducing net greenhouse gas emissions is also advanced by several other sections of this standard, including criteria related to conservation of natural ecosystems, enhancement of soil health, and optimization of nutrient management.

Continuous Improvement Area: **Energy and Greenhouse Gas Emissions**

Level	No.	Criteria
B	3.45	<p>If biomass energy is used, the <i>farm management</i> and <i>group administrator</i> minimize the direct or indirect effects of biomass use on <i>natural ecosystems</i> through actions such as:</p> <ul style="list-style-type: none"> • Planting trees to increase the availability of biomass energy from tree plantations. • When biomass is purchased, ensuring that it originates from sources not associated with the <i>destruction of forests</i> or other natural ecosystems. • Installing energy-efficient drying and processing infrastructure. • Supporting increased energy efficiency in domestic fuelwood use by workers, farmers and their families through training, or facilitating access to energy-efficient cook stoves.
A	3.46	<p>Based on record-keeping, the <i>farm management</i> and <i>group administrator</i> demonstrate reductions in overall energy use or non-renewable energy use per unit product grown or processed.</p>

PRINCIPLE 4

IMPROVED LIVELIHOODS AND HUMAN WELLBEING

Objectives and outcomes:

All humans have equal worth and should be treated well. By following the criteria in this principle, the SAN Standard intends protection of human and labor rights for farmworkers and their families.

SAN supports the UN Guiding Principles on Business and Human Rights, and workers' rights are not just as recognized by the SAN standard but are protected in national and international law. On certified farms, workers' rights are protected, including essential ones as defined by ILO core conventions¹⁵.

That's why certified farms do not use forced labor or engage in labor discrimination. The health and wellbeing of all workers (and young workers in particular) are protected, and minors below 15 years of age cannot be hired.

Requirements in this principle include that workers' Freedom of Association be fully respected. Farms pay at least the country's minimum wage and overtime rates. The farm management and group administrator set a plan to increase workers' wages and/or improve in-kind benefits towards a living wage that meets the essential needs of workers and their families.

When housing is provided by farms for their workers, it is free from disease vectors and safe. All workers, smallholders and their families must have access to safe drinking water.

Community rights, including the rights of indigenous peoples, are fully respected during farm siting, development and operations. Farm operations do not diminish communities' land or resource use rights or collective interests without communities' free, prior and informed consent (FPIC). Farms and group administrators engage constructively with the local community to identify and minimize any negative impacts of agriculture and to proactively identify and support community needs.

SAN participates in the Global Living Wage Coalition (GLWC), and the standard includes a living wage and essential needs approach as part of this effort. The GLWC has developed a process for identifying essential needs and the corresponding living wage level for countries with operations certified by the GLWC member systems. Living Wage is defined as follows:

¹⁵ The ILO core conventions include the Freedom of Association and Protection of the Right to Organize Convention, 1948 (No. 87), Right to Organize and Collective Bargaining Convention, 1949 (No. 98), Forced Labor Convention, 1930 (No. 29), Abolition of Forced Labor Convention, 1957 (No. 105), Minimum Age Convention, 1973 (No. 138), Worst Forms of Child Labor Convention, 1999 (No. 182), Equal Remuneration Convention, 1951 (No. 100), and Discrimination (Employment and Occupation) Convention, 1958 (No. 111).

Remuneration received for a standard work week by a worker in a particular place sufficient to afford a decent standard of living for the worker and her or his family. Elements of a decent standard of living include food, water, housing, education, health care, transport, clothing, and provision for unexpected events. Fulfillment of these eight “essential needs” together constitutes a decent standard of living.

The GLWC will provide a calculation of living wage for countries or their regions with certified farms or group administrators. Where a locally calculated living wage level is available, this benchmark is used as a basis for employers and worker organizations to evaluate current remuneration levels, collectively negotiate increases, and implement plans to progress toward living wage remuneration. In the absence of this living wage calculation, the farm management provides or facilitates key essential needs including access to health care and education for workers and their families.

Through this principle, the SAN Standard aims to transform agriculture by creating environments where farm owners, workers, their families and the broader communities they live in can all prosper and have better livelihoods.

Critical Criteria

No.	Criteria
4.1	All forms of <i>forced, compulsory, or slave labor</i> are prohibited, including use of trafficked and bonded labor, labor by prisoners or soldiers, or the use of extortion, debt, threats, monetary fines or penalties. According to ILO Forced Labor Convention (No. 29) and Abolition of Forced Labor Convention (No. 105)
4.2	<i>Workers</i> are treated respectfully and are never subjected to threats, intimidation, sexual abuse or harassment, or verbal, physical or psychological mistreatment.
4.3	All forms of <i>discrimination</i> in labor, hiring, training, task assignment, labor benefits, promotion policies and procedures, and other opportunities for better conditions, pay, or advancement are prohibited, including any distinction, exclusion or preference to invalidate or harm equality of opportunity or treatment in employment; and different pay ¹⁶ to men and women for work of equal value. According to ILO Conventions 100 and 111

¹⁶ Equal remuneration for men and women workers for work of equal value refers to rates of remuneration established without discrimination based on sex (ILO Equal Remuneration Convention, 1951 (No. 100), Geneva)

Critical Criteria

No. Criteria

- 4.4 Workers have the right to establish and join worker organizations of their own free choice without influence or interference by farm management, owners or group administrators. Worker organizations operate without interference or influence by farm management, owners or group administrators. Workers have the right to collectively negotiate the elements of their employment conditions into a collective bargaining agreement. Workers are fully protected against acts of discrimination or retaliation for reasons of affiliation.

 *Not Applicable to Smallholders*

Freedom of Association according to ILO Convention 87, Collective Bargaining according to ILO Convention 98 concerning the Application of the Principles of the Right to Organize and to Bargain Collectively

- 4.5 All workers receive no less than the legal minimum wage or wages negotiated collectively, whichever is higher. For production, quota or piece work, the established pay rate allows workers to earn at least a minimum wage compared to a 48-hour standard working week of a similar task. If under these conditions, the piecework rate does not meet the minimum wage, then the wage level is upgraded to at least the minimum wage. No more than 30% of the required minimum wage is paid in-kind. If wages are negotiated voluntarily between employers and workers' organizations, those negotiated wage amount(s) apply to all workers covered under the negotiated agreement. Management-required training takes place during normal working hours and is fully compensated. Workers are not charged, nor is pay deducted, to cover the cost of tools, equipment or gear required for performance of worker duties.

- 4.6 The worst forms of child labor are prohibited, including:
- Work harmful to children;
 - Any type of paid or unpaid work by a child under the age of 15 years old, except tasks that are traditional for children in the location and are undertaken for the purpose of encouraging the family's or local culture;
 - Young workers' work during legally compulsory school hours;
 - Young workers' work of more than eight hours per day and more than 48 hours per week;
 - Young workers' work schedule not permitting minimum consecutive period of 12 hours' overnight rest, and at least one full day of rest for every six consecutive days worked;
 - All forms of forced, compulsory, or slave labor or discrimination;
 - Sale and trafficking of children;
 - Use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances; and
 - Use, procuring or offering of a child for other illicit activities.

ILO Worst Forms of Child Labor Convention No. 182


Critical Criteria

No.	Criteria
4.7	<p>If <i>young workers</i> are contracted, records for each young worker are kept, including: First and last name; reliable proof of date of birth; parent(s) or legal guardian(s) first and last name and domicile or place of contact; young worker's permanent residence; school registration and attendance statuses; parent(s) or legal guardian(s) consent and authorization for the young worker's employment; type of assigned work or tasks; and number of daily and weekly working hours.</p> <p>ILO Minimum Age Convention No. 138</p>
4.8	<p>The <i>farm management</i> and <i>group administrator</i> do not engage in arrangements or practices designed to eliminate or reduce pay and benefits due to workers such as employing contract or <i>temporary workers</i> for permanent or ongoing tasks.</p>
4.9	<p>The <i>farm management</i> and <i>group administrator</i> implement complaints or grievance mechanisms to protect workers' rights. Workers also have the right to object to their received payment and have their objections reviewed and decided with decisions being documented. Workers are not subject to employment termination, retribution, or threats as a consequence of utilizing the complaint or grievance mechanism. The farm management and group administrator inform workers of the right to access external complaint and grievance mechanisms, including SAN accredited Certification Bodies, SAN secretariat or local authorities.</p>
4.10	<p>Regular working hours of all workers do not exceed 48 hours per week, with at least one full day of rest for every six consecutive days worked. Workers receive one meal period break for every six hours worked.</p>
4.11	<p>All overtime is voluntary. Overtime does not result in a work week exceeding 60 total hours, except under extraordinary circumstances. All overtime is paid at the rate required by <i>applicable law</i> or as collectively negotiated, whichever is higher. In absence of applicable law for higher overtime pay, overtime is paid at 1.5 times the regular wage level.</p>
4.12	<p>Farmers, workers, and their families are afforded access to potable water through one of the following means:</p> <ul style="list-style-type: none"> • Access to a public potable water system is provided; • Potable water provided by the <i>farm management</i> and <i>group administrator</i> complies with <i>SAN safe drinking water parameters</i> based on testing preceding each SAN certification audit and any time that new <i>water contamination risks</i> have occurred. Potable water sources are protected and water distribution mechanisms are maintained to avoid contamination; and • In the case of <i>smallholder</i> groups, the group administrator implements and documents a training program to instruct smallholder members on potable water treatments, such as boiling, filtering or chlorinating and the prevention of water contamination.



Critical Criteria

No.	Criteria
4.13	<p>When the <u>farm management</u> and <u>group administrator</u> provide housing to <u>workers</u> and their families, it includes:</p> <ul style="list-style-type: none"> • Absence of rats, mice, insects and vermin, or conditions that favor their populations that could cause disease or carry parasites that function as vectors of diseases; • Dry floors; • Protection against rain, wind or cold weather conditions; • No conditions posing imminent threats to the health or security of the occupants; • A register of workers and family members that live in management provided housing; • Separate beds; and • Doors with locking mechanism.
4.14	<p>The <u>farm management</u> and <u>group administrator</u> develop and implement an Occupational Health and Safety (OHS) <u>plan</u>. The OHS plan is based on a risk analysis developed by a <u>competent professional</u> or organization and identifies and characterizes biological, physical and chemical hazards by job types or physically demanding tasks. The OHS plan describes and rates risks in terms of the frequency of potential occurrence and the potential danger or impact, and indicates the communication, training, equipment, or procedures, including medical exams and first aid, needed to prevent or reduce those risks rated as high to <u>worker</u> health or the health of other people on the farm or group administrator facilities. The farm management and group administrator designate a qualified OHS officer responsible for ensuring the implementation of the OHS plan.</p>
4.15	<p>Functional Personal Protective Equipment (PPE) in accordance with the product's MSDS, safety tag or other instructions, whichever are more stringent, is provided free of cost to <u>workers</u>. All persons who mix or handle pesticides, fertilizers <u>hazardous materials</u>, or other chemical substances or <u>natural pest control substances</u> with possible dermatological or microbiological risks use PPE. Substances listed in the SAN List of Pesticides for Use with Risk Mitigation as having inhalation risks may be used only if <u>restricted entry intervals</u> are enforced and respirators with an organic vapor (OV) cartridge or canister with any N, R, P, or 100 series pre-filter are used, and only if all application sites are flagged to indicate inhalation risks to bystanders.</p>
4.16	<p>The <u>farm management</u> trains all workers and the <u>group administrator</u> trains all group members or their representatives that handle or come into contact with <u>pesticides</u> or other substances posing potential health risks. Training is conducted by a <u>competent professional</u> on safer management of these substances and includes:</p> <ul style="list-style-type: none"> • Occupational health topics specific to chemical handlers as defined in the Occupational Health and Safety Plan; • An explanation of the names, formulations, toxicity, health risks, and other relevant MSDS information related to all substances to be applied; • Techniques for correct handling of these substances; • Correct use of PPE; • Preventative measures for reducing possible damage to health and the environment caused by these substances; and • Emergency procedures, first aid and medical attention for cases involving poisoning or undue contact with these substances.

Critical Criteria

No.	Criteria
4.17	Bathing facilities are provided to all handlers of <u>pesticides</u> or other substances posing potential health risks. These handlers bathe and change their clothes after finishing the daily application schedule and before leaving the workplace at the end of the workday. All PPE for workers is washed and stored on the farm or group administrator facilities, and does not enter workers' housing.
4.18	Women who are pregnant, nursing or have recently given birth are not assigned to activities that pose <u>risk to the woman's, fetus's or infant's health</u> . In cases of job reassignment, there is no reduction in <u>remuneration</u> .
4.19	Legitimate right to use the land is demonstrated by ownership, leasehold, or other legal documents or by documentation of traditional or <u>community</u> use rights. Right to use the land is not legitimately disputed by current or former local residents or communities, including in relation to past <u>dispossession</u> or <u>forced abandonment</u> . In the event of land conflict, legitimate right may be demonstrated if a conflict resolution process has been implemented, documented, and accepted by the affected parties.
4.20	Activities diminishing the land or resource use rights or collective interests of <u>communities</u> are conducted only after having received the communities' <u>free, prior and informed consent (FPIC)</u> . The <u>farm management</u> and <u>group administrator</u> implement complaints or grievance mechanisms to protect community members' rights. If the farm management and group administrator diminish communities' land or resource use rights, mutually agreed compensation commensurate with the loss of use is negotiated with and provided to communities as part of the FPIC process. The farm management and group administrator fully document the FPIC process, including maps developed through the participatory process that indicate the location, boundaries, and planned uses of lands and other resources over which communities have legal, customary, or user rights.
	 <i>Not Applicable to Smallholders</i>

Continuous Improvement Area: **Employment Conditions and Wages**

Level	No.	Criteria
C	4.21	The <i>farm management's</i> and group <i>administrator's</i> payment procedures guarantee the complete payment to <i>workers</i> of all of their wages due, including for overtime work. Payments are made on the date, in the place, and with the frequency specified by collectively negotiated agreements or worker contracts.
C	4.22	The <i>farm management</i> and <i>group administrator</i> inform all <i>workers</i> offered employment in their native language about all terms of work, covering labor policies, procedures, rules and conditions either as stated in a collective bargaining agreement (where implemented) or as contained in the employer's proposed <i>labor agreement</i> .
B	4.23	All <i>workers</i> receive at least two weeks of paid vacation leave per year (10 days based on a five-day work week or 12 days based on a six-day work week) with pro-rating for part-time or seasonal workers.  <i>Not Applicable to Smallholders</i>
B	4.24	The <i>farm management</i> and <i>group administrator</i> develop and implement a <i>child labor</i> prevention and monitoring plan after considering the results of consultations with <i>community</i> members and minors.
B	4.25	Pregnant women who are active <i>workers</i> receive fully-paid maternity leave of at least 12 weeks before or after birth, with at least six of these weeks being taken after birth.  <i>Not Applicable to Smallholders</i>
B	4.26	The <i>farm management</i> and <i>group administrator</i> offer women who are pregnant, nursing or have recently given birth flexible working schedules or work site arrangements.
A	4.27	The <i>farm management</i> and <i>group administrator</i> increase inflation-adjusted cash wages at least annually.

Continuous Improvement Area: **Living Wage – Essential Needs for Workers and their Families**

Level	No.	Criteria
C	4.28	<p>When the <i>farm management</i> and <i>group administrator</i> provide housing to <i>workers</i>, or workers with their families, this housing meets the following conditions:</p> <ul style="list-style-type: none"> • Beds are not arranged in more than two levels; • Natural light during the daytime and artificial light for the nighttime; • Natural ventilation that ensures movement of air in all conditions of weather and climate; • Functional and effective fire wood smoke evacuation or ventilation mechanisms well maintained or repaired; • Non-leaking windows, doors and roofs; • At least one toilet for every 15 persons, one urinal for every 25 men, one washbasin for every six persons or per family; • At least one shower per 10 persons, separated by gender; • At least one large laundry sink for every 30 persons; • Installed and maintained fire extinguishing mechanisms; and • Marked safety exits. <p>ILO Guidance on Workers’ Housing Recommendation No. 115</p>
C	4.29	<p>If a <i>living wage benchmark</i> is provided, the <i>farm management</i> and <i>group administrator</i> document and implement a living wage <i>plan</i>, to progress towards payment of living wage. In absence of a living wage benchmark, the farm management and group administrator assess current access of <i>workers</i> and their families to <i>health care</i> and <i>basic education</i> and develop and implement a plan for providing access to these services.</p>
B	4.30	<p>When the <i>farm management</i> and <i>group administrator</i> provide housing to <i>workers</i>, or workers with their families, this housing meets the following conditions:</p> <ul style="list-style-type: none"> • Sealed floors; • Space for belongings; • Headroom is of not less than 203 centimeters for full and free movement; • Cooking facilities; • Toilets are designed to maximize safety for women and children, including good sight lines to latrines, privacy structures with locks and well-lit toilet areas; and • Sleeping space is at least <ul style="list-style-type: none"> • For rooms with two persons: 7.5 square meters (m²). • For rooms with three persons: 11.5 m². • For rooms with four persons: 14.5 m². • If a room accommodates more than four persons, the floor area is at least 3.6 m² per person. • When workers reside with their family, living space per family group is at least 30 m².

Continuous Improvement Area: **Living Wage - Essential Needs for Workers and their Families**

Level	No.	Criteria
B	4.31	The <i>farm management</i> and <i>group administrator</i> provide access to <i>health care</i> and <i>basic education</i> to all workers.
A	4.32	When the <i>farm management</i> and <i>group administrator</i> provide housing to <i>workers</i> , or workers with their families, they provide areas for recreation and drying clothes. For permanent workers residing with their family, housing provides at least one toilet, one shower, and one laundry sink per family. Non-family worker housing provides at least one toilet for every six persons.
A	4.33	If a <i>living wage</i> benchmark is provided, the <i>farm management</i> and <i>group administrator</i> pay a living wage to all workers. Payment may include in-kind <i>remuneration</i> , pursuant to the <i>plan</i> (see C 4.29).

Continuous Improvement Area: **Occupational Health and Safety**

Level	No.	Criteria
C	4.34	An Occupational Health and Safety (OHS) committee is chosen by <i>workers</i> for <i>farms</i> or <i>group administrators</i> with 20 or more workers. The committee participates in or carries out regular OHS reviews and its findings and decisions are considered in the updating and implementation of the OHS plan. Committee decisions and associated activities are documented.
C	4.35	Farms implement <i>Restricted Entry Intervals</i> (REI) for persons entering pesticide application areas without PPE that are at least 12 hours or as stipulated in the product's MSDS, label or security tag, whichever is more stringent. For WHO class II products, the REI is at least 48 hours. When two or more products with different REIs are used at the same time, the longest interval applies.
C	4.36	The <i>farm management</i> and <i>group administrator</i> test cholinesterase levels of <i>workers</i> who handle WHO ¹⁷ Class II or III organophosphates or carbamates. Tests are conducted prior to the first time workers apply these substances on the farm and periodically thereafter as long as they remain assigned to this task. The farm management and group administrator offer other work that does not involve use of these chemicals to those pesticide handlers with results outside of the accepted cholinesterase levels.
C	4.37	When <i>workers</i> are diagnosed with temporary health conditions or have short-term disabilities that impair their ability to carry out their job, the <i>farm management</i> and <i>group administrator</i> reassign these workers for the length of the disability period to a different work task without penalty or a decrease in compensation.

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Continuous Improvement Area: **Occupational Health and Safety**

Level	No.	Criteria
C	4.38	Workshops, storage areas, and processing facilities are designed for safe and secure storage of materials and equipped and identified in accordance with the type of stored substances and materials, are clean and organized, and have sufficient light and ventilation, equipment for firefighting, and means to adequately remediate any substance or spillage of materials.
C	4.39	Only authorized personnel have access to workshops, storage or processing facilities.
C	4.40	First aid equipment is available at the work place for offices, processing areas, and other central facilities and first aid kits are accessible in the field. Designated <u>workers</u> or <u>group members</u> are trained on first aid as specified in the OHS <u>plan</u> .
C	4.41	The <u>farm management</u> and <u>group administrator</u> provide workers with medical examinations as specified in the Occupational Health and Safety <u>plan</u> (see Critical Criterion 4.14). <u>Workers</u> have access to the results of their medical examinations.
C	4.42	The <u>farm management</u> and <u>group administrator</u> provide emergency showers and eye-washing facilities in or close to workshops, storage areas, and processing facilities where <u>pesticides</u> or other <u>hazardous materials</u> are used or stored.
C	4.43	Working toilets and washing facilities are available at the work place for offices, processing areas, and other central facilities of <u>farms</u> and <u>group administrators</u> .
B	4.44	The <u>farm management</u> and <u>group administrator</u> document and implement procedures for emergency scenarios (such as natural catastrophes, civil unrest, or fire), provide training, and maintain equipment to minimize harm for each of these emergency scenarios.
A	4.45	Farms provide natural or built shelter for meals and rest during the work period to protect from sunlight, rain and lightning.

Continuous Improvement Area: **Community Relations**

Level	No.	Criteria
B	4.46	The <i>farm management</i> and <i>group administrator</i> communicate openly with local <i>communities</i> to identify community concerns and interests related to the farm's or group administrator's operations. The farm management and group administrator develop and implement a system to receive, respond to, and document the resolution of complaints from communities.
A	4.47	The <i>farm management</i> and <i>group administrator</i> implement and document activities to support identified needs and priorities of the <i>community</i> , such as support for local schools or other institutions, environmental education, or collaboration on emergency preparedness.

PRINCIPLE 5

SUSTAINABLE CATTLE PRODUCTION

(Cattle certification scope only)

NOTE: Principle 5 of this Standard is applicable to semi-confined¹⁸ cattle systems only.

Objectives and outcomes:

Cattle production can pose a risk to the environment when not carefully managed, through greenhouse gas emissions, through damage to aquatic ecosystems and over grazed, degraded land.

On certified farms cattle are raised in accordance with responsible practices. Farms keep track of animals and have herd health and nutrition programs that respect SAN prohibited substances. Pastures are selected and managed based on agro-ecological parameters, resistance to pests, nutritional value and production rates to ensure optimum growth and avoid pasture degradation.

Farms practice responsible animal husbandry through an animal welfare program which includes safe transportation. On farms and at their handling facilities cattle are not mistreated. Animals are provided shelter, food and water in sufficient quantity and quality to ensure good health and productivity.

Certified cattle production systems reduce greenhouse gas emissions through improved diet, optimized productivity, manure and urine processing.

Implementation of this principle's criteria helps farms to raise cattle in a way that does not harm the environment, support increased productivity and ensures a stress-free life for the animal.

¹⁸ Cattle production systems where animals for at least part of the day roam outdoors during periods with temperatures compatible with the animal's physiology. Confining animals in an enclosure for 24 hours each day and for the majority of the year are excluded from this definition of semi-confined. Outdoor ranging areas may be fenced but still offer animals the opportunity for movement and exposure to sunlight.

Critical Criteria	
No.	Criteria
5.1	<p>The <i>farm management</i> and <i>group administrator</i> implement a mechanism to confirm that cattle sold as certified are born and raised on SAN certified farms for their entire lives; or cattle spend at least six months on SAN certified farms and spend all other portions of their lifespan on farms that</p> <ul style="list-style-type: none"> • Do not use forced labor; • Have not legitimately disputed <i>communities'</i> land use rights; and • Have not <i>destroyed forests</i>, protected areas or other <i>natural ecosystems</i> subsequent to January 1, 2014.
5.2	<p>The <i>farm management</i> and <i>group administrator</i> apply an individual animal identification record system for cattle with a unique identification code from birth or purchase until sale or death. Records are maintained for at least one year following sale or death.</p>
5.3	<p>The presence of transgenic or <i>cloned animals</i> is prohibited.</p>
5.4	<p>Mistreatment or abuse of cattle or working animals is prohibited.</p>
5.5	<p>Cattle are not fed animal or human excrement, animal products or by-products, or feed containing these substances.</p>
5.6	<p>The administration of the following chemical substances to cattle is prohibited:</p> <ul style="list-style-type: none"> • Organochlorinated substances; • Anabolics to promote muscle mass increase; • Hormones to stimulate higher production; • Non-therapeutic antibiotics (preventive medication or promotion of higher production). • Clenbuterol, Diethylstilbestrol (DES), Dimetridazole, Glicopeptids, Ipronidazole; • Chloramphenicol, Fluoroquinolones, Furazolidone; and • Diclofenac and Aceclofenac.

Continuous Improvement Area: **Sustainable Cattle Production**

Level	No.	Criteria
C	5.7	The <i>farm management</i> and <i>group administrator</i> develop and implement a cattle herd health <i>plan</i> endorsed by a technician trained in animal husbandry or veterinary science, including vaccinations and the monitoring, control and treatment of diseases by veterinarians.
C	5.8	Competent professionals trained in veterinary science monitor animal health. Veterinarians or other legally authorized professionals treat animal diseases.
C	5.9	Medications are recommended by veterinarians or legally authorized professionals and approved by national animal health regulatory authorities, are registered, applied and stored safely and in compliance with label instructions.
C	5.10	Cattle are fed according to the nutritional needs of their life stages. Animals do not present symptoms of malnutrition. Newborn calves are fed with <i>colostrum</i> and consume milk or milk substitutes until their development allows for digestion of fodder.
C	5.11	Water for cattle is continuously available to animals in quantities sufficient to avoid dehydration. The <i>farm management</i> and <i>group administrator</i> develop and implement a water quality monitoring plan to comply with <i>SAN parameters for cattle water</i> .
C	5.12	Animal handling and treatment activities are conducted by trained personnel and reduce fear, stress and pain.
C	5.13	<i>Euthanasia</i> is reserved for animals with incurable or terminal diseases, and is swift and painless.
C	5.14	Castration of animals is conducted at the earliest age possible, and only by surgical methods or <i>emasculat</i> ion. If animals are castrated after two months of age, pain relief medication is applied during and after castration.
C	5.15	<i>Hot iron processes</i> and excision are not used for dehorning calves. If calves are older than two months, only tipping of horns is permitted.
C	5.16	Dairy and double purpose cows are milked regularly.
C	5.17	Milking infrastructure is clean and free of <i>waste</i> . A sanitation protocol for milking equipment and personnel is implemented including: <ul style="list-style-type: none"> • Utensils and equipment is sterilized or disinfected; and • Hands are washed or disinfected with non-<i>irritating substances</i> before each cow is milked.

Continuous Improvement Area: **Sustainable Cattle Production**

Level	No.	Criteria
C	5.18	Infrastructure for cattle management is clean and safe and provides sufficient and clean bedding, natural light and ventilation, and protection from extreme weather conditions events. All equipment is maintained clean from excrement and in good operating condition. Animal loading and unloading structures ensure animal safety.
B	5.19	The <i>farm management</i> and <i>group administrator</i> develop and implement a <i>pasture</i> management plan, including: <ul style="list-style-type: none"> • Selection of forage species considering agro-ecological conditions, production rates, nutritional value, non-invasiveness, resistance to pests, and climatic variability; • Periodic evaluation of pasture condition and level of weed infestation; and • Actions to avoid overgrazing and pasture degradation.
B	5.20	Reproduction periods and activities are documented to reduce inbreeding and improve herd genetics.
B	5.21	Dead animals are buried or incinerated promptly or other legally permitted mechanisms are applied to eliminate the risk of contamination.
B	5.22	Urine and manure from cattle stables and enclosures are collected, composted or treated to reduce pathogens and minimize methane emissions. Composted solids are reused as part of the production system
B	5.23	Animals are declared fit by trained personnel before any travel. Animals are not contained in the vehicle for more than 24 hours continuously. Except for emergencies and medical treatment, animals with the following conditions are not transported: Sick or severely injured animals, including those with open surgical wounds; females that have given birth less than 48 hours ago; and cows in the last month of pregnancy.
A	5.24	Cattle products sold as certified are from animals that spend at least the last two-thirds of their lives on farms certified with this standard.
A	5.25	Chutes, alleys, and other restraining equipment and facilities are designed and built to reduce cattle stress and injury.
A	5.26	Cattle's negative impact on <i>aquatic ecosystems</i> is reduced by ensuring that cattle receive water and feed within pasture lots and that there are physical barriers between cattle and aquatic ecosystems. Routes where cattle cross aquatic ecosystems are selected and managed in ways that minimize damage.
A	5.27	Water for cattle complies with <i>SAN safe drinking water parameters</i> .