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# **Sustainable Agriculture Principles & Practices**



# Overview



**SAI Platform is a Principles and Practices led organisation** – these form the foundation of our working groups and systems development, prioritise our activities and resources and align with activities within member companies. They provide the basis on which we publicly share our positions on key issues.

- **Our principles** define sustainable agriculture and what we believe the industry can achieve.
- **Our practices** identify how we can achieve the principles of sustainable agriculture and are the backbone of our systems and activities. These are integrated into the tools we develop and projects we action.

The scope of the Sustainable Agriculture Principles and Practices cover farm management as well as supply chain management. It is clear that not all responsibility lies with farmers; responsibility should be shared with those who purchase the agricultural materials as well as those who provide products and services to farmers.

The Sustainable Agriculture Principles and Practices provide a holistic framework. We have identified eleven sustainable agriculture principles. All the principles are interdependent, with best practices often benefiting several principles. However, it is critical to keep in mind all interdependencies, as some on-farm or supply chain practices can have unintended and/or conflicting consequences.

## BUILDING ON OUR PREVIOUS WORK

This document reviews and consolidates our Principles and Practices which have guided our work since SAI Platform first created them in 2009.

In carrying out this review, we have highlighted the crossover with the **UN SDGs** which many of our members use as a reference for their sustainability goals.

Many of the SDGs and associated targets are covered by SAI Platform's Sustainable Agriculture Principles and for each we provide a reference on where there is more specific alignment.





# Climate



## PRINCIPLE

An agricultural sector that minimises greenhouse gases and air pollution, acts as a significant greenhouse gas sink, enables adaptations to a changing climate and supports the resiliency of farmers and farming communities.

## PRACTICES

**Success requires a common approach, built on strong science, speed and scale for delivery and practical solutions.** This needs to be widely adopted to provide a foundation for economic, social and environmental viability of the farming sector. The Climate principle is dependent on Water, Land and Soil, and Nature principles, as well as the Resource and Markets principle. Practices which support the best outcome for climate include:

- Implement the use of efficient farming practices; inputs and outputs management, soil health improvement, livestock solutions, and deforestation prevention, among others.
- Implement farming systems that increase on-farm biomass, both above and below ground, and create a significant greenhouse gas sink.
- Reduce the use of non-renewable sources of energy and increase the use of renewable sources of energy, and optimise the use of energy-intensive inputs, e.g. inorganic fertilisers.
- Manage all sources of emissions which affect air, noise and odour, such as manure storage, burning, agrochemical applications, dust, exhaust, machinery maintenance etc. to ensure minimal to no emissions.
- Drive energy efficiency to avoid wasting energy and increasing the use of renewable energy and fuels on-farm.
- Use innovative techniques to identify new carbon sink practices.



## CONTEXT

Agriculture and its associated land use changes account for 25% of all human influenced global greenhouse gas emissions<sup>1</sup>. **Agriculture not only drives climate change but is also directly affected by changes in water availability, increased frequency and intensity of weather events, and depletion of soil carbon needed for crop production.** Climate change impacts at farm and landscape levels increase global food insecurity and threaten farmer livelihoods, with far reaching impacts on human health and nutrition, human rights, and biodiversity.

## SUPPORTING THE SDGs



<sup>1</sup> IPCC, 2019: *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*. (also available at <https://www.ipcc.ch/site/assets/uploads/sites/4/2020/08/200730-IPCCJ7230-SRCL-Complete-BOOK-HRES.pdf>)





# Land and Soil



## PRINCIPLE

An agricultural sector that ensures land use is appropriate given the characteristics of the terrain, maintains soil fertility and health, prevents damage and provides benefits to the surrounding environment, and ensures the land acts a significant greenhouse gas sink.

## PRACTICES

Land and soil management is interdependent with the management of other principles, notably Nature, Water, and Climate as well as Communities, Resources and Markets, and Livelihoods. **Good land and soil management is important to ensure a farm's continued profitability and to protect long-term soil sustainability;** practices include:

- Assess land by taking into account the prior use of land e.g. historical/archaeological remains, topography and soil type, soil pollution issues or land change from forest to agricultural land, availability and quality of water resources, importance for biodiversity and surrounding ecosystems, pest disease and weed levels and potential impact of the production on adjacent crops and the adjacent area.
- Minimise land use change, unless supported by the findings of a land assessment.
- Promote healthy soils (high levels of microbial activity, higher levels of organic matter, and a good structure). Ways to retain, build and restore soil health include: no-till or reduced tillage; cover cropping; mulching; nutrient management; keeping the soil covered with plant material as much as possible; reducing soil disturbance; ensuring year-round plant cover; and using an appropriate crop rotation combined with cover crops.
- Sequester carbon by planting trees, shrubs, and perennial plants with deep root systems.
- Ensure choice of cultivation methodology takes into consideration soil type and topography, soil conditions, proximity to waterbodies, equipment limitations etc.
- Implement practices for retaining water and preventing soil erosion, through permanent perennial cover such as hedgerows, planting native grasses in marginal land, buffer strips, etc.
- Assess impact on the surrounding ecosystem and communities and identify co-beneficial activities which promote multiple positive outcomes, such as increased soil organic matter leading to improved biodiversity and reduced carbon footprint.
- Identify and implement innovative carbon sequestration techniques.



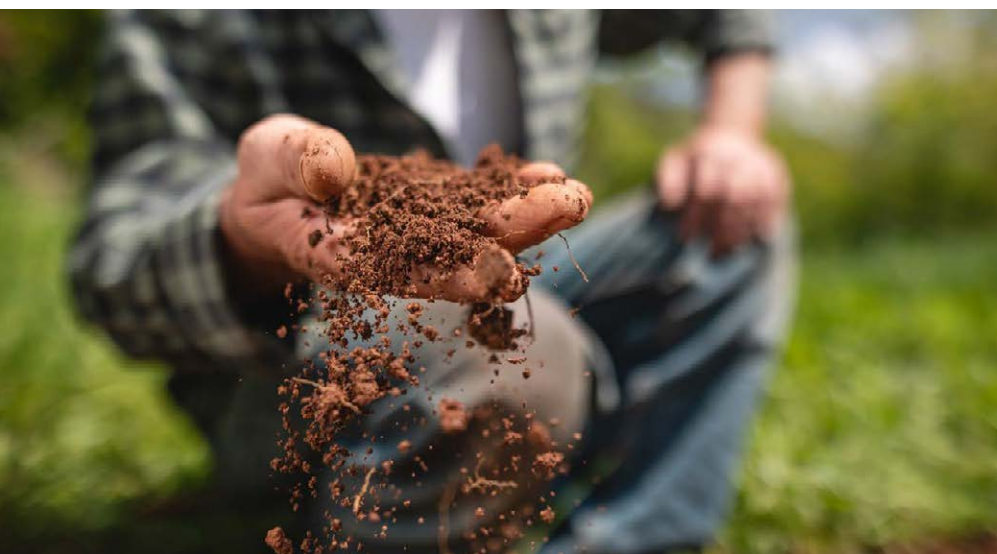
## CONTEXT

**Healthy soils support diverse communities of plants, animals, and soil biota, cycle nutrients, improve water and air quality, and maximise crop production.** Land dedicated to agriculture comprises 12% of global landmass, of which 25% is at risk of, or has already become, highly degraded<sup>1</sup>. Degraded land includes eroded soil, loss of fertility, and/or a loss of ecosystem function, as well as having a detrimental impact on the surrounding environment, for example decreased biodiversity, increased carbon emissions, and disruptions to the hydrological cycle and diminished water quality.

## SUPPORTING THE SDGs



<sup>1</sup> FAO. 2011. *The state of the world's land and water resources for food and agriculture (SOLAW) – Managing systems at risk.* Food and Agriculture Organization of the United Nations. Rome and Earthscan, London. (also available at <http://www.fao.org/3/i1688e/i1688e.pdf>)





# Nature



## PRINCIPLE

An agricultural sector that maintains and enhances the biodiversity of the area as well as surrounding ecosystems, promotes the health of pollinators, ensures diversity of genetic material (commercial and wild) and hinders invasive species.

## PRACTICES

Nature encompasses natural ecosystems as well as biodiversity on the farm and is intrinsically linked to Water, Land and Soil, Climate and Communities Principles. Practices which support nature include:

- Minimise deforestation and avoid deforestation in ecologically sensitive areas.
- Provide provisions for wildlife habitats and food sources.
- Enhance the environment for locally important, rare and endangered species by providing appropriate habitats.
- Minimise the negative impacts of operations such as use of agri-chemicals, ploughing, grass cutting and hedge cutting.
- Restore vegetation in degraded areas that have been prone to loss of fertility or soil erosion, preferably by using native species.
- Create biodiversity habitats that encourage natural enemies of pests and contribute to their control by biological rather than chemical means.
- Implement management systems that are adapted to local conditions.
- Ensure invasive species are not planted.
- Maintain and use genetically diverse plant material and livestock, as appropriate for the region and markets.
- Work with local communities to promote regional initiatives.
- Ensure awareness and protection of endangered species, by training farmer, workers and the local community.



## CONTEXT

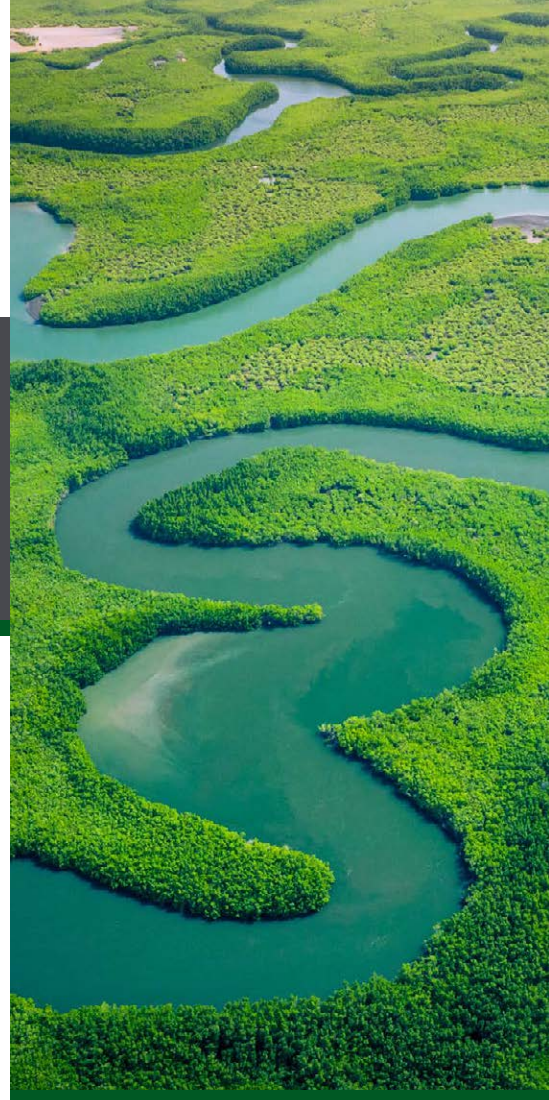
Agriculture is both a beneficiary and provider of biodiversity and related ecosystem services. **Diverse, healthy agricultural landscapes provide habitat to flora and fauna, purify air and water, and provide climate change mitigation and carbon sequestration.** In turn, agriculture benefits from soil erosion control, important services from wildlife such as pollination and pest management, and a source of genetic diversity for plants and livestock, as well as food, fuel, fibre, water, and medicinal resources.

## SUPPORTING THE SDGs





# Water



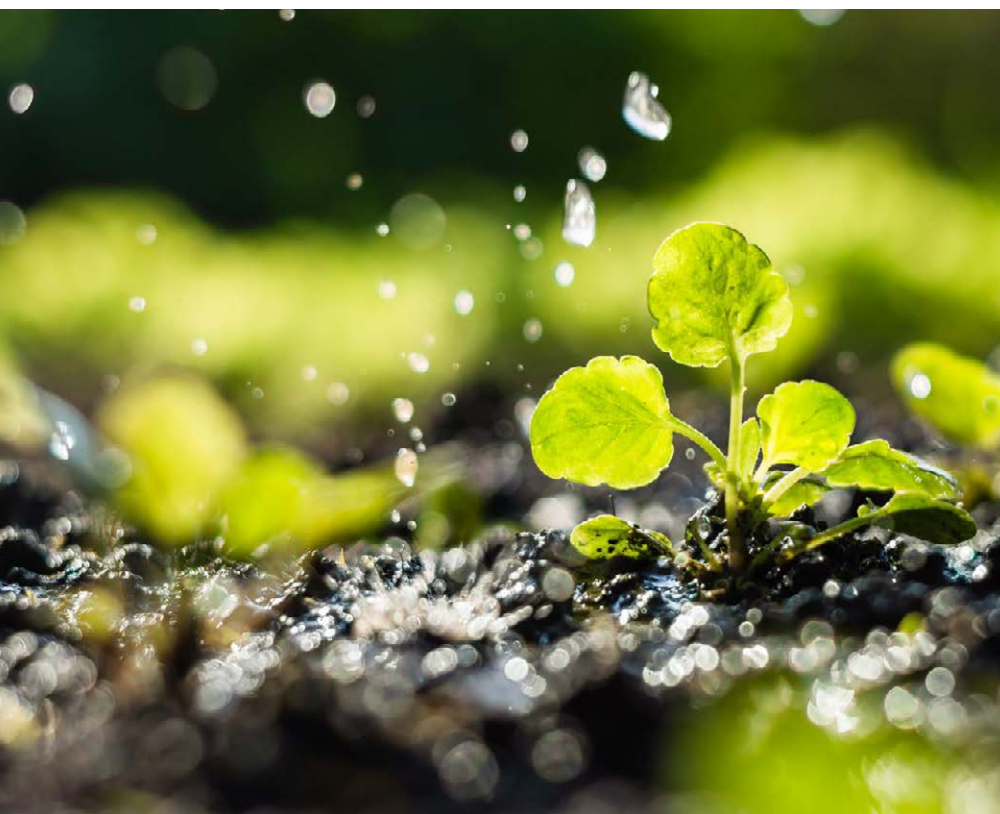
## PRINCIPLE

An agricultural sector that ensures water resources are optimally managed; water balance is maintained for the catchment, water runoff and pollution is minimised, water is managed for economic benefit, and equitable access to water is assured for all users (human and wildlife).

## PRACTICES

**Water management is interlinked with and can support positive outcomes for several principles**, including Nature, Land and Soil, Resources and Markets, and Working and Living Conditions. Practices which support water stewardship include:

- Properly manage and optimise water use.
- Manage water use in line with the recharge capacity of the watershed/catchment.
- Use cropping systems which are sympathetic to the regional water availability.
- Only use irrigation when it can enhance the yield and quality of crops produced and provide economic benefit.
- Install the best available water delivery system.
- Properly manage the use of inputs and release of wastewater in surrounding water sources.
- Protect surface and ground water from direct and indirect pollution.
- Ensure access to clean drinking water and availability of water for sanitation and hygiene for farmers, workers and their families if living on farm.
- Ensure appropriate storage and application of inputs including manure, to avoid pollution and runoff.
- Ensure appropriate management techniques to avoid soil loss into waterbodies.



## CONTEXT

### **Water is vital to productive agriculture.**

Irrigation from ground and surface waters (specifically rivers, lakes, and aquifers) accounts for 70% of water usage by human activity; however unsustainable use of aquatic resources, as well as the introduction of agri-chemicals to waterways, contributes to increasing global water shortages and diminished quality of water resources<sup>1</sup>. Climate change causes additional strain to agricultural systems by increasing the frequency and intensity of extreme weather events, such as prolonged rainfall and drought.

## SUPPORTING THE SDGs



<sup>1</sup> FAO. 2011. *The state of the world's land and water resources for food and agriculture (SOLAW) – Managing systems at risk.* Food and Agriculture Organization of the United Nations. Rome and Earthscan, London. (also available at <http://www.fao.org/3/I1688e/I1688e.pdf>)



# Communities



## PRINCIPLE

An agricultural sector that supports resilient farming communities, by contributing to the local economy, ensuring land conversion does not result in forced resettlement, fair use of shared resources, respecting traditional land use and land rights, building trust throughout the value chain and supporting next generation farming.

## PRACTICES

**Supporting resilient farming communities is fundamental to long-term sustainability** and is linked to the Livelihood Principle as well as Working and Living Conditions. Practices which support communities include:

- Ensure activities provide, where possible, economic benefits to local communities.
- Build trust amongst all actors in the value chain.
- Support collaborative efforts with the local community, such as education and training, infrastructure development, and catchment approach to environmental challenges.
- Support local efforts in recruitment of permanent and temporary workers.
- Identify and address any conflicting resource use demands (e.g. land or water).
- Ensure any land conversion does not require forced resettlement or negatively impact the community.
- Respect the traditional land use of the area and ensure land rights are recognised.
- Contribute to efforts that encourage and support young and diverse farmers.



## CONTEXT

The rural, often isolated, nature of farming creates specific challenges. Farming communities are often limited in their access to education, healthcare, and mental health resources. Conflicts arise between cultural groups when land is obtained through involuntary resettlement or coercion, and/or communities are no longer able to access land that is relevant for cultural practices. Increasingly, youth are choosing to move from rural to urban areas, especially where barriers to entering the agricultural sector exist. **Growing the agricultural workforce and ensuring long-term sustainability of farming communities is contingent upon improving labour conditions and livelihoods, creating mutually respectful relationships with indigenous communities, and strengthening financial and entrepreneurial resources.**

## SUPPORTING THE SDGs



SUSTAINABLE AGRICULTURE  
PRINCIPLES & PRACTICES





# Legal Compliance



## PRINCIPLE

An agricultural sector that ensures legal requirements are well understood and complied with, including local, regional, national legislation as well as international conventions.

## PRACTICES

**Legal compliance is the foundation for long-term agricultural sustainability.**

Practices which support legal compliance include:

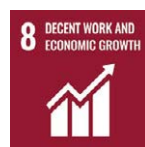
- Ensure all applicable legal requirements are understood by farmers as well as farm workers.
- Provide training to farmers and workers on the full range of applicable legislation.
- Review farm activities to assess and confirm compliance.
- Avoid working with organisations who do not act in compliance with the law.
- Remain up to date on legislative changes and take steps to remain compliant as requirements change.
- Ensure awareness of and compliance with applicable international conventions.



## CONTEXT

**Agricultural activities have become increasingly regulated as the environmental and human health impacts resulting from agricultural activities have become more widely understood.** Legislation addresses most agricultural activities, with topics ranging from food safety to environmental protection, health and safety and human rights. National and local legislation protect the priorities of local communities and ecosystems and vary greatly across regions. International conventions and treaties create consistency among countries on specific topics. These include, but are not limited to, the Rotterdam Convention, The Stockholm Convention, The International Treaty on Plant Genetic Resources for Food and Agriculture, and the European Convention on Human Rights.

## SUPPORTING THE SDGs





# Livelihoods



## PRINCIPLE

An agricultural sector that ensures farm livelihoods support a thriving agricultural economy, by providing a living wage to workers and ensuring availability of living income and financial investment options for farmers.

## PRACTICES

**Supporting farmer livelihoods is critical to the longer-term sustainability of the agricultural sector** and is intrinsically linked to the Resources and Markets principle as well as Living and Working Conditions. Good practices which improve livelihoods include:

- Provide payments which meet the living wage and living income levels for the region.
- Collaborate with organisations in the region to develop and implement living wage and income frameworks.
- Provide access to financial support and investments, directly or through partnerships with organisations and companies.
- Support farmers in creating the financial stability and record keeping required for many financial institutions.
- Identify opportunities and implement steps for business development, innovation and expansion.



## CONTEXT

Agriculture is the single largest employer in the world; however, employment for farm workers in much of the world is precarious and does not provide a living wage. Labour is one of the key issues facing farm viability. Farmers frequently rely on income that does not meet living income levels and/or must work untenable hours to make sufficient income. They may also lack access to financial supports, land, credits, and markets, and therefore face a decreased ability to manage risks and implement sustainable practices.

**The economic stability of farmer and farm workers is fundamental to the long-term sustainability of the sector.**

## SUPPORTING THE SDGs





# Resources and Markets



## PRINCIPLE

An agricultural sector that ensures the efficient use of resources and fair and effective markets, creating resilient farm businesses and supply chains that are able to adapt to changing markets and resource availability.

## PRACTICES

**Resource efficiency, productivity and market effectiveness are strongly linked to the Livelihoods principle.** Practices which support resource use efficiency, productivity and market stability include:

- Ensure availability of required resources to produce efficiently, at a fair price.
- Track and optimise input use, including fertilisers, pesticides, manure, water, labour. Focus on productivity.
- Assess use of inputs with respect to yields, profitability and quality to identify areas for improved efficiency and to meet market requirements.
- Facilitate and make use of available technology, including remote sensing etc.
- Drive innovation, including genetics, machinery, training, inputs etc.
- Use regionally appropriate plants and livestock, allowing for greater efficiencies in water, land and other resources, and aligned to labour requirements and availability.
- Assess resource efficiency using a whole farm approach, taking into account aspects such as equipment and labour requirements etc.
- Create efficient supply and demand, by implementing mutually beneficial supply agreements and communicating farm production levels as well as updates in supply chain demand.
- Ensure quality requirements are clearly communicated and measures to meet the requirements are implemented.
- Facilitate the establishment of farmer cooperatives and associations, where appropriate.
- Support the development of circular economies, which ensure waste becomes a co-product.

## CONTEXT

**Sustainability of the agricultural sector requires access to sufficient resources and efficient use of resources, including elimination of waste.** Agricultural resources range from inputs such as fertilisers and agri-chemicals, animal feed, medicines and feed additives, to land and equipment, financial and legal services, insurance, labour, and plants and livestock. Market access is fundamental to the stability of agricultural economy and is strongly influenced by the fairness and effectiveness of the supply chain.

## SUPPORTING THE SDGs





# Health and Safety



## PRINCIPLE

An agricultural sector that supports the health and safety of farmers, farm workers and their families, and nearby communities.

## PRACTICES

**Health and Safety is strongly linked with the Working and Living Conditions Principle.**

Practices which support health and safety include:

- Provide effective instructions and take measures to protect the health and safety of farmers, farm workers and nearby communities, particularly those who handle or are exposed to agrochemicals.
- Ensure all those working with livestock are well-trained and capable of managing the risks.
- Ensure facilities and equipment are adequate for worker safety, most notably those related to livestock and agri-chemical management.
- Provide personal protective equipment appropriate to the tasks and conditions.
- Ensure tasks are allocated and undertaken as appropriate for capabilities and training.
- Construct storage facilities to minimise risks to the environment and human health.
- Actions should be promoted which help prevent accidents and injuries of farmers and farm workers during their duties.
- Provide first aid/medical training to sufficient personnel to ensure access to first aid is always available to those working on farm.
- Promote activities for the prevention of diseases, such as vaccination programmes.
- Ensure access to medical treatment is available.

## CONTEXT

**Agriculture is one of the top three most dangerous sectors in the world, accounting for over half of all workplace accidents globally every year.** Nearly 50% of the global workforce is engaged in agricultural work, and is exposed to many risks including heavy machinery, livestock management, physically demanding and repetitive labour conditions in variable weather and challenging terrain, and exposure to dust and toxins (including fertilisers, pesticides, and fuels). Risks for farmers and farm workers living in rural and/or developing areas are exacerbated by limited access to healthcare and education, lack of support systems for workplace health and safety, and less stringent regulations<sup>1</sup>.

## SUPPORTING THE SDGs



<sup>1</sup> ILO 2003. *Decent work in agriculture*. Labour Education 2003/2-3 No. 131-132. (also available at [https://www.ilo.org/wcmsp5/groups/public/---ed\\_dialogue/---actrav/documents/publication/wcms\\_111457.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---actrav/documents/publication/wcms_111457.pdf))





# Working and Living Conditions



## PRINCIPLE

An agricultural sector that ensures human rights are respected, by providing a pleasant working environment, free from forced or the worst forms of child labour, any type of discrimination<sup>1</sup> and disciplinary practices<sup>2</sup>, work is appropriately compensated and managed, and access to suitable sanitary, housing and transportation infrastructures and services for farmers, farm workers and their families.

## PRACTICES

**Human rights are the foundation for healthy working and living conditions.**

There is a strong link with the principles of Health & Safety, Livelihoods, Water and Legal Compliance. They all are inter-related and practices should be mutually beneficial. Practices which support human rights and positive working and living conditions include:

- Implement systems to ensure there is no forced or bonded labour, coercion, harassment, or discrimination in any form against farmers or workers.
- Support the education of farmers and farm workers and seek to ensure children have access to adequate education.
- Ensure there is no discrimination based on ethnic groups, national origin, religion, disability, gender, sexual orientation, worker organisations or political affiliation.
- Instil the same rights and obligations for women and men, while being sympathetic to local cultural practices.
- Protect workers' rights to associate, organise, and collectively bargain and provide access to grievance mechanisms.
- Ensure, as a minimum, payment of legal minimum wage or wages negotiated collectively, including overtime pay, as well as equal remuneration for equal work between men and women.
- Provide potable water for workers, and their families if living on farm.
- Provide suitable sanitary, housing and transportation infrastructures and services for employees and their families, when living on the farm.
- For cultural and socio-economic reasons, children under the minimum working age referred by national laws may help their parents on farm. It shall be ensured that they are not forced to work, do not work long hours and are not exposed to hazardous or heavy work. Work should not prevent children from attending school or other forms of education.
- The individual situation of the children involved should be considered in relation to all actions implemented to eliminate the worst forms of child labour. All measures taken shall be designed to improve the living conditions of the individual child. Young workers under the age of 18 should not be exposed to situations in the workplace that are hazardous, unsafe or unhealthy, even more so than any other workers.

## CONTEXT

Most agricultural workers live in rural areas, a setting that often exacerbates gender inequalities and limits access to clean water, sanitation, education, and safe and equitable work. Sixty percent of child labour is found in agriculture, and the agricultural workforce continues to face some of the most precarious and dangerous working conditions in the world<sup>3</sup>. **Improving working and living conditions for agricultural workers has the potential to impact millions of lives globally and create a more resilient, thriving agricultural sector.**

## SUPPORTING THE SDGs



1 as per ILO Convention 111 on Discrimination and ILO Convention 100 on Equal Remuneration.  
2 as per the Universal Declaration of Human Rights.  
3 ILO. 2017. *Global estimates of child labour: Results and trends, 2012–2016*. Geneva. (also available at [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms\\_575499.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_575499.pdf))





# Animal Welfare



## PRINCIPLE

A sector that ensures welfare of livestock by adhering to the Five Freedoms<sup>1</sup>, and promotes animal health and natural behaviour.

## PRACTICES

Animal welfare includes good stockmanship and husbandry (breeding and animal care) and the principles of good housing, feeding, health and appropriate behaviour and good breeding to both deliver and safeguard welfare. Practices which promote animal welfare include:

- Eliminate the worse systems and practices, such as dehorning, teeth clipping and tail docking, disbudding and castration / female spaying without anaesthetic and analgesia, veal crates and single penning of calves, tethering of dairy cows, gestation crates for sows (stalls), caged systems for poultry, etc.
- Avoid the use of animal production systems which promote rapid-growth practices, overuse of antibiotics, breeding for high production traits that do not support good animal welfare and health outcomes and rearing animals in barren environments.
- Implement non-confinement systems, including pasture access for cattle; group housing and free farrowing for pigs; barn and free-range systems for poultry.
- Ensure good system design, including increased space allowances, the provision of functional space and comfortable, enriched environments.
- Develop and implement proactive veterinary health plans, including robust antibiotic stewardship schemes.
- Measure welfare outcomes and implement action plans to continuously improve welfare.



## CONTEXT

The treatment of animals reared for human food provision is largely determined by what society judges to be acceptable based on ethics, morals, resource efficiency, productivity, human nutrition implications, market demand, and general sustainability concerns.

**Providing humane living conditions for livestock is not only considered morally right, but also contributes to healthier animals and more productive livestock systems.**

## SUPPORTING THE SDGs

There are no SDGs that refer to animal welfare.

<sup>1</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4810049/>





The Sustainable Agriculture Initiative Platform (SAI Platform) is a global food and drink industry platform for developing sustainable agriculture solutions through member-driven pre-competitive collaboration. SAI Platform connects members and external stakeholders to catalyse change and establish sustainable agriculture as a pre-requisite for doing business throughout the food and drink supply chain.

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