ProTerra Regenerative Agriculture Module (***ProTerra Regenera***)

Version 1.o – July 2025

Introduction

Regenerative agriculture is a farming approach that aims to improve soil health and biodiversity of the soil, enhance ecosystems and biodiversity in general, and conserve water resources. It helps to make farms more resilient to climate change and supports business development while also helping the production of healthy and nutritious food.

Unlike conventional farming, which is often associated with soil degradation and a high reliance on chemical inputs, such as pesticides and fertilisers, regenerative agriculture seeks to avoid or minimise the use of such inputs. Instead, it promotes a range of practices aimed at restoring and maintaining ecological balance. These include cover cropping, reduced or no-tillage systems, efficient irrigation and water management, and integrated pest and nutrient management.

ProTerra Standards, specifically the *ProTerra Standard for Social Responsibility and Environmental Sustainability version 5.0* (or **PT V5**) and the *ProTerra Monitoring and Verification Standard version 1.0* (or **PT MRV**), already incorporate several requirements that align with regenerative agricultural practices. However, this add-on module has been developed to provide additional support for the adoption and scaling up of regenerative practices and to help organisations strengthen their commitment to regenerative agriculture.

The purpose of this document and module is to define the additional parameters required for the implementation of regenerative agricultural practices.

Contributing to climate change mitigation

Climate change is one of the most significant challenges facing our society today. The ProTerra Foundation is committed to supporting initiatives in the feed and food sector that reduce greenhouse gas emissions (GHG), mitigate the impact of climate change and promote adaptation.

Regenerative agriculture, through its holistic farming approach, contributes directly and significantly to climate change mitigation by improving soil health, biodiversity, and water management. In short, regenerative agriculture transforms farmland from a net emitter to a net absorber of greenhouse gases, offering one of the most promising nature-based solutions to climate change.

To our understanding, many of the elements that support the reduction of GHG emissions in agricultural activity are already covered by ProTerra certification and verification. More specifically, there are requirements to minimise the use of non-renewable energy and to adopt sustainable agricultural production practices, such as reducing the use of chemical fertilisers, banning the burning of agricultural residues, and encouraging the use of cover crops and crop rotation, among others. In the context of ***ProTerra Regenera***, requirements

relating to climate change are present throughout the practices associated with the three ***ProTerra Regenera*** Principles. Key practices are highlighted in Appendices A and B.

Applicability

The ProTerra Regenerative Agriculture Module (***ProTerra Regenera***) applies to any ProTerra Level I economic operator (i.e. farm) that is seeking certification under PT V5 or verification under PT MRV. During the PT V5 or PT MRV audits, the Certification Body (CB) will conduct additional activities to verify compliance with ***ProTerra Regenera***, if requested by the economic operator[1].

When farms are part of an economic operator's supply chain seeking ProTerra Regenera Module compliance, farm assessments are conducted based on the same sampling strategy applied for PT V5 or PT MRV, depending on the applicable standard. In this case, the economic operator shall support its suppliers in implementing and monitoring the farms' KPIs (Key Performance Indicators). For smallholders, the approach may include, among others, developing a distinct set of KPIs, as well as implementing training programmes and providing technical assistance to increase the capabilities of smallholder farmers, especially in relation to alternative agronomic practices.

The specific Audit Protocols (PT V5 or PT MRV) apply in full. The Guidelines and Requirements for the Use of the ProTerra Logo and Seals also apply in full.

Recognition as a ***ProTerra Regenera*** verified farm is granted based on the level of maturity of the regenerative agricultural practices implemented, and is divided into three levels:

- **Bronze level** – an organisation that meets all the core[2] requirements and at least 30% of the non-core requirements.
- **Silver level** – an organisation that meets all the core[2] requirements and at least 60% of the non-core requirements.
- **Gold level** – an organisation that meets all the core[2] requirements and at least 80% of the non-core requirements.

Under the ***ProTerra Regenera*** approach, farms that do not fall into these categories are considered to practice conventional agriculture. The following practices/aspects mean that farms are not eligible for a ***ProTerra Regenera*** verification:

- Deep tilling practices (>30cm depth);
- Destruction of riparian zones;
- Burning for land clearance or harvesting;
- Deforestation is defined under PT V5 or PT MRV, according to the definition associated with the standard that the organisation has applied for.;
- Use of banned or illegal pesticides;
- Lack of specific KPIs; and
- Lack of adoption of the continuous improvement approach.

[1] Note that when hiring the services of a CB the desire to certify against ***ProTerra Regenera*** must be indicated by the Economic operation so that the CB can adequality plan the timing and costs of the audits.
[2] Core requirements under PTV5 are also core requirements under ***ProTerra Regenera.*** Under PT MRV, those that are core for the sake of ***ProTerra Regenera*** will be clearly indicated herein.

Principles and Requirements

ProTerra Regenera is based on three Principles that are connected to the three key resources of any agricultural system: soil, water, and biodiversity. ***ProTerra Regenera*** acknowledges that all principles are interconnected and that action in one system can trigger improvement in others. For example, reducing soil erosion can also contribute to improved surface water quality by reducing sediment runoff. There are also many synergies between systems that have positive impacts in other areas, such as reducing GHG emissions. Techniques associated with regenerative agriculture can also improve the resilience of farmland to climate change, thus contributing to improved farmers' livelihoods and food security.

ProTerra Regenera Principles

Principle 1- Soil Health

Good agricultural practices are fundamental to maximise the benefits of agricultural activity while minimising negative impacts on the environment, workers and neighbouring communities. This Principle aims to support organisations to maximise soil health while reducing and optimising the use of agricultural inputs, especially the use of pesticides, and other toxic/polluting materials. This Principle is embedded in the continuous improvement approach. Healthy soil is a powerful carbon sink. Regenerative farming practices such as cover cropping, no-till farming, and compost application increase soil organic matter, enhancing the soil's ability to absorb carbon dioxide (CO_2) from the atmosphere.

Improved soil biology (e.g., mycorrhizal fungi, bacteria) boosts nutrient cycling and carbon stabilisation, locking carbon in stable soil aggregates.

Ground cover and reduced tillage minimise soil erosion, thereby maintaining carbon-rich topsoil and preventing CO_2 release.

Principle 2- Water Management

Water is a scarce resource in many parts of the world. It is also a resource under constant threat of contamination and misuse. This Principle aims to ensure the responsible use of water by preserving and ensuring quality and quantity of local water resources and protecting them from contamination. This Principle is embedded in the continuous improvement approach. Efficient water use and retention help to reduce climate vulnerability and emissions. Healthy soil with a high organic matter content can hold more water, thereby reducing runoff and irrigation needs. Less irrigation means less energy use, especially in pumped systems.

Regenerative practices buffer farms against extreme weather effects by improving water availability, reducing the risk of crop failure and the need for emergency responses, which often carry carbon costs.

On-farm restoration of valuable ecosystems or zones can sequester carbon and methane and act as natural water filters.

Principle 3 - Biodiversity preservation and enhancement
This Principle seeks to eradicate the clearing of high conservation value areas (HCV) for agricultural use and to enhance biodiversity. This Principle is also embedded in the continuous improvement approach. Biodiverse systems are more resilient and better at regulating greenhouse gases. Polycultures and crop rotations increase root biomass and soil carbon storage while reducing reliance on synthetic fertilisers, which are energy-intensive to produce. Biodiverse farms support pollinators and pest predators, thereby reducing the need for chemical inputs (pesticides, herbicides) and associated emissions.

Appendix A outlines the set of ***ProTerra Regenera additional*** requirements for organisations undergoing a PT V5 certification audit. **Appendix *B*** outlines the set of ***ProTerra Regenera*** additional requirements for organisations undergoing a ProTerra MRV verification audit.

ProTerra Regenera aims to be results-oriented and therefore driven by measurable outcomes that will ultimately lead to improved soil and water quality, enhanced biodiversity in a farm area and reduced GHG emissions. Thus, defining and maintaining KPIs is fundamental, as is applying the concept of continuous improvement.

Because ***ProTerra Regenera*** applies to any location around the world, different soil characteristics, weather patterns and different socioeconomic realities exist. Additionally, it can be used for any crop. For these reasons, it is not possible to define absolute quantitative indicators that make sense to all potential users of the ProTerra Standards. Each organisation must therefore define its own set of KPIs based on plausible, realistic and technically sound aspects. Consistency of the KPIs defined by the organisation will be confirmed during the first verification audit by the CB. Inadequate KPIs may result in non-compliance, which must be corrected for the next audit cycle if the farm is to remain in the ***ProTerra Regenera*** programme.

Appendix A - *ProTerra Regenera additional* requirements for organisations undergoing a PT V5 certification audit

This Appendix outlines the additional (add-on type) requirements associated with ***ProTerra Regenera*** for economic operators seeking certification under PT V5. In practice, this means that all ProTerra V5 requirements are applicable, but add-ons have been defined to permit recognition also under ***ProTerra Regenera***. An add-on can be either specific guidance associated with a PT V5 indicator or a new requirement.

Core requirements under PT V5 are also core requirements under ***ProTerra Regenera***. The table below shows the status of new requirements.

Principle 1- Soil Health
1) PT V5 Indicator 1.2.1 - Continuous improvement KPIs should be defined and maintained, and improvements should include aspects relating specifically to **soil health**.
2) PT V5 Indicator 9.3.1 Organisations must be able to demonstrate the application of at least **three (3)** of the techniques described in the guidance, such as cover crops, management of crop succession and rotation, precision farming, residue management, no-tillage, contour tillage, grass waterways, terraces, nitrogen-fixing plants, green manure and agroforestry techniques. Alternatively, organisations can demonstrate the application of equivalent techniques for protecting soil quality. KPIs should be defined and maintained. In the initial certification, at least the **30%** of the total cultivation area should be aligned with this requirement. Note that these practices also contribute to the reduction of climate change impacts.
3) PT V5 Indicator 9.3.3 Monitoring and record-keeping of the parameters indicated in the guidance are mandatory: N, P, K, soil organic matter (SOM) and soil organic carbon (SOC). KPIs should be defined and maintained. Sampling is required at least at least every **two years.**
4) PT V5 Indicator 9.3.4 Organisations must be able to demonstrate the application of at least **two (2)** of the techniques described in the guidance, such as deep rooting of green crops; mulching; using low-pressure tyres, following contours in soil preparation operations, using terraces, minimising tillage and placing windbreaks, or other techniques demonstrated to be equivalent in preventing desertification and erosion. KPIs should be defined and maintained. In the initial certification, at least the **30%** of the total cultivation area should be aligned with this requirement. Note that these practices also contribute to the reduction of climate change impacts.
5) PT V5 Indicators under Criteria 6.2 - Management and appropriate disposal of non-hazardous waste KPIs should be defined and maintained.
6) **Non-Core** - Organisations shall monitor and make data and information available for Soil Sampling: Bulk Density, pH, and Total soil microbial biomass.
7) **Core** - Organisations shall demonstrate an improvement in terms of % in soil organic matter over time (this improvement can be waived during the first 3 years of certification).

During the period for which the waiver applies to this indicator, the organisation cannot be classified as silver or gold under ***ProTerra Regenera*.** Note that this is key to contribute to the reduction of climate change impacts.
8) **Core** - Organisations shall develop and implement a nutrient management plan. KPIs should be defined and maintained.
9) **Non- core** - Organisations shall provide for full ground cover in high erosion risk areas (steep slopes for example) or during periods of high erosion risks (rainy season, for example).
10) **Core** - Organisations shall reduce the use of inorganic fertilisers. KPIs should be defined and maintained (a reduction can be waived during the first 3 years of certification). During the period for which the waiver applies to this indicator, the organisation cannot be classified as silver or gold under ***ProTerra Regenera*.** Note that these practices also contribute to the reduction of climate change impacts.
11) **Non-Core -** Integrating livestock into farm area. This provides an opportunity to improve nutrient cycles. Manure and its application must be properly managed. Overgrazing should be avoided and integrated pasture management and grazing strategies should be defined.
Principle 2- Water Management
12) PT V5 Indicator 1.2.1 - Continuous improvement KPIs should be defined and maintained, and improvements should include aspects relating to **water management.**
13) Indicators 6.1.3 and 6.1.4 (related to effluent discharge and runoff): KPIs should be defined and maintained.
14) **Non-Core** - Surface water bodies in the farm area shall be monitored for their quality. KPIs should be defined and maintained.
15) -**Non-Core** - KPIs for water reuse should be defined and maintained.
Principle 3 - Biodiversity preservation and enhancement
16) PT V5 Indicator 1.2.1 - Continuous improvement KPIs should be defined and maintained, and improvements should include aspects relating to **biodiversity preservation and enhancement**.

Appendix *B* - *ProTerra Regenera additional* requirements for organisations undergoing a PT MRV verification audit

This Appendix outlines the additional (add-on type) requirements associated with ***ProTerra Regenera*** for those economic operators seeking verification under PT MRV. In practice, this means that all PT MRV requirements are applicable, but add-ons have been defined to permit recognition also under ***ProTerra Regenera***. These add-ons can be either specific guidance associated with a PT MRV indicator or a new requirement.

The table below shows the status of new indicators, as well as MRV indicators that are to be considered core under **ProTerra Regenera**.

Principle 1- Soil Health
1) PT MRV Indicator 4.3.1 is **Core** under ***ProTerra Regenera*.**
2) PT MRV Indicator 4.3.6 is **Core** under ***ProTerra Regenera***. In relation to this indicator, organisations must be able to demonstrate the application of at least **three (3)** of the techniques described in the requirement, such as precision farming, residue management, crop rotation, no-tillage, contour tillage, grass waterways, terraces, nitrogen-fixing plants, green manure and agroforestry techniques. Alternatively, organisations demonstrated the application of equivalent techniques for protecting soil quality. KPIs should be defined and maintained. In the initial verification, at least the **30%** of the total cultivation area should be aligned with this requirement. Note that these practices also contribute to the reduction of climate change impacts.
3) PT MRV Indicator 4.3.7 is **Core** under ***ProTerra Regenera***. In relation to this indicator, organisations must be able to demonstrate the application of at least **two (2)** of the techniques described in the requirement, such as following contours with operations for soil preparation, using terraces or cover crops, minimising tillage and placing windbreaks. Alternatively, organisations demonstrated the application of equivalent techniques for avoiding erosion. KPIs should be defined and maintained. In the initial verification, at least the **30%** of the total cultivation area should be aligned with this requirement. Note that these practices also contribute to the reduction of climate change impacts.
4) PT MRV Indicator 4.3.9 is **Core** under ***ProTerra Regenera*.**
5) PT MRV Indicator 4.3.11 is **Core** under ***ProTerra Regenera*.**
6) PT MRV Indicator 4.3.12 is **Core** under ***ProTerra Regenera*.**
7) PT MRV Indicator 4.3.13 is **Core** under ***ProTerra Regenera*.**
8) PT MRV Indicator 4.3.14 is **Core** under ***ProTerra Regenera*.**
9) PT MRV Indicator 4.3.16 is **Core** under ***ProTerra Regenera***
10) PT MRV Indicator 4.3.17 is **Core** under ***ProTerra Regenera***

11) **Core** - Continuous improvement KPIs should be defined and maintained, and improvements should include aspects relating to **soil health.**
12) **Core** - Soil shall be monitored for N, P, K, soil organic matter (SOM) and soil organic carbon (SOC). KPIs should be defined and maintained. Sampling is required at least at least every **two years.**
13) **Core** - Organisations shall monitor and make data and information available for Soil Sampling: Bulk Density, pH, and total soil microbial biomass.
14) **Core** - Organisations shall demonstrate improvement in terms of % in soil organic matter over time (this improvement can be waived during the first 3 years of verification). During the period for which the waiver applies to this indicator, the organisation cannot be classified as silver-or gold under ***ProTerra Regenera*.** Note that this is key to contribute to the reduction of climate change impacts.
15) **Core** – Organisations shall develop and implement a nutrient management plan. KPIs should be defined and maintained.
16) **Non-Core** - Organisations shall provide for full ground cover in high erosion risk areas (steep slopes for example) or during periods of high erosion risks (rainy season, for example).
17) **Core** – Organisations shall reduce the use of inorganic fertilisers. A reduction can be waived during the first 3 years of verification. KPIs should be defined and maintained. During the period for which the waiver applied to this indicator, the organisation cannot be classified as silver or gold under ***ProTerra Regenera*.** Note that this is key to contribute to the reduction of climate change impacts.
18) **Core** – Organisations shall reduce the use of pesticides. A reduction can be waived during the first 3 years of certification. KPIs should be defined and maintained. During the period for which the waiver applies to this indicator, the organisation cannot be classified as silver or gold under ***ProTerra Regenera*.**
19) **Non-Core** - Integrating livestock into farm area. This provides an opportunity to improve nutrient cycles. Manure and its application must be properly managed. Overgrazing should be avoided and integrated pasture management and grazing strategies should be defined.
Principle 2- Water Management
20) PT MRV Indicator 4.3.5 is **Core** under ***ProTerra Regenera*.**
21) **Core** - Continuous improvement KPIs should be defined and maintained, and improvements should include aspects relating to **water management.**
22) **Non-Core** - Surface water bodies in the farm area shall be monitored for their quality. KPIs should be defined and maintained.
23) **Core** - Verified organisations shall discharge sewage /effluents in a way that it does not pollute the water, contaminate the soil or crops with chemicals, heavy metals, by-

products, excess nutrients or pathogens or otherwise cause harm. Raw sewage shall not be used to irrigate crops. KPIs should be defined and maintained.
24) **Core** - Verified organisations shall conserve the quantity and quality of existing natural water resources around their facilities, such as lakes, rivers, artificial lakes, dams, water tables and aquifers. Organisations shall also avoid creating or aggravating water scarcity situations. KPIs should be defined and maintained.
25) **Core** - Verified organisations shall implement best practices for water conservation and avoidance of contamination of surface and groundwater. When irrigation is used, effective measures shall be implemented to ensure efficient irrigation and compliance with relevant regulations. The use of irrigation water shall be controlled in order to avoid soil salinisation. KPIs should be defined and maintained.
26) **Non-Core**- KPIs for water reuse should be defined and maintained.
Principle 3 - Biodiversity preservation and enhancement
27) PT MRV Indicator 4.2.1 is **Core** under ***ProTerra Regenera.***
28) PT MRV Indicator 4.2.2 is **Core** under ***ProTerra Regenera.***
29) PT MRV Indicator 4.2.3 is **Core** under ***ProTerra Regenera.***
30) PT MRV Indicator 4.2.5 is **Core** under ***ProTerra Regenera.***
31) PT MRV Indicator 4.2.6 is **Core** under ***ProTerra Regenera.***
32) PT MRV Indicator 4.2.8 is **Core** under ***ProTerra Regenera.***
33) **Core** - Continuous improvement KPIs should be defined and maintained, and improvements should include aspects relating to **biodiversity preservation and enhancement**.