Agreena

The Global challenge that continues to grow

The globe is facing the enormous challenge of addressing our emissions and our impact on the climate and ecosystem processes. As per IPCC (2021), food, agriculture, and land-use account for 24%[1] of global Green House Gas (GHG) emissions. In recent years, there has been growing evidence that rather than being a source of emissions, agricultural lands can be managed so that they become an emissions sink, potentially storing up to 6.8GtCO2eq[2] per year (Roe et al., 2019), which is equivalent to removing about 5.4 billion cars off the road annually (EPA, 2021).

To achieve the above potential, the agricultural industry must overcome two key barriers:

The financial barrier

The financial barrier of requiring new equipment purchases.

The educational barrier

The educational barrier relating to new practices such as cover cropping, tillage systems or crop rotations.

With the Paris Agreements' commitment to transition to a greener economy and ensuring alignment upon CO2eq as an umbrella measurement unit, there is now a great market potential in agricultural land based CO2eq certificates.

AgreenaCarbon: Supporting farmers to farm for the Climate

AgreenaCarbon (AC) is a leading European certificate programme that supports the farmers and the overall agricultural industry through the development of a carbon certificate payment programme, in which verified carbon removals and reductions are represented through the generation of carbon certificates. Certificates are a purchasable commodity that represents 1000kg (1 tonne) of CO2eq removals and reductions, for the use of insetting or offsetting emissions. When used for offsetting, companies must have a pathway towards reduction or elimination of their own Scope 1, 2 and 3 emissions[3].

AgreenaCarbon certificates go beyond just supporting Sustainable Development (SDG) Climate Action Goal 13 and Life On Land Goal 15. Through supporting improved soil health, our certificates directly target Zero Hunger (SDG 2). Additionally, actions that improve nutrient deficiencies in plants will indirectly target human health (SDG targets 3.1, 3.2) and overall food security (SDG target 2.1).

Within the voluntary carbon market, our Programme provides a comprehensive framework that will work in parallel to government action to address Climate (SDG target 13.2), land degradation neutrality (SDG target 15.3), and hunger (SDG target 2.4). Through purchasing our Certificates, it will assist in building a stronger network of sustainable practitioners who will be essential advocates for the transition within the industry.

Seeking to address the concerns of uncertainty in outcomes and practice within the Agricultural community, the Programme has developed an online platform-integrated learning system to assists farmers in achieving their greatest potential. To further strengthen this opportunity, AgreenaCarbon provides networking capabilities between farmers and agronomists to ensure the best fit of practices for their localised area.

Shifting the Carbon Market Gears

The carbon market has historically focused on agro-forestry and renewable energy generated credits through leading standards such as VSC and Golden Standard. However, the concept of agricultural carbon certificates is relatively new, and standards surrounding it are in development. Therefore, AgreenaCarbon has taken inspiration from these other leading standards but has chosen to improve upon and develop its own proprietary, scientific, scalable, and fit-for-purpose methodology which accurately reflects the GHG protocols accounting and quantification principles.

AgreenaCarbon utilises models and data to determine the in-situ results of the Programme. Agreena has partnered with Cool Farm Alliance and utilises their Cool Farm Tool developed by the University of Aberdeen. Cool Farm Alliance brings together farmers, NGOs, multinational food suppliers and retailers to promote agricultural practices that mitigate greenhouse gas emissions. The Cool Farm Tool an IPCC guideline aligned, comprehensive and industry leading tool utilized to manage food supply chain enterprises, quantify carbon and GHG emissions and model how different management practices will change emissions outcomes.

Outcome modelling is an essential component of AgreenaCarbon as it provides a qualitative measurement of additionality, in which the effects of gradual and/ or consistent adoption of Conservation Agriculture indicate the benefits provided because of AgreenaCarbon.

Certification and Verification

The Programme is certified by DNV under the ISO 14064-2 standard to issue verified carbon certificates. The purpose of the ISO 14060 family is to provide clarity and consistency for quantifying, monitoring, reporting, and validating or verifying GHG emissions and removals to support sustainable development through low-carbon economy and to benefit organizations, project proponents and interested parties worldwide. To maintain strong compliance of activities and outcomes by Project Proponents, the Programme applies an MRV system which involves internal validation and verification before being further verified by an independent verification entity before issuance of certificates.

Permanence risk and Buffer mitigation

As is the nature of carbon storage, there a potential that reversals can occur. Therefore, it is an essential role of AgreenaCarbon to ensure that the carbon relating to sold certificates remains permanently stored over time. The Programme performs this task using a Buffer mechanism. The Buffer represents a stock of certificates set aside for the purposes of replenishment in a case of reversal during the Project contracting term, and for accounting for the natural decline of soil organic carbon during the maintenance period. As with all modelling, there is a level of uncertainty that needs to be accounted for. Therefore, the Buffer mechanism is also used to mitigate against uncertainties and natural disaster risk such as fires and flooding.

Agreena's Public Registry

To be able to utilise the buffer mechanism effectively and mitigate potential double claiming or counting, the Programme has developed a Registry system for complete traceability and transparency. Built within the registry are safeguards that aim to prevent secondary markets arising. The purpose of preventing a secondary market is to prevent undesirable market functions such as speculation, front-running or insider trading as to capture the true market value of carbon. The registry will contain all pertaining details of each generated certificate, purchase history, ownership details and co-benefits.

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1: Agriculture, Forestry, and Other Land Use (24% of 2010 global greenhouse gas emissions): Greenhouse gas emissions from this sector come mostly from agriculture (cultivation of crops and livestock) and deforestation.

2: Carbon dioxide equivalent (CO_2 eq) stands for a unit based on the global warming potential (GWP) of different greenhouse gases. The CO_2eq unit measures the environmental impact of one tonne of these greenhouse gases in comparison to the impact of one tonne of CO_2.

3: Scope 1, 2 and 3 emissions: Scope 1 covers direct emissions from owned or controlled sources. Scope 2 covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company. Scope 3 includes all other indirect emissions that occur in a company's value chain.