



Olam Agri

# Driving an Integrated Mindset Through Multi-Capital Accounting

Annual Report 2025



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## Driving an Integrated Mindset Through Multi-Capital Accounting

**Agricultural systems are intertwined with, and underpinned by, nature and society, the values of which are not fully reflected in conventional accounting nor market prices. Barring holistic recognition of the impacts and dependencies of economic activities on Natural, Social and Human Capitals, economic systems driven by market forces incentivise actions that enhance short-term Financial Capital often at the expense of people and the planet, and consequently long-term Financial Capital.**

As a leading agri-business, Olam Agri believes in playing an integral role in transforming food, feed and fibre systems to deliver long-term value. Multi-Capital Accounting (MCA) is an integrated approach we take to assess performance beyond traditional financial metrics and expand conventional accounting by valuing natural and social resources. This brings environmental and social considerations into decision-making, benefitting all stakeholders including investors, farmers and local communities. With this approach, we can lead the sector towards achieving regenerative and sustainable agricultural systems.

Given the high dependence of agricultural systems on ecosystem services and resilient social systems, protecting Natural, Social and Human Capitals means protecting our Financial Capital. The agriculture sector faces mounting risks presented by environmental and social challenges such as climate change, biodiversity loss and social inequities. With MCA, we are better equipped to mitigate these risks and seize the opportunities of being a first mover in addressing environmental and social impacts, staying ahead of evolving regulatory and market mechanisms by reflecting the true costs of such impacts. In this context, understanding how business activities interact with natural and social systems through MCA is key to risk management, business resilience and long-term value creation.

### Pioneering MCA

Since 2021, Olam Agri has used MCA to measure, value, and report on performance beyond traditional financial metrics. A dedicated Sustainability Finance function was established to holistically approach MCA and embed it into business decision-making. Olam Agri is among the first organisations in Singapore to report detailed Natural Capital accounts.

We advocate for a holistic Capitals approach within the agriculture sector. Through partnerships with global collaborations including the Capitals Coalition, the World Business Council for Sustainable Development (WBCSD) and A-Track, we contribute to capacity building and development of guidelines and standards for MCA and its integration into business decision-making processes.

To evaluate our impact and dependency pathways and identify non-financial metrics for measurement, we reference the Natural, Social and Human Capital protocols issued by the Capitals Coalition. While such frameworks provide useful guidance, we also have to navigate the challenges posed by the absence of prescribed, standardised and scalable methodologies for the economic valuation of non-financial metrics. We have leveraged various scientific literature to develop tailored valuation methodologies that are often unique to each commodity, geography and sustainability intervention. This work has often taken place within fragmented data environments where centralised datasets are not readily available. By engaging directly with these challenges, we continue to refine practical applications of MCA and contribute to the broader evolution of impact valuation approaches within the agriculture sector.

### Embedding Sustainability Within Our Business Strategy & Decision-Making

We recognise that Financial, Natural, Social and Human Capitals are interconnected components of value creation, and our approach brings these dimensions together within business decision-making rather than assessing them separately. We use Social Return on Investment (SROI) valuations, which relates non-financial value creation to the Financial Capital deployed to support more informed allocation of resources towards initiatives that generate meaningful impact. In 2025, Olam Agri developed a Sustainability Profit and Loss (SP&L) reporting framework, which reflects the performance of sustainable product lines across Financial and Non-Financial Capitals, enabling business reviews to consider profitability alongside environmental and social outcomes. The SP&L has been integrated into existing financial planning and review processes, embedding sustainability considerations into business strategy and decision-making.

Our work in delivering these analyses has resulted in tangible business outcomes and external recognition. The latter includes our rice business unit being highly commended in the Social Impact category at the Reuters Responsible Business Awards, largely due to SROI-led insights. MCA outputs have also supported the advancement of sustainable product offerings, meeting increasing customer demand for products that align with their sustainability targets. In parallel, these analyses underpin the scaling of sustainability initiatives through partnerships and funding from global organisations such as Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), where our expertise is highly valued in unlocking and deploying such support.

# Assessing the Natural & Social Capital Impacts of Carbon Offsetting Rice Emissions (CORE) Project for Rice Farmers in India

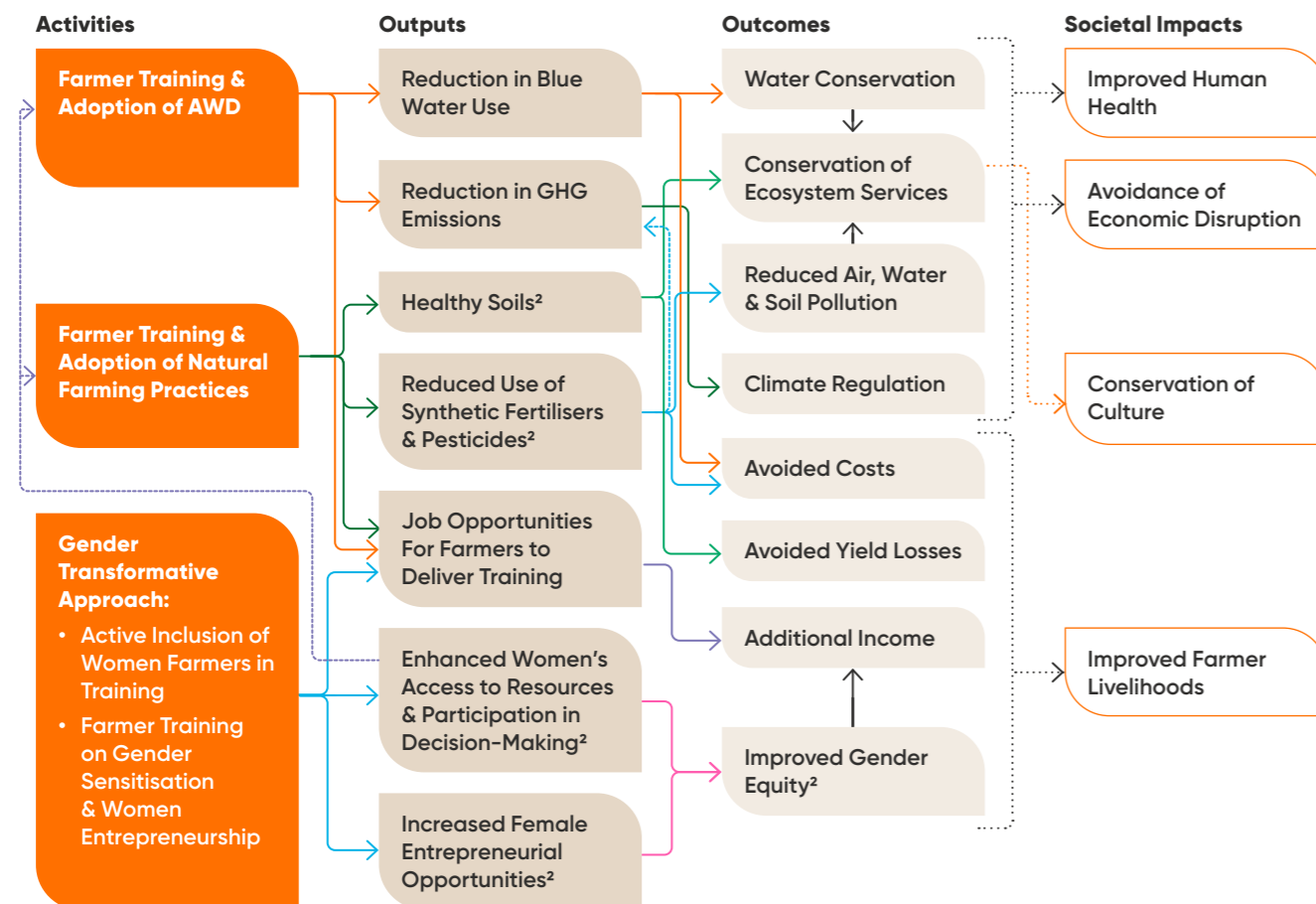
Rice cultivation has long been central to rural livelihoods in India, but it is also closely tied to environmental and social challenges around water use, methane emissions and income stability. For many smallholder farmers, these pressures are becoming more acute with climate change, as rainfall patterns grow less predictable and extreme temperatures become more frequent. At the same time, women continue to carry a significant share of the work in rice farming, while often having more limited access to training, resources and income-generating opportunities.

Against this backdrop, we have partnered with GIZ, the International Rice Research Institute (IRRI) and the UN Women in the CORE project<sup>1</sup> to support rice farmers in adopting climate-friendly cultivation practices. The implementation of the project is supported by the Professional Assistance for Development Action (PRADAN), Project Concern International (PCI) and Rythu Sadhikara Samstha (RySS) through farmer mobilisation and technical training.

CORE centres on alternate wetting and drying (AWD), complemented by elements of natural farming and capacity building by targeting women farmers with training, with the aim of reducing greenhouse gas (GHG) emissions, conserving water and strengthening farmer livelihoods over time. AWD is a recognised climate-friendly rice cultivation technique, whereby fields are flooded intermittently rather than continuously, leading to positive impacts that are scientifically proven and recognised by international standard-setters. When combined with natural farming, these practices contribute to lower emissions and water use, and benefit the soil and ecosystem.

Between 2023 and 2025, we supported the delivery of AWD training to almost 30,000 smallholder rice farmers, with around a third of participating farmers also trained in natural farming, and around a fifth also trained in gender sensitisation.

## Impact Map of Providing Support to Rice Farmers in India Under CORE Initiatives



<sup>1</sup> The project was co-financed by GIZ from public funds of the German Federal Ministry for Economic Cooperation and Development.  
<sup>2</sup> Due to data gaps, the following impacts were partially or not quantitatively assessed: reduced use of pesticides, impacts related to healthy soils including avoided yield losses, reduction in GHG and conservation of ecosystem services, and impacts related to the gender transformative approach.

## Improvements in Farmer Livelihoods & Gender Equity

While AWD and natural farming are known first and foremost as environmentally sustainable forms of farming, the practices directly lead to financial cost savings for farmers through lowered costs:

- Reduced water use from AWD practices reduce the electricity costs of irrigation on the farms where applicable, saving an estimated S\$127 per farmer.
- Substitution of chemical fertilisers with organic amendments as part of natural farming practices can reduce about 23% of chemical fertiliser costs.

Beyond these directly quantifiable livelihood improvements, natural farming may also help farmers avoid yield losses through improved soil health and provide resilience against increasing threats from climate change and nature loss.

As part of CORE's objectives, we aim to strengthen women farmers' equal representation, leadership and economic opportunities in the rice value chain. In India, women farmers lack recognition as farmers both in social norms, such as in decision-making in the household and farm, and in institutional norms, such as in access to government services and obtaining land rights. CORE recognises this context and the growing share of women's participation in Indian agriculture.

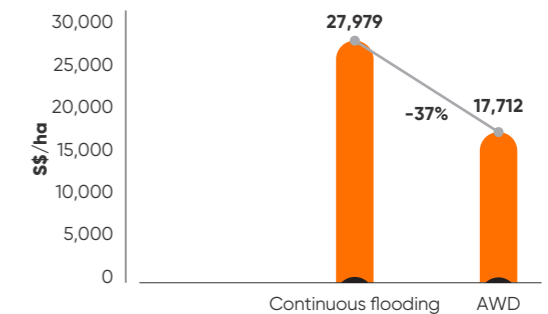
One of the levers of this approach is to improve the access of women farmers to knowledge and resources on climate-smart farming practices and technologies. Between 2023 and 2025, women farmers were approximately 69% of all farmers trained under CORE, significantly exceeding the project's participation target of 30%. Gender sensitisation training has been provided to sensitise both female and male farmers to the rights of women farmers, including access to institutional resources. Entrepreneurship programmes have also been rolled out for women farmers, encompassing both skills training and mobilisation into collectives for better engagement with markets. This approach aligns with the United Nations Sustainable Development Goals on Gender Equality (SDG 5) through reducing discrimination against women and girls (Target 5.1) and ensuring fuller participation and opportunities for leadership in economic and public life decision-making (Target 5.5).

For all CORE training, a train-the-trainer approach was adopted, enabling over 360 selected farmers to act as master trainers to support the wider dissemination of sustainable practices within their communities. The master trainers earned an additional income for delivering training, amounting to societal value of about S\$152 for each master trainer. These opportunities supported income diversification and strengthened local capacity for sustained practice adoption.

## Improvements in Climate & Environmental Outcomes

The primary environmental outcomes of using AWD are the reduction of blue water use and GHG emissions by approximately 37% each per hectare, relative to continuous flooding farming practices.

### Estimated Natural Capital Impact of GHG Emissions and Water Use Per Hectare of Rice (S\$/ha)



Category	Continuous flooding	AWD
Natural Capital Impacts from water use reduction	27,821	17,612
Natural Capital Impacts from GHG Emissions	158	100
<b>Total Social Impacts</b>	<b>27,979</b>	<b>17,712</b>

Where farmers were trained on natural farming practices, approximately 62% of participating farmers adopted elements that included increased use of organic soil amendments, biofertilisers, biopesticides and biological natural pest control methods such as bird perches. These practices led to improved soil health and reduced chemical fertiliser inputs required by an estimated 22% per hectare, consequently lowering the associated pollution. Natural farming practices were shown to reduce GHG emissions by 31% per hectare when applied alone, and by 41% per hectare when applied together with AWD, compared to continuous flooding with chemical inputs.

Apart from the impacts for which Natural Capital values were quantified, natural farming aims to cultivate healthy soils rich in biodiversity that support essential ecosystem services, including nutrient cycling and water regulation. This leads to potential reduction in soil erosion and runoff of chemical inputs to nearby water sources, as well as chemical pesticide use which could lead to air, water and soil pollution.

## Social Return on Investment (SROI) of the CORE Initiative

The cumulative Natural and Social Capital impacts associated with AWD and natural farming adoption from 2023 to 2025 translated into a total estimated societal value of S\$67,987,000<sup>1</sup>, reflecting avoided environmental costs alongside enhanced farmer livelihoods.

Based on the impacts covered in the valuation, the SROI of the CORE programme was estimated to be 6:1, or a \$6 value of social return on every \$1 invested.

Impact Valuation (Added/Deducted) for the CORE Project in Rice India for the Years 2023 to 2025 <sup>2</sup>	Value to Society (S\$'000)
<b>Natural &amp; Social Capital Enhancements (+ impacts)</b>	
Enhancement of Farmer Livelihoods	
Master Trainer Income	55
Reduction in Fertiliser Costs from Adoption of Natural Farming	12
Reduction in Electricity Costs of Irrigation From Adoption of AWD	175
Reduced Water Withdrawal	67,235
Reduced Water Pollution From Synthetic Fertiliser Use	59
Reduced GHG Emissions	
Reduction in Field GHG Emissions From Adoption of AWD & Natural Farming	439
Reduction in Fertiliser GHG Emissions From Adoption of Natural Farming	12
<b>Natural &amp; Social Capital Profit/(Loss)</b>	<b>67,987</b>

## Assessing the Natural Capital Impacts of Ensuring Deforestation-Free Rubber Supply Chains in Côte d'Ivoire & Indonesia

Forests play a critical role in regulating the climate and sustaining natural systems that support economic and social activity. In Côte d'Ivoire and Indonesia, decades of agricultural expansion have significantly reduced important forest cover that provides essential carbon storage, wildlife habitats, and hydrological and soil-regulating functions. Preserving these ecosystems is critical to mitigating climate change, conserving biodiversity, and supporting soil and water systems that benefit both local communities and agricultural landscapes.

1 The estimated societal value quantified does not include the following impacts of the CORE project: reduced use of pesticides, impacts related to healthy soils including avoided yield losses, reduction in GHG and conservation of ecosystem services, and impacts related to the gender transformative approach.  
2 Read more information via the [GIZ Carbon Offsetting Rice Emissions \(CORE\) India Factsheet](#).

As a Global Platform for Sustainable Natural Rubber (GPSNR) signatory, we champion sustainable natural rubber. To curb deforestation in our supply chains, our rubber business has invested in the development of TruTrace to enable complete traceability from pallet to plantation. This in-house system aggregates data from the Olam Farmer Information System (OFIS), Digital Supplier Engagement (DSE), and SAP systems, offering full value chain visibility, including intermediaries. TruTrace also facilitates Know Your Customer (KYC) checks and risk assessments, including deforestation assessments using Global Forest Watch Pro for new suppliers.

As of 2025, our Rubber IMPRINTS (Identification, Mitigation of Potential Risk In Navigating the Transformation of the Supply Chain) programme has mapped the geolocations of approximately 55,000 farmers, covering around 227,000 hectares across both Côte d'Ivoire and Indonesia. Robust monitoring allows the business to identify production at origin, verify land-use history, and avoid sourcing from deforested areas, supporting compliance with regulatory requirements ahead of their enforcement, most notably the European Union Deforestation Regulation (EUDR), while protecting access to regulated markets.

Relative to a baseline scenario of unmanaged land use expansion, avoided deforestation results in lower GHG emissions and the protection of ecosystem services such as carbon sequestration, soil and water regulation, habitat maintenance, biomass provisioning and cultural value. Following our efforts in establishing traceability systems to avoid deforested areas in our natural rubber procurement, an estimated 2,208 hectares of deforested area were avoided from procurement, leading to an estimated 23,203 tonnes of CO<sub>2</sub>e avoided. The reduction in avoided societal costs associated with Natural Capital impacts in the Company's supply chain for 2025 is estimated at approximately S\$2,722,180 for avoided GHG emissions and S\$2,251,003 for avoided loss of ecosystem services.

### Natural Capital Impacts Avoided From 2025 Procurement of Fully Traceable, Deforestation-Free Rubber

Total Deforested Area Avoided	2,208 ha
Estimated GHG Emissions Avoided	23,203 tCO <sub>2</sub> e
Estimated Avoided Social Cost of GHG Emissions	S\$2,722,180
Estimated Avoided Social Cost of Loss of Ecosystem Services	S\$2,251,003

While eliminating deforestation in rubber production will require collective industry action, our commitment to deforestation-free supply chains can send a strong market signal, advancing the sector's transition towards decarbonisation. Apart from avoiding deforested areas, we engage thousands of rubber-growing cooperatives and farmers across Côte d'Ivoire and Indonesia to support with deforestation-free and EUDR-compliant practices, collaborating with organisations such as GIZ where possible. These engagements are part of a suite of farmer extension support services provided as part of our overall commitment to farmers we procure from.

 **Read more about our rubber supply chain on page 36 of our Annual Report 2025**

## Continued Commitment to Inclusive & Sustainable Rubber Supply Chains

Alongside environmental safeguards, we continue to invest in farmer livelihoods and responsible production practices across our rubber business. Building on the established Gouassou farmer recognition programme in Côte d'Ivoire, in 2025 the business introduced SAHABAT in Indonesia, designed to recognise and reward rubber growers for quality, consistency and volume of supply. The programme engages local partners and suppliers in Lampung, providing tools, safety gear and equipment that reinforce growers' productivity and strengthen the sustainability and resilience of the rubber value chain. In parallel, other sustainable initiatives such as Good Agricultural Practices (GAP) training have been scaled up in both Côte d'Ivoire and Indonesia in collaboration with GIZ, integrating productivity, occupational safety and environmental stewardship to support a coherent suite of practices that deliver positive outcomes for people and nature.

 **Read more on pages 19 and 35 of our Annual Report 2025**

### Notes & Assumptions

#### Natural & Social Capital Valuation Approach

**GHG Emissions:** We have applied a Social Cost of Carbon (SCC) of US\$90 (S\$117) per tCO<sub>2</sub>e<sup>1</sup> to value the costs to society of climate change impacts due to GHG emissions, measured by a global GDP reduction.

**Water Use:** The shadow price of water<sup>2</sup> accounts for the value of 'services' provided by water to human health, ecosystems, agriculture and domestic supply. The shadow price of water is calculated to be S\$3.22 (in Haryana, Andhra Pradesh) and S\$2.44 (in Madhya Pradesh) per m<sup>3</sup> of water.

**Water Pollution From Fertiliser Use:** We have applied environmental prices<sup>3</sup> of nitrogen and phosphorus emissions to water from fertiliser use. As these environmental prices are derived from studies conducted in European countries, there is a limitation in their application to other locations since the damage costs of environmental pollution can vary widely according to local circumstances. We will continue to update our methodology as more appropriate valuation data becomes available.

**Ecosystem Services:** Underpinned by biodiversity, these are the direct and indirect contributions of ecosystems to human wellbeing, including provisioning, regulating, supporting and cultural services. We have applied a monetary value of S\$1578 per hectare per year for tropical moist forests in Côte d'Ivoire<sup>4</sup> and S\$2086 for rainforests in Indonesia<sup>5,6</sup>.

**Social Impact of Reduced Fertiliser Costs for Farmers:** The impact of reduced fertiliser use on farmers' livelihoods has been assessed based on average fertiliser costs in Andhra Pradesh, India, adjusted by purchasing power parity.

**Social Impact of Reduced Electricity Costs of Irrigation for Farmers:** The impact of reduced electricity costs of irrigation on farmers' livelihoods has been assessed based on average irrigation requirements and irrigation pump electricity usage where applicable.

**Social Impact of Additional Income for Farmers:** The impact of additional income on farmers' livelihoods has been assessed based on average additional income per farmer, adjusted by purchasing power parity.

**Disclaimer:** Olam Agri's Natural and Social Capital accounting analyses are not related to financial results or financial reporting. The analyses and insights are specific to the selected operations and are based on economic estimates of non-monetary goods and services; they should not be used outside the context of Olam Agri's analyses. All methodologies are based on well-established databases and frameworks. However, as they depend on third-party expert studies, all values are indicative estimations provided to inform decisions in relation to the management of Natural and Social Capital impacts. Results from the Natural and Social Capital Valuation Analyses may be readjusted according to further methodological refinements.

1 We have used the mid-point of SCC recommended by Massachusetts Institute of Technology (Pindyck, R.S. 2019, The Social Cost of Carbon Revisited).  
2 We have used the shadow water pricing methodology from the Corporate Bonds Water Credit Risk Tool developed by GIZ/NCD/VfU (2015).  
3 Environmental prices from CE Delft Environmental Prices Handbook 2024: EU27 Version, corrected for inflation and purchase power parity.  
4 Tilahun, M., Damnyag, L., & Anglaaere, L. C. (2016). The Ankasa Forest Conservation Area of Ghana: Ecosystem service values and on-site REDD+ opportunity cost. Forest Policy and Economics, 73, 168-176. A Ghana-based study was selected as a proxy due to lack of available ecosystem services valuation papers for Côte d'Ivoire and given its similar biome.  
5 Van Beukering, P. J., Cesar, H. S., & Janssen, M. A. (2003). Economic valuation of the Leuser national park on Sumatra, Indonesia. Ecological economics, 44(1), 43-62.  
6 Monetary values of ecosystem services are based on the total international dollars per hectare per year for all relevant beneficiaries and provided by the Ecosystem Services Valuation Database (ESVD) as part of the ESVD 2.0 Database. Brander, L.M. de Groot, R., Guisado Gofii, V., van't Hoff, V., Schägner, P., Solomonides, S., McVittie, A., Eppink, F., Sposato, M., Do, L., Ghermandi, A., and Sinclair, M. (2025). The ESVD is an updated development of authors of The Economics of Ecosystems and Biodiversity (TEEB) Valuation Database from 2010. The estimated monetary values exclude those related to sequestration or storage of GHG emissions, which have been valued using the social cost of carbon in this case study.

### Notes & Assumptions continued

#### Social Return on Investment (SROI) Valuation Approach

SROI is a framework for measuring and accounting for a much broader concept of value that is not currently captured in financial terms. SROI depicts how change is being created by measuring social, environmental and economic outcomes and uses monetary values to represent them. This enables a ratio of benefits to costs to be calculated.

We have computed the SROI for the case study 'Assessing the Natural & Social Capital Impacts of Carbon Offsetting Rice Emissions (CORE) Project for Rice Farmers in India' using Social Value International (SVI)'s Guide to SROI2.

The Guide to SROI provides a clear framework for measuring, managing and accounting for social value or social impact. This Guide was written in 2009 by the UK Cabinet Office. Updated in 2012 by SVI, it is the result of consultation with practitioners, members, academics and others with an interest in social and environmental value and impact measurement.

$$\text{SROI} = \frac{\text{Present Value of Total Outcome (\$)}}{\text{Total Investments (\$)}}$$

Where:

$$\begin{aligned} \text{Total Outcome (\$)} = & \text{Quantity} \times \text{Proxy financial value}^1 \\ & \times (1 - \text{deadweight per cent}) \times (1 - \text{displacement per cent}) \\ & \times (\text{attribution per cent}) \times (1 - \text{drop-off per cent}) \end{aligned}$$

**Deadweight (estimated at 25% for AWD-related impacts only, 0% for natural farming and master trainer remuneration impacts):** Deadweight is a measure of the amount of outcome, even if the activity had not taken place, calculated as a percentage.

In the absence of year-on-year comparison data, deadweight is estimated based on reasonable assumptions about external influences on farmer behaviour. The deadweight estimate for AWD-related impacts accounts for the presence of other ongoing initiatives promoting similar practices, as well as informal knowledge transfer between farmers, e.g. peer-to-peer learning and word-of-mouth, which may lead to changes in behaviour independent of the project. It is assumed that this deadweight is not applicable for natural farming which may require technical guidance for adoption.

**Displacement (estimated at 0%):** Displacement refers to the assessment of how much of the outcome from the intervention displaced other outcomes.

Displacement is not applicable as it is assumed that the outcomes of reduced GHG and water use from AWD and reduced fertiliser use from natural farming are not displaced with outcomes such as an increase in water use or fertiliser use elsewhere.

Nevertheless, AWD may lead to increased prevalence of weeds which requires additional weed control. While this may displace part of the positive impacts of AWD if more herbicides are used, some farmers have adopted natural pest management methods such as using azolla to suppress weed growth. Although this potential source of displacement has not been quantified due to a lack of data on herbicide use, it is expected to be partly offset by reduced pesticide use due to natural farming practices which have also not been quantified.

**Attribution (25% for natural farming-related impacts only, 100% for AWD-related and master trainer remuneration impacts):** Attribution is the assessment of how much the outcome was due to a contribution by Olam Agri and consortium partners from the CORE project. In Andhra Pradesh, natural farming practices have been experiencing a rapid scale-up due to the Andhra Pradesh Community-Managed Natural Farming (APCNF) programme launched by the state government and under the aegis of the non-profit RySS since 2016. In tandem with the APCNF programme, the natural farming training component of the CORE project in Andhra Pradesh collaborated with RySS and may be seen as a synergistic addition to the climate-smart farming practice of AWD under CORE.

Given the concurrence of natural farming in Andhra Pradesh due to APCNF, we have conservatively assumed a 25% attribution rate of natural farming impacts to CORE.

For all other impacts, attribution per cent is not considered as the impacts of CORE are attributed to all partners of the project, and impacts are generated collaboratively and collectively by all partners that have contributed monetarily/non-monetarily.

**Number of years of impact (1 year):** Impacts are conservatively assumed to be seen in the same year of the training and potential continuation of impacts beyond that year has not been included in the valuation.

**Drop-off (not applicable):** Drop-off refers to reduced outcomes in future years as outcomes are likely to be less or, if the same, more likely to be influenced by or attributed to other factors than the organisation's intervention. Drop-off accounts for this and is calculated for outcomes that last more than one year, thus it is not applicable for this valuation.

<sup>1</sup> The proxy financial value is estimated using the Natural and Social Capital Valuation Approach as stated in the section above.

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