



Wild Asia's SPIRAL Programme

wild asia

Accelerating regenerative agriculture in oil palm to improve farm profitability, ecosystem services and carbon sequestration

Opportunities for Social Impact Investments

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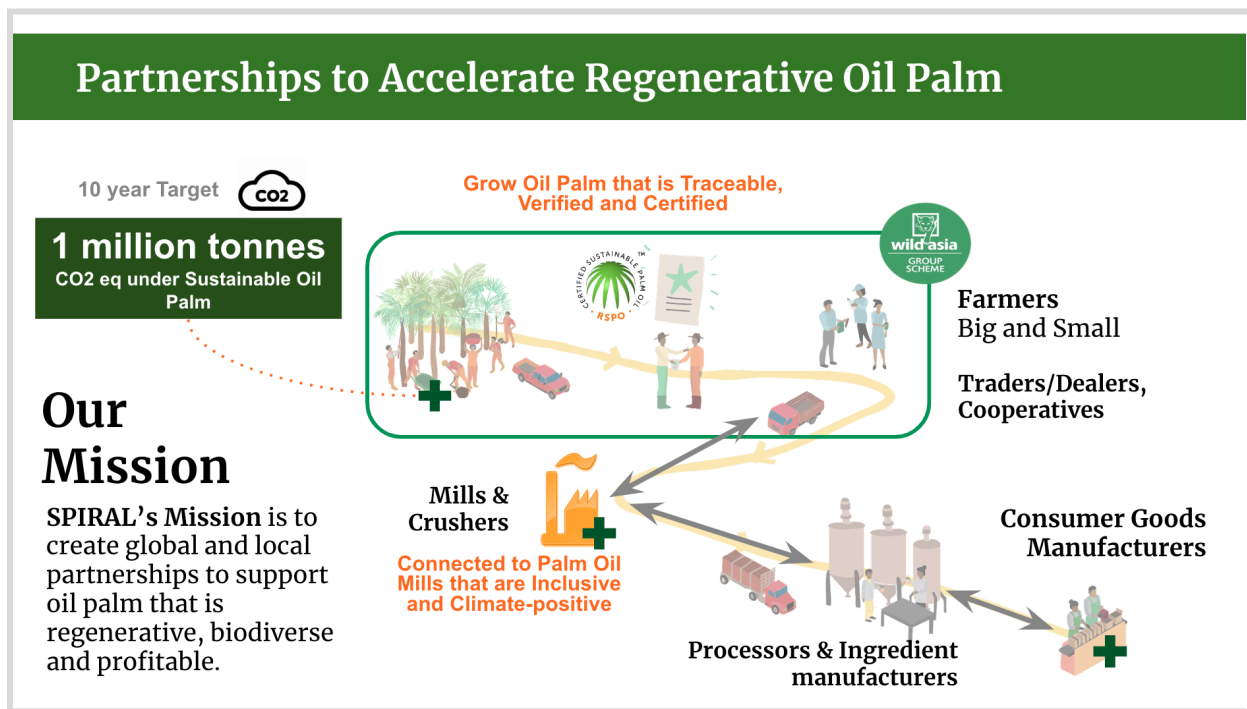
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The Problem

Over one-quarter of Malaysian land area is under agriculture (26%, [source](#)); [5.8 million hectares](#) of which is under oil palm. Conventional oil palm is heavily dependent on fertilizers, agro-chemicals and extensive land works. Soils under industrial agriculture are low in organic carbon and technically [degraded](#). Palm oil is however a major national economic contributor as the majority of the products are traded globally, and form an important source of income for both national and local economies. Total agriculture trade contributes 8% to Malaysia [GDP](#), of which oil palm contributes half-of this to the annual trade accounts. The industry needs a workable solution to be able to de-risk palm oil from deforestation, climate-impact and intensive international and national regulatory pressure.

The Solution



Wild Asia has pioneered a **novel and scalable approach** that has the potential to transform these expansive oil palm monocultures into **chemical-free, biodiverse and regenerative agriculture** (WAGS BIO). The innovation is that we bring **palm oil value chain partners**



together to support sustainable certified production in partnership with local mills or dealers. This creates local partners for promoting smallholder inclusion and for introducing WAGS BIO farms as a way to improve farmer livelihoods. We want to show that there are alternatives to conventional oil palm cultivation, one that makes farmers more money, and enhances local biodiversity. This will ultimately reduce pressure on natural areas, enhance local biodiversity through reduced chemical inputs and promote more diversity on and between farms. The Project builds resilience amongst farmers by increasing profitability of the farm: by adopting global standards to add value, reducing costs, and/or reducing the need for chemical inputs by adopting natural farming methods. The Project will build partnerships to enhance the digital ecosystem to allow the programme to scale. The outcome of this Project will see the adoption and extension of regenerative agriculture by larger land owners (estates), increasing investments by palm oil mills to extend the Project activities and increasing inclusion of traceable, certified and verified farms in global supply chains.

Market Size

In Malaysia alone, **independent small producers** make up at least 40% of the total national palm oil production. This is equivalent to about 2.5 million hectares of oil palm land. Our 10-year target is to increase the number of palm oil mills to include 150,000 ha of traceable and sustainable production. Over the same period, we will grow the number of WAGS BIO farms to enhance the carbon sequestration potential within our network. WAGS BIO is a systematic approach towards supporting oil palm producers to adopt chemical-free agriculture and regenerative practices. Our goal is to secure a minimum of 1 million metric tonnes (mt) of carbon (CO² equivalents) under agriculture. Our assumption is that 1 ha of WAGS BIO could sequester add an additional 10 mt of carbon (i.e., enhanced oil palm blocks with trees and gains in soil organic carbon); our 10-year target could be achieved from a 100,000 ha of WAGS BIO farms. With our working Malaysian model, we hope to be able to extend the programme to Thailand and Indonesia over the course of the next 5-10 years, extending the scale and potential impact of the programme significantly.

Our Value Proposition

- Wild Asia already manages one of the largest RSPO certified group schemes, covering some 50,000 ha in Malaysia (and soon Thailand). We will be enhancing our programme to include traceability assurance and carbon accounting.
- WAGS BIO farms models have already been established on over 300 ha of farms on smallholdings and estates. There are now proven advantages to conventional farming practices: improvements in soil health, plant productivity and reducing farm input costs.



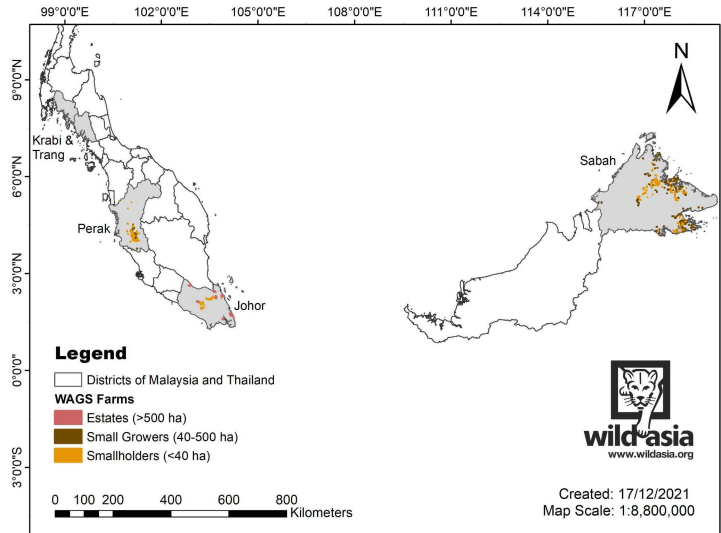
- Small Producer Inclusivity Alliance (SPIRAL) is the platform for scaling-up the impact of a 10+ year existing group scheme (WAGS) that has enabled 1000+ oil palm small producers to be RSPO certified today.
- SPIRAL builds on a 10+ year experience of partnering with palm oil companies to support small producers. Today, we bring together **global consumer goods companies** (e.g., L’Oreal, Keloggs), **Refiner-Mills** (KLK, IOI and Kim Loong, Genting Plantations) and **technical partners** (e.g., Dibiz, Ulula, UKCEH) into one ecosystem.
- Wild Asia has been working in the palm oil sector since 2005, and has over 15 years of experience providing technical social and environmental assessments, professional training and ESG advisory services. To date, we have completed over 168 palm oil-based assignments in 10 countries (Asia, Pacific Islands and Africa).



SPIRAL Impact

Geographic Scope

Wild Asia is currently active in geographic regions covering Malaysia and Thailand. There are new regions like Sarawak or Kalimantan in the pipeline, but these are in early stage discussions.



Area Under Sustainable Production

SPIRAL programme is currently active in Malaysia, operating in three major palm oil producing regions (Perak, Johor and Sabah). A start-up operation in Thailand began in mid-2022 and we will be starting field projects by the end of this year. There are on-going discussions with potential local partners for extending our work into other Malaysian regions (including Sarawak) and in Indonesia (Kalimantan). The current status of our programme is summarized below:

	Current included in Certification Programme	SPIRAL Targets	+ Year 5	+ Year 10
Years	2022	Progress Against Y5 Target	2025	2025-2030
Number of small producers	1,807	36%	5,000	10,000
Area Certified to RSPO	25,588	26%	100,000	150,000
Total Area Certified under SLM, Ha	49,631	50%	100,000	150,000
Target BIO Minimum Area (ha)	382	4%	10,000	100,000



Inclusivity

SPIRAL mill partnerships are our strategy for growth and scale. Out of the 400+ mills in Malaysia, we currently have secured commitments from **5 mills** (with another 7 in the pipeline) to support our model for inclusion, traceability and certification. This includes both large corporate mills and independent mills. We are currently in discussion with other large corporate mill groups (including refineries) and hope to secure a number of partner mills to adopt our model for inclusion.

Regenerative Agriculture

SPIRAL regenerative agriculture is being adopted by smallholders, small growers and larger estates covering some **381 ha** in Perak, Johor and Sabah. These working farms are the basis for the WAGS BIO methodology.

Strategic alliance with premier research institutions. These farms have been included in a number of research trials: with the University of Cambridge (biodiversity and oil palm), UK-CEH (low cost methods for farm monitoring, soil carbon, carbon stocks) and SAN-Ferrero (biodiverse habitat islands for enhancing predatory insects and lowering dependency on chemicals). With UK-CEH we have developed a simplified farm and plant health monitoring methodology which is currently in its first year of testing.

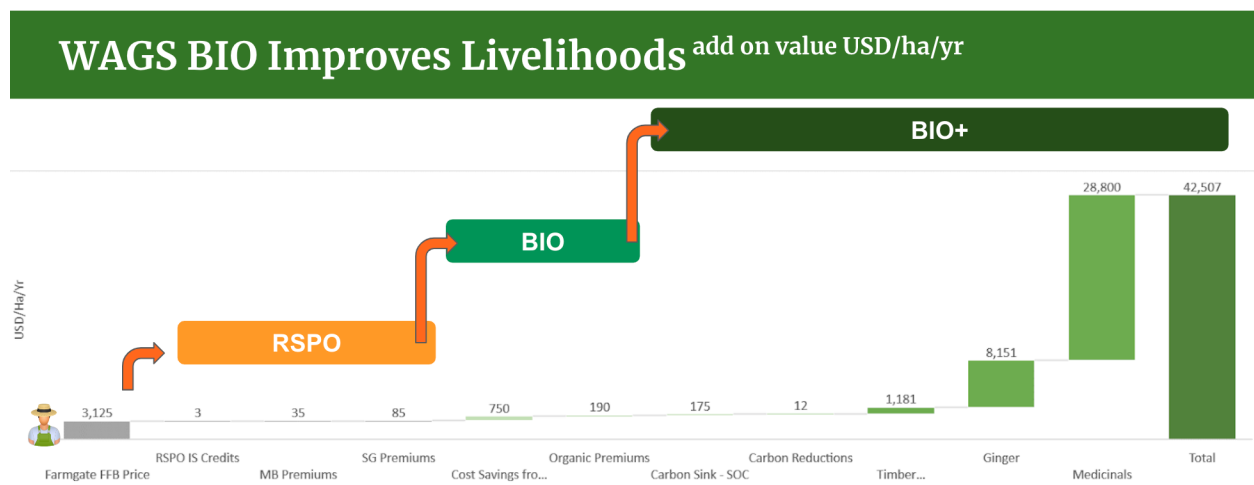
Oil palm agroforestry blocks are also included amongst the working farms: new local partners to explore models for palm-trees that include other economic products (e.g., timber, illipe nuts, cocoa, coffee). **Soil carbon** is being enhanced by biochar. This is another pilot that is looking at carbon removal credits through the conversion of oil palm fronds into biochar and applying this back into farms. This has the potential to add 1 mt carbon per ha per annum, essentially creating a long-term carbon store. The scheme follows the European biochar certification standard ([EBC](#)) and allows farmers to access carbon removal credits. Our methods are adapted for smallholders, but we are also exploring partnerships with industrial producers of biochar (Johor and Sarawak) to apply the same carbon removal scheme for a significantly larger area. In addition, the work by UK-CEH will provide us with an optimum method for **measuring carbon stocks** (below and above ground).

BIO Circular Economies & Resilience

SPIRAL builds resilience. With WAGS BIO, we have also studied the potential economic impact for land owners. We see an increase in farm revenue potential, we project an additional USD 42,000 per ha per annum, which is a significant increase from the USD 3,000+ per ha per



annum from conventional oil palm alone. The significant gains are from a combination of reducing costs (minimal fertilizers, chemical use), and the increasing revenue from inter-crops and new income streams from carbon removal credits. Currently, WAGS RSPO and BIO offer a tangible way to get farmers to adopt our approach. By building the connection to mills, we can access a significantly larger organic “waste” resource base to support more BIO farms - this includes EFB or biochar in the future. Creating the local circular economic loop will be the driver for the growth of WAGS BIO - and the impact on livelihoods and carbon sequestration.



We see farmers earning additional USD 42,000 per ha/year

WAGS BIO unlocks the hidden potential of the farm to increase diversity, lower costs and improve farm profits. Farms are now regenerative, climate-smart and profitable.

Shared Responsibilities

SPIRAL connect is our strategy to allow the whole palm oil value chain to support sustainable production and increase the revenue base for SPIRAL. Today, c. 50% of our annual income is derived from SPIRAL grants. These are annual grants committed for 1, 3 or 5 years from global palm oil users (e.g., L’Oreal, Keloggs, Clariant, etc). Today, RSPO sales account for 11 % of our annual cost. These are sales derived from a small share of physical sales of certified products from a WAGS-certified farm, or, a share of RSPO credits sold on an electronic trading platform which is available to RSPO members to offset their oil palm usage by supporting an equivalent certified production. These SPIRAL partners open the opportunity to develop off-take or new revenue models for certified production. In 2022, we pioneered a SPIRAL premium which guarantees a fixed premium to WAGS for all WAGS traceable volumes that are connected to



palm oil mills in a given geographic region. This is part of a pilot to explore how to improve inclusion reporting for projects supported in physical palm oil procurements from this region. Other potential revenue streams from SPIRAL partners would be the share of sales of carbon ([insetting](#) or direct trade of carbon credits) or other non-oil palm derived crops.

Social Impact

SPIRAL provides a way to report on the social impact at the farm-level: farm profitability, costs and farm production/outputs are some of the measured indicators. These are metrics that are collected for all members. Monitoring of farms, especially for carbon stocks will be a future add on. With the traceability information, these metrics will be reportable to specific mills to allow reporting of impacts per quantum of mill products. The reporting will be enhanced with the wider application of digital solutions, such as the DiBiz traceability app that is being trialed now. A summary of the main indicators is shown below (bold are currently active).

Impact Area	Impact Indicator
Livelihood	<ul style="list-style-type: none"> ● Farmer demographics ● Farm production (yields of oil palm and non-oil palm products) ● Additional income from certified premiums (e.g., RSPO, carbon removals)
Ecosystem	<ul style="list-style-type: none"> ● Soil health indicators ● Soil infiltration ● Normalised difference vegetation index (NDVI) as a proxy for plant productivity
Climate Positive	<ul style="list-style-type: none"> ● Total carbon stocks - above and below ground ● Above ground carbon - oil palm and trees ● Soil carbon stock - biochar addition ● Soil carbon stock - total measured



Market Strategy

Our current marketing strategy is focussed on building viable business models for **palm oil mills** to cooperate with Wild Asia.

1. Depending on each company's requirements, we offer different solutions: (a) extend their certified producers connected to them (inclusion, lower risk); (b) offer a dealer service that increases the traceable and certified production from their dealers (lower risk). Much of this results in the expansion of RSPO certified production area. With the mill partnerships, we begin to introduce BIO demo and extend the number of working farms adopting our methods. These are important BIO trials which convince the mills to extend the BIO programme.
2. The second strategy is to continue to develop the **carbon removals** programme with (a) smallholders; and (b) industrial producers of biochar. By connecting industrial biochar production to a land bank for carbon removals we gain a financial mechanism to grow the scale of BIO production.

The other market strategy is to increase the number of **brands and consumer goods manufacturers** connected to Wild Asia. The growing pool of **SPIRAL partners** offers a number of opportunities to support sustainable production - offtake of RSPO certified production, carbon insetting, etc. SPIRAL is able to gain more visibility to a wide-range of players across the palm value chain by being part of the RSPO membership and related market-specific networks for sustainable palm oil (such as FONAP in Germany, JASPON in Japan).

Team

Wild Asia team has over 20 years of experience in understanding sustainable palm oil production, and its social and environmental challenges across major palm oil production regions (Malaysia, Indonesia, Papua New Guinea, Thailand and Africa). This work has been pioneered by Dr Reza Azmi, its founder together with the founding partners (Dennis Yong, Rick Gregory, Su Mei Toh and John Howes). Today, our capabilities are extended by our board members (Gonthong, based in Thailand and an experienced facilitator; and Omar Fateh, based in Malaysia and currently heads Dana Impact for the Malaysian Khazanah sovereign fund). The regional teams are headed by senior management representatives (Peter Chang in Sabah, Haji Yusof in Perak and Asae in Thailand). The regional teams are made up of experienced staff that are often local to the area and many have direct experience with smallholdings of palm oil. These regional teams are an important asset in building trust with local stakeholders and the farmers in the area. It is envisaged that with more investments, we can build a senior



management team to help spearhead the technical, communication and business development to strengthen the revenue streams and improve the efficiency of our operations as we scale.

See Wild Asia [Our Team](#)

Key risks and risk mitigation strategies

Potential Risk	Impact	Risk Mitigation Approaches
Collapse in the market for RSPO Certified Products- leading to a loss of revenue.	Low Likelihood High Severity	Diversify the SPIRAL revenue base - carbon, connect Diversify the farm revenue base - carbon
Poor implementation of BIO Farm - e.g., due to operational issues, lack of resources or cost escalation.	Medium Likelihood High Severity	Seek grants to support BIO and develop working models for wider adoption Partner with local mills to increase the access to funding and man-power
Delay or non-materialisation of market for carbon trading, leading to the inability to obtain funding to scale the project.	Medium Likelihood Medium Severity	Diversify the SPIRAL revenue base and put less emphasis on carbon in revenue models Develop alternative funding models through biochar production and carbon removal credits



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