

Candra Naya Lestari (Former ASYX)



Business Context

ASYX is a supply-chain integration firm specialized in agroindustry that works across producers, marketers, and retailers within Indonesia, Singapore, Kenya and Hong Kong. Through integrated and digitized supply-chain processes, the company shapes best practices such as circular economy and sustainable business procurement strategies.

In 2020, ASYX started to incubate natural fibres production through its sister company PT Candra Naya Lestari (a venture building investment company), working closely with communities in Java as well as peatland communities in Sumatra and Kalimantan. The initiative reuses otherwise wasted pineapple leaves and turns them into biodegradable fibres for yarns and household items. They mapped the pineapple value chain and observed the opportunity to create new markets for pineapple leaf fibres to supply the apparel industry.

One of the SMEs ASYX partnered with was a natural pineapple fibre producer from Subang, West Java called Candra Naya Lestari or CNY ALFIBER. They helped design a specialized financial instrument for machinery and working capital provisions and supported the implementation process by connecting the company with an offshore off-taker/buyer. In addition, they also supported the business in digitizing their process.

With support and advisory services, this natural fibre producer SME was able to expand their business. The production has increased from 1 machine producing 10 kg of orders per month, to now 4 machines producing 200kg a month. The ambition is to help the company become a leader in natural fibre production, taking fibrous waste from other agriculture industries, or planting trees for fibre purposes.

In 2023, Candra Naya Lestari is now a stand alone business which has been incorporated as part of PT AGRINDO group. The capital assessment is therefore now a legacy within AGRINDO and Candra Naya Lestari.

Assessment

WHY? What is the objective of the assessment?

They opted to conduct a TEEB-Agri multi-capitals assessment to gain clarity on the pineapple leaf fibre value chain and to better understand the positive impacts for nature, people, and the economy. By communicating the value of these benefits, the community-based business can secure more investment and further expand its production, creating a feedback loop that further increases its positive impact.

They also hoped to find out whether the processing of pineapple waste into textile raw material could provide new economic opportunities to the local community. By providing additional value from an otherwise wasted product, they saw the business as an opportunity to not just generate added revenue, but also upskill people in the local community through the creation of formal jobs for youth and women.

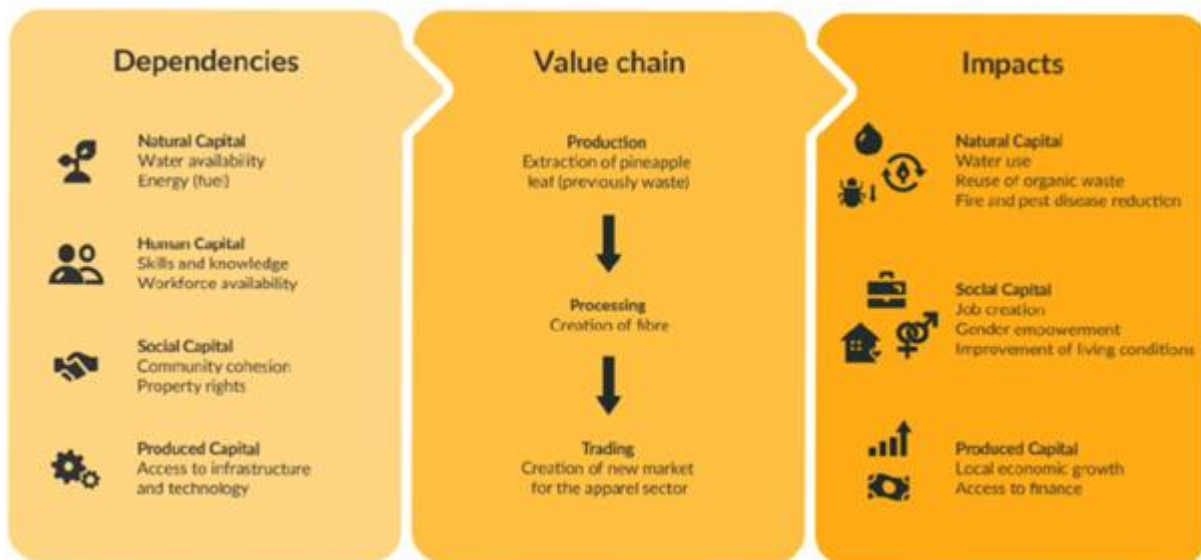
Moreover, with the fast growth of the circular fashion industry, they were confident that the business could become a part of the sustainable fashion value chain.

The results of the assessment will be used to build interest from other farmers in the local community as well as the local government. This support will help the business to expand by securing more sources of organic fibre waste and developing favourable relations with local authorities.

WHAT? What is the scope of the assessment?

The company set out to conduct a multi-capitals assessment across all four capitals. Their focus was on the direct operations of CNY ALFIBER, the pineapple leaf fibre producer in Subang, West Java. They aimed to assess the value of its positive impacts on society across a 1-year period from June 2021 - 31 July 2022.

To develop the scope of the assessment, CNY ALFIBER mapped the dependencies and impacts of their business activities (production, processing and trading of pineapple leaf fibre), classifying them according to each capital as shown in the figure below.



From this, they were able to identify and select their most material impact drivers for the assessment:

1. Impact: Job creation (for men & women) and increased incomes
2. Impact: Access to finance
3. Impact: Reduction of waste and pests
4. Dependency: Workforce availability

The assessment compared the baseline of before the ASYX collaboration in 2020 with the situation 1 year after the engagement in 2021. By comparing these two scenarios, they set out to understand the diverse benefits to society across the capitals.

HOW? What will be measured and valued?

The impact pathways for each of the selected drivers are displayed in the table below, highlighting the type of impacts (consequences) the company's activities have.

Impact Driver	Change in Capital	Consequence
Job Creation	Social Capital: Higher employment rate & more trust/respect of the business More women working Produced Capital: Higher income per capita + benefits	Impact to society: Women empowerment and job security
Access to Finance	Produced Capital: Increased access to credit and finance	Impact to society: Long term development for local community
Reduction of waste and pests	Natural Capital: Reduction in pest population & pineapple diseases – reducing human health risks (from rats, flies, fire and smoke)	Impact to business: Improvement of pineapple productivity and quality Impact to society: Reduced illness and enhanced wellbeing (less visual and odour impacts from less waste)
Technology & changed production process	Natural Capital: Reduced stress on local water supply Produced Capital: More and improved output	Impact to society: More water available in the local community Impact to business: Increased revenue, profits, and incomes.
Workforce Availability	Social Capital: Countering rural-urban migration by providing jobs within the community (but need for innovation/ investment to secure workforce/be attractive.	Impact to society: Enhanced wellbeing of rural populations and reducing additional stress on urban areas.

Due to resource constraints, they were unable to set out how they would measure and value these changes in capital and associated benefits to the business and society.

WHAT NEXT? What were the results of the assessment?

While the multi-capitals assessment was not completed in full, some important results were obtained from the assessment. Furthermore, the process of undertaking a TEEB Agri multi-capitals assessment and the insights and recognition it has generated around its broad sustainability benefits has helped Candra Naya

Lestari scale up and grow its fibre production significantly. It has since become an independent business unit with its own investments and infrastructure as a subsidiary of AGRINDO group.

The table below displays the some of the impactshas established across five different components. In addition, the impact pathways above provide useful qualitative results in terms of what some of the positive impacts are that the initiative is generating.

Component	Before ASYX Collaboration	After ASYX Collaboration
Job Creation	3 individuals	Decorticator: 6 people Pick & Scrap: 2 people Smoothing process: 1 person Combing: 6 people Total: 15 people
Purchase of Pineapple Leaves	500 kg	2,500 – 3,000 kg
Water use	9 litres/kg pineapple fibre	2 litres/kg pineapple fibre
Water supply	50-100 litres	1,200 litres
Pineapple fibre production	8kg/week	30kg/week
Sales of pineapple fibre	Per order	100-200kg per month

One of the key contributions was the expansion and creation of more secure jobs within the community. In the 1-year period, the business grew from 3 to 15 staff positions, which resulted in gender empowerment through more women being employed (social capital).

With support, the company were also able to improve their water use efficiency (natural capital). Before the collaboration, the company was using around 9L of water for every kg of produced pineapple fibre. After the collaboration, this has decreased to around 2L per kg.

In addition, the company successfully expanded its fibre production from 8kg/week to 30kg/week. By connecting the business with off-shore buyers, a more stable stream of revenue was generated, with sales shifting from an ad hoc per order basis, to regular sales of 100-200kg per month.

They calculated an estimate of the potential increase in revenue from these productivity gains and their contribution to the regional economy and individual workers. They then compared these with the actual accounts from after 1 month of operations. The results from this are displayed in the table below.

Potential increase in income

	<u>8 months</u>	<u>Annualised</u>
Cash Outflow	779,052,057	1,168,578,085.08
Raw Material / Waste Utilization	200,898,907	301,348,360.13
Added Value Generated	245,981,891 [▼]	368,972,835.77
Economic contribution to regional economy	578,153,150	867,229,724.96
Worker	15	15
Per Capita	3,211,962	4,817,943
UMR Kabupaten Subang	2,965,468	2,965,468

Income after 1 month of operations

	<u>8 months</u>	<u>Annualised</u>
Cash Outflow	371,620,422	557,430,633
Raw Material / Waste Utilization	63,546,383	95,319,574
Added Value Generated	(85,661,699) [▼]	(128,492,549)
Economic contribution to regional economy	308,074,039	462,111,059
Worker	15	15
Per Capita	1,711,522	2,567,284
UMR Kabupaten Subang	2,965,468	2,965,468

AGRINDO is now using the results from the assessment – including just the qualitative descriptions of the positive consequences/impacts – to improve their communication with buyers and investors from the fashion industry to further the expansion of a more sustainable natural material supply chain. From a by-product, Candra Naya Lestari generates shared value, prosperity, and well-being for different stakeholders.