The Forests Dialogue

Tree Plantations in the Landscape in Indonesia

12-16 June 2023 – Siak, Pelalawan and Pekanbaru, Riau, Sumatra

Field Visit Descriptions

Tuesday 13 June – Field Visits Day 1

A: Nursery Operations Kerinci Central Nursery (KCN)

Description: The nursery is the foundation of all the plantation activities – high quality seedlings ensure the highest rates survival, uniformity and the optimum levels of plantation productions. APRILs six nurseries supply 100% of the planting material for our peatland (acacia) and mineral soil (eucalyptus) plantations. Covering a total of 83 hectares the nurseries have the capacity to produce and deliver 200 million seedlings a year from vegetative cuttings and, here at KCN 2, using innovative tissue culture techniques.

Vegetative cuttings are selected from carefully selected mother plants. The new cuttings are subject to strict hygiene and climate controlled conditions with regular boom spray misting to ensure a uniform watering process across the site. Plants are subject to regular quality control to ensure that only the best seedlings are released to the estate for planting. Managing the production of quality, pests and diseases are the key challenges for the nursery team.

B: Forestry Operations in APRIL's Peatland and Mineral Soil Estates

Themes: Responsible peatland management; Sustainable production in the context of landscape and jurisdictional approaches

Description: APRIL manages approximately over 1 million hectares of land concession with nearly 450,000 hectares of hardwood plantation (Acacia and Eucalyptus) integrated with 360,000 hectares of conservation across both peatland and mineral soils in Riau Province, Sumatra. The remainder is infrastructure, community and other uses. Nearly 245,000 hectares of the plantations are on peatland.

The plantations are the primary source of fiber for the integrated mill facility at Pangkalan Kerinci producing 2.8 million tonnes of pulp and 1.15 million tonnes of paper. Plantation rotation length ranges from 4 - 6 years depending on site and species. All planting material comes from APRIL's own nursery facilities. As part of a structured tree breeding program planting material has been improved for specific traits over many generations. This includes higher site productivity, better pulping properties and increased resilience to pests and diseases. Precision forestry allows for the right genetics to be targeted by site to achieve higher yielding plantation forests.

APRIL has a target of a 50% gain in fibre plantation productivity by 2030. Over the past three years, we have posted a 29% increase in fibre yield and more than 60% of our total plantation base is now on the higher end of our productivity range. Site preparation and planting are critical phases of the plantation cycle. Giving young seedlings the best opportunity for survival means that effective competition control is essential. This is combined with appropriate planting techniques and on-time, cost effective fertilizer regimes. Integrated Pest Management (IPM) ensures pest and weed management are only applied depending on plantation age, stand condition, weed types and coverage. In addition, all forest operations are designed to minimize soil disturbance and compaction and maximize soil nutrients and water.

C: High Conservation Value Area

Themes: Nature based climate solutions; Sustainable production in the context of landscape and jurisdictional approaches

Description: APRIL has been involved in HCV assessment since the early 2000s when the first Indonesian national guidance was released. It has been an important part of conservation area assessment and design and APRIL remains an active participant of the HCV Network. HCV defines 6 forest values that might be assessed in an area - multiple values can be identified at the same site. It is incumbent on the land manager to protect these values and for APRIL this responsibility is included in our Sustainable Forest Management Policy (2015) with a specific commitment to *"actively protect HCV areas".*

APRIL currently has over 210,000 hectares of conservation area that have been set aside from its operational plantations. All APRIL own and long term suppliers have completed HCV assessments. APRIL's plantation effectively funds these conservation areas (production-protection model) via a self-imposed tariff of $1/delivered tonne of fiber. In 2022 this meant a total conservation allocation of $12 million for 2023.

Each Estate has its own dedicated Estate based Conservation Management Plan. The Conservation Plan ensures that operational managers can effectively protect and manage the identified values in their conservation areas by identifying key threats, and specific management actions to address these threats. Monitoring is done monthly by assessment both on the ground and by satellite imagery to ensure that the forest cover is not damaged by fire or encroachment and there are established monitoring plots within these HCV areas to assess the status of the specific identified value.

D: Water Management and Greenhouse Gas Monitoring

Themes: Responsible peatland management; Landscape dynamics

Description: Water Management is a key part of peatland plantation management. It is important to differentiate water management from drainage - in the wet season, when water tables (WT) in natural forests are at or above the surface, plantations are managed to ensure that the WT is managed to the target average (40 - 60cm). Similarly in the dry season when the water tables in natural forests may be lower than a meter below the surface the plantation is managed to the target average. This means that the soil profile is continually moist, not saturated, allowing for optimal growth. Water gates are established for every 25cm change in elevation along the slope and are part of a careful landscape water management design. The canals are also important structures for wood transport and logistics, fire breaks, water sources and are also regularly fished by local communities and form an important source of protein.

APRIL Greenhouse Gas Emissions (GHG) Monitoring is focused on two key areas – better understanding CO_2, CH_4 and N_2O emissions and improving peatland management practices to reduce GHG emissions at the landscape level. The first GHG tower was installed in 2016 and there are currently four towers (Plantation (peatland), Natural Peat Swamp Forest, Degraded Peatland, Plantation (mineral soil)) measuring GHG flux using the Eddy Covariance technique. GHG data from plantation on peatland has already been analyzed for one full plantation rotation and in collaboration with the Independent Peatland Expert Working Group (IPEWG) and other leading peatland scientists, the team has recently published its findings in the world's leading peer reviewed journal Nature (Nature). APRIL continues to invest in developing scientific capability with a focus on long term subsidence and water management trials.

Wednesday 14 June – Field Visits Day 2

A. Community Conservation Area, Dayun

Themes: Social forestry; Nature based climate solutions

Description: Fire Management is a critical part of any plantation manager's agenda - burnt plantations are a significant risk and cost. APRIL has a strict no burn policy and an annual target of zero burnt hectares within APRIL own and long term supplier concessions. While the bulk of fire management budgets are spent on preparation (equipment and training) and suppression (firefighting) APRIL experience has shown that identifying and working on solving root causes of fire, that is fire prevention, is incredibly important.

APRIL data shows that nearly 100% of the fires they respond to have a direct human causation and that these cases are linked to land preparation and agriculture activities. As a result APRIL's Fire Free Village Program (FFVP) works directly with local communities, following FPIC, to recognise and engage with fire and smoke haze as an environmental and human health problem. This includes providing the necessary assistance to help communities prepare agricultural land, improve their agricultural productivity and providing improved access to information related to the serious impacts of smoke haze on vulnerable members of the community, including pregnant woman, children and the elderly.

Since the inception of the Fire Free Village program in 2014 there has been an opportunity to expand beyond simply fire prevention and to identify and conserve areas of remaining forest cover outside APRIL concession with community partners. Following FPIC, APRIL has been working with six communities including Dayun and Penyengat. The concept is simply to identify any large natural forest areas within community areas that are currently not protected and offer communities a financial incentive to continue to conserve these areas. Expanding agriculture is the key threat to remaining natural forests. Working in partnership with Earthworm, APRIL recognizes that fundamental to good conservation outcomes is providing genuine economic support and opportunities. As a result a key part of the program is helping to improve community agriculture.

As part of the process, a community participatory mapping and planning process is undertaken to ensure that the full range of local needs is understood and included in the plan. A conservation regulation is also developed by local community leaders to ensure that these areas are extended appropriate protection. Areas are monitored and if there is no deforestation in the agreed area communities' receive a payment generally in the form of social infrastructure agreed on by the community members.
Illegal logging remains a significant threat to remaining natural forests and APRIL recognizes that communities will continue to need to source construction timber. As a result they are also planning to help communities source and supply their own domestic wood needs with innovative restoration programs that will, in the long term, lead to natural forest restoration.

This site is actually inside a government oil concession but clearly there is a range of other land uses here including smallholder oil palm. There has been logging in this area quite recently and without the community conservation agreement and community participatory planning process it is clear that the logging would have continued. While the program is still in a pilot phase the enthusiasm which the local communities have embraced the concept is encouraging.

B. Penyengat Village, Suku Anak Rawa Community

Themes: Social forestry; Land tenure and dispute resolution models

Description: The administrative village of Penyengat is situated in the customary territory of the Suku Anak Rawa indigenous people. They have resided in this area since prior to the Dutch colonial era. Traditionally their mixed livelihood strategy included hunting in the extensive lowland swamp forests, fishing in inland and coastal waters and sago grove management. Forests were also used for extracting medicines and other NTFPs for local use and sales in regional markets. Although intermarriage and

migration has brought outsiders into the village, the Suku Anak Rawa remain the majority population. World religions have largely replaced traditional shamanic beliefs since the 1990s.

The village was officially recognised in 2020 as a customary village (*kampung adat*) by a decree of the regent of Siak district but the extent of their rights in land have yet to be affirmed by the government. In the 1970s and 1980s, commercial logging concessions were handed out in their area. The village territory now plays host to one of PT RAPP's plantations, a large palm oil estate (Triomas), PT RAPP's international port facility and various other businesses. These operations have had major impacts on their lands and livelihoods, somewhat compensated by help setting up a lucrative pineapple cultivation enterprise. Discussions are underway on how to resolve some of the land conflicts that have resulted and on a proposed community conservation programme.

C. Kampung Tengah, Customary Village (*Kampung Adat*)

Themes: Social forestry; Land tenure and dispute resolution models

Description: This customary Malay village traces its origins back to the time of the pre-Dutch sultanate of Siak, the palace of which is situated on the other bank of the river from the village. In those days, officials of the Siak Kingdom inhabited Kampung Tengah as royal advisors. In line with the Dutch colonial policy of 'indirect rule', the Dutch recognised the Siak sultanate and its authority over its lands and peoples, meaning that customary law was applied right up until the time the Dutch left. After independence, the Siak sultan's powers were transferred to the Government of the Republic of Indonesia. The community, however, retains its traditional leadership and institutions and is officially recognised as a customary village, but their rights to their communal lands and forests (*tanah ulayat*) and to their customary farmlands (*tanah adat*) have not been formally titled by the district or provincial government.

Like many Malay (*Melayu*) villages, the people of Kampung Tengah rely on fishing and wet rice cultivation for their livelihoods supplemented by small trades and employment in local enterprises. The majority are devout Muslims. Several businesses have acquired licences from the government to operate within the village domain. The village is in a yet unresolved dispute with one palm oil company, which has taken over their lands without their agreement.

D. Smallholder Oil Palm Plantation

Themes: Landscape dynamics

Description: Asian Agri has engaged 76 KUDs (Koperasi Unit Desa) in the form of Scheme Oil Palm Smallholders (Plasma) in Riau and Jambi Province with a total of around 60,000 hectares. These KUDs are already 100% certified for both ISCC (International Sustainability & Carbon Certification) and RSPO (Roundtable on Sustainable Palm Oil) since 2014 and 2017 respectively.

One of the KUDs is Mulus Rahayu, located in Kerinci kanan Sub-district, Siak Regency, Riau Province. Currently, KUD Mulus Rahayu plantation area is 702 ha with a total of 351 farmers. They were the first KUD to join the replanting program with the Indonesian Palm Oil Plantation Fund Management (BPDPKS) in 2016. In this first phase, the cooperative replanted 310 hectares which consisted of 155 smallholders. The program continued in 2020 with an additional 33 smallholders for a total area of 66 hectares. The KUD will continue the replanting program in 2024 for the rest of the area which is around 326 hectares. In 2020, KUD Mulus Rahayu was assessed by Siak Regency Agriculture Office and was the first KUD in Indonesia to achieve the A score. The physical assessment of the plantation covered plant conditions, soil cover conditions, soil preservation systems, production roads, collections, the collection points, market and plates as well as general impressions. They continue to implement sustainable practices as part of their commitment to promote the growth and use of oil palm products.